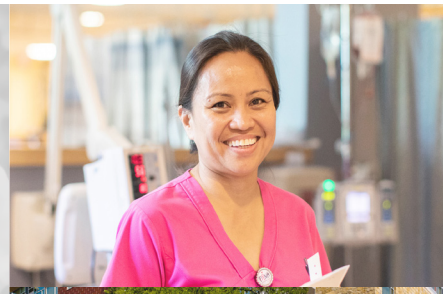
University of California San Diego

2019 Long Range Development Plan

Hillcrest Campus

Draft Environmental Impact Report



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Environmental Impact Report

University of California San Diego
2019 Long Range Development Plan
Hillcrest Campus

Volume I

June 2019

Prepared for:

UC San Diego
CAMPUS PLANNING

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Acronyms and Abbreviations

°F	degrees Fahrenheit
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
2012 LRWRP	2012 Long-Range Water Resources Plan
2019 LRDP	2019 Long Range Development Plan for the University of California, San Diego, Hillcrest Campus
2019 LRDP EIR	Environmental Impact Report for the 2019 Long Range Development Plan for the University of California, San Diego, Hillcrest Campus
AAQS	ambient air quality standards
AB	Assembly Bill
ACOE	U.S. Army Corps of Engineers
ADT	average daily trips
AF	acre-feet
AFG	accelerated forecasted growth
AFY	acre-feet per year
ALUCP	Airport Land Use Capability Plan
amsl	above mean sea level
APCD	Air Pollution Control District
ARG	Architectural Resources Group
ASMD	area-specific management directives
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
AWSC	all-way stop control
bgs	below ground surface
BMP	best management practice
C&D	construction and demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAGN	coastal California gnatcatcher
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Control Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDC	Centers for Disease Control and Prevention
CDFW	California Department of Fish and Wildlife

CDPH	California Department of Public Health
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980, commonly known as Superfund
CERS	California Environmental Reporting System
CESA	California Endangered Species Act
CFG Code	California Fish and Game Code
CFR	Code of Federal Regulations
CH_4	methane
Ci	curie
City CAP	City of San Diego Climate Action Plan
City	City of San Diego
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNI	University of California Carbon Neutrality Initiative
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COC	constituent of concern
County CAP	County of San Diego Climate Action Plan
County	County of San Diego
CPIOZ	Community Plan Implementation Overlay Zones
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSSC	Chemical Safety and Surveillance Committee
CUP	central utilities plant
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
cy	cubic yard
dB	decibel
dBA	A-weighted decibel
DEH	County OF San Diego Department of Environmental Health
DEXA	Dual Energy X-Ray Absorptiometry
DNA	deoxyribonucleic acid
DPM	diesel particulate matter
DRB	University of California, San Diego, Design Review Board
DTSC	California Department of Toxic Substances Control
DU	dwelling unit
EAP	Energy Action Plan
EH&S	University of California, San Diego, Environmental Health and Safety
EIR	environmental impact report
EIS	Environmental Impact Statement

EOCC	Environment of Care Committee
ERA	ecological risk assessment
EVS	University of California, San Diego, Environmental Services
FESA	federal Endangered Species Act
FHSZ	fire hazard severity zones
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FS	feasibility study
FTA	Federal Transit Administration
FY	Fiscal Year
GDP	gallons per day
GHG Reduction Strategy	Greenhouse Gas Emissions Reduction Strategy
GHG	greenhouse gas
gpm	gallons per minute
GPS	Global Positioning System
gsf	gross square feet
H.R.	House of Representatives
HABS	Historic American Building Survey
Harris	Harris & Associates
HCM	Highway Capacity Manual
HEPA	high-efficiency particulate air
HID	high-intensity discharge
HMBP	Hazardous Materials Business Plan
HOV	high-occupancy vehicle
hp	horsepower
HRA	health risk assessment
HVAC	heating, ventilation, and air conditioning
I-	Interstate
IACUC	Institutional Animal Care and Use Committee
IBC	Institutional Biosafety Committee
IC	Implementation Coordinator
IDW	investigation-derived waste
IEPR	Integrated Energy Policy Report
IFPD	San Diego Unified School District Instructional Facilities Planning Department
in/sec	inches per second
IP	Individual Permit
kg	kilogram
KVP	key vantage point
kW	kilowatt
kWh/yr	kilowatt-hours per year
LED	light-emitting diode
LEED	Leadership in Energy and Environmental Design
L_{eq}	equivalent continuous sound level
LID	low-impact development
LLRW	low-level radioactive waste

L_{max}	maximum sound level
L_{min}	minimum sound level
LOS	level of service
LRDP	long range development plan
MBTA	Migratory Bird Treaty Act
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
mgd	million gallons per day
MHPA	Multi-Habitat Planning Area
MMBTU/hr	million British Thermal Units per hour
MMT	million metric ton
Model Ordinance	Model Water Efficient Landscaping Ordinance
MS4s	municipal separate storm sewer systems
MSCP	Multiple Species Conservation Program
MT	metric ton
MTS	San Diego Metropolitan Transit System
MWD	Metropolitan Water District of Southern California
MWWD	City of San Diego Public Utilities Metropolitan Waste Water Department
N_2O	nitrous oxide
NA	not applicable
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Planning
NCTD	North County Transit District
NEHRP	National Earthquake Hazards Reduction Program
NEV	Neighborhood Electric Vehicles
NF_3	nitrogen trifluoride
NHTSA	National Highway Traffic Safety Administration
NIH	National Institutes of Health
NO	nitric oxide
NO_2	nitrogen dioxide
NOAA Fisheries	National Oceanic and Atmospheric Administration's National Marine Fisheries Service
NOP	Notice of Preparation
NO_x	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
NRC	Nuclear Regulatory Commission
NRHP	National Register of Historic Places
NSLU	noise sensitive land use
NWP	Nationwide Permit
O&M	operations and maintenance
O_3	ozone
OPR	Governor's Office of Planning and Research
OSHA	U.S. Occupational Safety and Health Administration

OSHPD	Office of Statewide Health Planning and Development
OSWER	Office of Solid Waste and Emergency Response
PA	preliminary assessment
PAH	polynuclear (also polycyclic) aromatic hydrocarbons
PCB	polychlorinated biphenyl
PCE	passenger car equivalence
PLWTP	Point Loma Wastewater Treatment Plant
PM	particulate matter
PM_{10}	respirable particulate matter
$PM_{2.5}$	fine particulate matter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PPV	peak particle velocity
PRC	California Public Resources Code
PUD	City of San Diego Public Utilities Department
PVC	polyvinyl chloride
QA	quality assurance
QC	quality control
RAQS	Regional Air Quality Strategy for San Diego County
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act of 1976
Regional Plan	San Diego Forward: The Regional Plan
Reporting Rule	Final Mandatory Greenhouse Gas Reporting Rule
RFS	Renewable Fuel Standard
RHNA	Regional Housing Needs Assessment
rms	root mean square
ROW	right-of-way
RPS	Renewable Portfolio Standard
RSC	Radiation Safety Committee
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAF Plan	State Alternative Fuels Plan
San Diego River HU	San Diego River Hydrologic Unit
SANDAG	San Diego Association of Governments
SAP	sampling and analysis plan
SARA	Superfund Amendments and Reauthorization Act of 1986
SB	Senate Bill
SCIC	South Coastal Information Center
Scoping Plan	California Air Resources Control Board's Climate Change Scoping Plan
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDCWA	San Diego County Water Authority
SDFR	City of San Diego Fire-Rescue
SDG&E	San Diego Gas & Electric
SDIA	San Diego International Airport

SDMC	San Diego Municipal Code
SDPD	San Diego Police Department
SDRWQCB	San Diego Regional Water Quality Control Board
SDUSD	San Diego Unified School District
SF_6	sulfur hexafluoride
SHB	shot hole borer
SIP	State Implementation Plan
SLF	Sacred Lands File
SO_2	sulfur dioxide
SOV	single-occupancy vehicle
SR-	State Route
Subarea Plan	City of San Diego Multiple Species Conservation Program Subregional Plan
Sustainable Practices Policy	University of California Sustainable Practices Policy
SVOC	semivolatile organic compound
SWMP	Storm Water Management Plan
SWP	State Water Project
SWPPP	storm water pollution prevention plan
SZA	Select Zone Assignment
TAC	toxic air contaminant
TAP	Transit Priority Area
TDM	Transportation Demand Management
TIS	Transportation Impact Study
TMDL	Total Maximum Daily Loads
TPC	Transportation Policy Committee
UC Regents Direct Access Program	University of California Regents Energy Services Unit Direct Access Program
UC Regents	The Regents of the University of California
UC San Diego	University of California, San Diego
UC	University of California
UCOP	University of California Office of the President
USDA	U.S. Department of Agriculture
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Services
USGS	U.S. Geological Survey
UST	underground storage tank
UWMP	urban water management plan
V/C	volume to capacity
VdB	vibration decibels
VMT	vehicle miles traveled
VOC	volatile organic compound
WDR	waste discharge requirement
WMA	Watershed Management Area
Working Draft	Working Draft of the Mission Valley Community Plan Update

WPCP	water pollution control plan
WQIP	water quality improvement plan

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Executive Summary

This chapter is an executive summary of the Environmental Impact Report (EIR) for the implementation of the University of California, San Diego (UC San Diego), Hillcrest Campus 2019 Long Range Development Plan (LRDP), prepared in compliance with the California Environmental Quality Act (CEQA).

This chapter highlights the major areas of importance in the environmental analysis for the proposed 2019 LRDP, as required by CEQA Guidelines Section 15123. It also provides a brief description of the 2019 LRDP, project objectives, alternatives to the 2019 LRDP, and areas of controversy/issues raised by the public known to UC San Diego. In addition, this chapter provides tables summarizing (1) the potential environmental impacts that would occur as the result of implementation of the proposed 2019 LRDP, (2) the level of impact significance before mitigation, (3) the recommended mitigation measures that would avoid or reduce significant environmental impacts, and (4) the level of impact significance after mitigation measures are implemented. A table is also provided that compares the anticipated impacts of the proposed 2019 LRDP with those of each project alternative.

Overview

As required by CEQA, this 2019 LRDP EIR (1) assesses the potentially significant direct, indirect, and cumulative environmental effects of the proposed 2019 LRDP for the UC San Diego Hillcrest Campus; (2) identifies potential feasible means of avoiding or substantially lessening significant adverse impacts; and (3) evaluates a range of reasonable alternatives to the proposed 2019 LRDP, including the required No Project Alternative. The Regents of the University of California (The Regents) is the lead agency for the project evaluated in this 2019 LRDP EIR and, as such, has the principal responsibility for approving the proposed 2019 LRDP.

Pursuant to CEQA Guidelines, this 2019 LRDP EIR is a Program EIR (PEIR) that evaluates the effects of the entire 2019 LRDP at a project level. This 2019 LRDP EIR will be used by the UC Regents to evaluate the environmental implications of adopting the 2019 LRDP. Once certified, this 2019 LRDP EIR would also be used to tier subsequent environmental analyses for future UC San Diego development projects. Once adopted, the 2019 LRDP would guide the redevelopment of the campus anticipated through the planning horizon year 2035. The UC Regents may approve amendments to the 2019 LRDP at any time, and the 2019 LRDP would be in effect until a new LRDP is prepared that replaces it.

Project Description

The University of California (UC) system requires that each UC campus maintain an LRDP to guide capital project development and review processes. The process of periodically updating an LRDP

provides the UC Regents an opportunity to make certain that physical plans remain solidly based on academic, research, and public service program goals. The proposed 2019 LRDP provides a substantial update from the previous LRDP adopted by the UC Board of Regents in 1995, which placed an emphasis on campus expansion and the procurement of new property along its existing borders, the majority of which was not implemented. The proposed 2019 LRDP aims to redevelop approximately 34 acres of the 62-acre property resulting in the removal of all but two existing buildings, including the 11-story hospital.

Located in the Medical Complex neighborhood in the City of San Diego's (City's) Uptown Community, the Hillcrest Campus largely resembles the hilltop campus depicted in the previous LRDP prepared for the campus in 1995. Nearly all current campus buildings existed at the time of the previous plan's adoption, and the current campus circulation system has remained relatively unchanged. This is due to its edge location bounded by steep, sloped canyons and residential neighborhoods, creating limited opportunities for the campus to expand beyond the current developed area. Currently, the campus is composed of steep, sloped canyons surrounding the western, northern, and most of the eastern perimeters of the campus and the Medical Complex neighborhood abutting the southern property line.

The existing Hillcrest Campus provides the following services: Regional Burn Center, Level 1 Trauma Center, Certified Comprehensive Stroke Center, Comprehensive Emergency Department, Epilepsy Center, Inflammatory Bowel Disease Center, International Patient Services, Neurological Institute, and many outpatient specialties, including the region's only dedicated clinic for HIV patients, the Owen Clinic. Hospital inpatient services make up the largest gross square footage of the total campus building area and are located primarily in the center of the campus.

As of 2017, the Hillcrest Campus's existing total development includes approximately 1.1 million gross square feet (gsf) of primarily health care and research uses. Under the 2019 LRDP, the majority of existing buildings would be demolished and replaced with similar uses, plus a more substantial residential component, for a final buildout condition of 2.7 million gsf. The 2019 LRDP proposes to create five new districts, each of which would be defined by a predominant land use and development condition. The residential population on the Hillcrest Campus would increase from 21 existing housing units to up to 1,000 residential units. Medical, research, and administrative faculty and staff would increase from 4,450 persons to approximately 5,200 persons.

As part of the LRDP approval process established by the UC Regents, the campus must analyze the environmental impacts of implementing the 2019 LRDP in compliance with Section 21080.09 of the CEQA. To comply with this requirement, the campus is preparing a PEIR to address the near-term and long-term consequences of implementing the 2019 LRDP through its planning horizon in the year 2035.

Project Objectives

The fundamental purposes of the 2019 LRDP for the Hillcrest Campus are to:

1. Meet the seismic safety requirements of SB 1953 by replacing the existing hospital building by 2030 while maintaining existing community health care operations including but not limited to:
    a. San Diego's only Regional Burn Center
    b. Level 1 Trauma Center
    c. Certified Comprehensive Stroke Center
    d. Comprehensive Emergency Department
    e. Epilepsy Center
    f. Inflammatory Bowel Disease Center
    g. International Patient Services
    h. Neurological Institute
    i. The region's only dedicated clinic for HIV patients, the Owen Clinic
2. Replace aging and obsolete buildings and redevelop the Hillcrest Campus to create a modern, patient-centered environment that leverages UC San Diego Health's capabilities as an academic medical institution while also providing live-work-learn housing for UC San Diego affiliates, wellness-driven programming, and accessible open spaces
3. Organize the campus development by clearly delineating five new land use districts (Health Care, Residential, Open Space, Mixed-Use, and Canyon), each of which would be defined by a predominant land use and development condition that contribute to a cohesive campus that is aligned with UC San Diego's vision
4. Create a campus that promotes community wellness and health care in both its facilities and its site development
5. Implement a mix of land uses including residential, retail, and office space that support the financial feasibility of the campus's development and operations into the future
6. Provide up to 1,000 residential units for UC San Diego affiliates that respond to an existing and increasing demand for housing on campus and region wide, reduce commuter traffic to and from the campus, and integrate a range of resident- and neighborhood-oriented amenities
7. Improve the roadway circulation network adjacent to and within the campus while minimizing traffic impacts to adjoining neighborhoods
8. Improve transportation-related facilities including parking structures, transit stops, and passenger drop-off and pick-up areas in a way that allows for intuitive vehicular, biking, and patient-oriented access and multimodal improvements for wayfinding

9. Enhance the campus open space concept as a resource for campus patients, visitors, and employees, as well as the surrounding community
10. Provide on-site energy infrastructure that is cost effective, redundant, and energy efficient and is in compliance with regulations for acute care hospital and related medical facilities
11. Site the CUP in a location on the campus such that it does not impair construction sequencing, impact existing utilities that serve current facilities that must remain online, or impact the efficient replacement of facilities under the 2019 LRDP
12. Accommodate a robust graduate education program with research labs, instructional areas, and office administrative space

Impact Summary

This 2019 LRDP EIR contains a discussion of the potential environmental effects from implementation of the proposed 2019 LRDP, including information related to existing site conditions, analyses of the type and magnitude of individual and cumulative environmental impacts, and feasible mitigation measures that could reduce or avoid environmental impacts. In accordance with Appendix G of the CEQA Guidelines, the potential environmental effects of the proposed 2019 LRDP are analyzed for the following environmental issue areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural and Tribal 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
- Utilities and Service Systems
- Wildfire

Tables ES-1 and ES-2 are presented at the end of this section and provide a summary of the project-level and cumulative environmental impacts that could result from implementation of the 2019 LRDP and feasible mitigation measures that could reduce or avoid environmental impacts. For each impact, Tables ES-1 and ES-2 identify the significance of the impact before mitigation (including which phase the mitigation is required), applicable mitigation measures, and the level of significance of the impact after the implementation of the mitigation measures.

Alternatives to the 2019 LRDP

The following alternatives were analyzed in detail in this 2019 LRDP EIR and compared to the proposed 2019 LRDP. The objective of the alternatives analysis is to consider a reasonable range

of potentially feasible alternatives to foster informed decision-making and public participation. The 2019 LRDP alternatives are as follows:

- **No Project Alternative.** Under the No Project Alternative (1995 LRDP), the proposed 2019 LRDP would not be implemented. The 1995 LRDP would remain as the applicable planning document for the Hillcrest Campus and, therefore, the No Project Alternative (1995 LRDP) assumes that development planned in the 1995 LRDP on the campus would continue to occur.
- **No Residential Alternative.** This alternative would be the same as the proposed 2019 LRDP with the exception that it would not include the residential component. This alternative would not include the construction of up to 1,000 residential units. It would, therefore, reduce total campus development by 1.2 million gsf compared to the 2019 LRDP. This alternative would not fulfill the residential component of the 2019 LRDP to meet housing demands and sustainability objectives, including reduced traffic, and would not meet the 2019 LRDP's goal of implementing a mix of revenue-generating land uses that support the financial feasibility of the health care campus's redevelopment and operations into the future.
- **No Cogeneration Alternative.** This alternative would be the same as the proposed 2019 LRDP with the exception that the CUP would not use cogeneration (also known as combined heat and power). The No Cogeneration Alternative would accomplish most of the 2019 LRDP objectives because it would consist of the same project with the exception that its electrical system would use traditional boilers instead of cogeneration, which would produce fewer greenhouse gas (GHG) emissions but be less efficient. However, it would not provide an energy solution that is cost effective, reliable, or energy efficient to support the critical patient services of an acute care hospital and related medical facilities.
- **No North Access Driveway Alternative.** This alternative would be the same as the proposed 2019 LRDP with the exception that it would not construct the north access driveway. Under the 2019 LRDP, converting this existing dirt and gravel access road in the canyon bottom into a functional two-way road with vehicle, pedestrian, and bicycle amenities would help ease the traffic burden on existing neighborhood streets and offer a new access point to underground parking for the Residential District and service access to the future hospital/Health Care District. Thus, the north access driveway would serve to more evenly distribute traffic throughout the campus. The No North Access Driveway Alternative would not fulfill the objectives aimed at improving the circulation network improving transportation related facilities. Therefore, this alternative would not minimize traffic impacts to adjoining neighborhoods. In addition, without the north access driveway the 2019 LRDP would also not be able to provide

an efficient vehicular patient-oriented access as medical-related and residential traffic would both use the First Avenue/Arbor Drive entrance to the campus.

- **Reduced Scale Alternative.** The Reduced Scale Alternative would contain the same proposed uses as the 2019 LRDP but would reduce the scale of each use by 50 percent. This alternative would still require the demolition of the existing uses at the Hillcrest Campus and would include the construction of the new north access driveway. The Reduced Scale Alternative would replace obsolete and construct new buildings that would meet the seismic safety requirements of SB 1953 but due to the limited size of the proposed buildings and reduction in proposes health care uses, UC San Diego would not have sufficient space be able to provide the needed services to the community. In addition, this alternative would only provide 500 residential units on the mesa as opposed to maximizing the residential potential of the Hillcrest Campus.

Detailed descriptions and an analysis of potential impacts of each alternative are presented in Chapter 5, Alternatives. Table ES-3 presents a comparison of the environmental impacts of these alternatives to the potentially significant impacts that are expected to result from the 2019 LRDP. The environmentally superior alternative would be the Reduced Scale Alternative would be the environmentally superior alternative because it would result in the greatest reduction in environmental impacts as compared to the 2019 LRDP.

Issues Raised by the Public/Known Areas of Controversy

This 2019 LRDP EIR addresses issues associated with the 2019 LRDP that are known to the lead agency or were raised by agencies or interested parties during the NOP public and agency review period and open houses. These issues are potential areas of known controversy and include the following:

Aesthetics

- City expressed concern over potential impacts to the surrounding view corridors within the Uptown Community Plan.
- Concern regarding the feasibility of retrofitting the existing hospital instead of building a replacement.

Biological Resources

- CDFW provided letter encouraging conformance with the City's Multiple Species Conservation Program (MSCP) Subarea Plan and other City regulations governing environmentally sensitive lands.
- City requested the 2019 LRDP EIR to discuss how issues are being addressed in a way that will not adversely affect the Multi-Habitat Planning Area and to include a discussion on how the 2019 LRDP would implement the area-specific management directives (ASMD) of the City's MSCP Subarea Plan.

Greenhouse Gas Emissions

- City requested the 2019 LRDP EIR to acknowledge the City's Climate Action Plan (CAP).

Land Use and Planning

- Concern expressed regarding applicability of the City's planning and development regulations to the 2019 LRDP including the Land Use Adjacency Guidelines; the City's MSCP; and the Uptown Community Plan.
- Concern expressed over the location of the future CUP.

Noise

- Concern expressed regarding potential noise impacts during both construction and operation of the 2019 LRDP.

Population/Housing

- Uncertainty expressed regarding whether the future residential tenants would be affiliated with UC San Diego.
- Concern expressed regarding the area being currently overcrowded and additional residential units being growth inducing.

Transportation

- Concern expressed that project traffic would result in significant impacts to off-site area roadways and intersections, most of which experience significance delay in existing conditions.
- Concern expressed over the 2019 LRDP's ability to provide adequate public transportation and multi-modal facilities.

Appendix A of this 2019 LRDP EIR includes comments received on the NOP and at the open houses.

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
3.1 Aesthetics				
Scenic Vistas	Implementation of the 2019 LRDP would not have a substantial adverse effect on a scenic vista.	LS	No mitigation is required.	LS
Degradation of Existing Community Character or Conflict with Zoning or Regulations for Scenic Quality	Implementation of the 2019 LRDP could substantially degrade the existing community character of areas adjacent to the southern and eastern Hillcrest Campus Boundaries.	PS (Phases 1A, 2A,2B, 3, 5)	**AES-2A: Design Review.** Prior to project design approval, any proposed structure or phase that would have the potential to substantially degrade the community character shall undergo design review by the UC San Diego Design Review Board to ensure that the design is consistent with the visual landscape and/or the character of the surrounding development. The design review process shall evaluate and incorporate, where appropriate, factors including but not necessarily limited to building mass and form, building proportion, roof profile, architectural detail and fenestration, texture, color, type and quality of building materials, and landscaping.	LS
Degradation of Existing Community Character or Conflict with Zoning or Regulations for Scenic Quality	Implementation of the 2019 LRDP could substantially degrade the existing community character of areas adjacent to the southern and eastern Hillcrest Campus Boundaries.	PS (Phases 1A, 2A,2B, 3, 5)	**AES-2B: Building Design.** Proposed structures to be located along the southern and eastern Hillcrest Campus Boundaries shall be reviewed by the UC San Diego Design Review Board, Campus Architect, and other relevant campus committees at the conceptual design stage to ensure structures are designed to incorporate as applicable the following pedestrian-scale features along the facades facing the public realm: • Pedestrian-oriented architectural details and scale • Proportional building mass, form, and roof profiles • Building setbacks, fenestration, and visual reliefs • Use of high-quality building materials • Welcoming and wayfinding elements • Pedestrian connections and pathways • Pedestrian furniture and signage • Landscape buffers • Limited use of walls or pedestrian barriers	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Lighting and Glare	Implementation of the 2019 LRDP would not have the potential to create new sources of substantial light or glare on campus or in the immediate vicinity, and would not adversely affect daytime and nighttime views in this area.	LS	No mitigation is required.	LS
Scenic Resources	Implementation of the 2019 LRDP would not substantially damage scenic resources, including, but not limited to, trees, rocks, outcroppings, and historic buildings within a state scenic highway.	NI	No mitigation is required.	NI
3.2 Air Quality				
Consistency with Applicable Air Quality Plan	Implementation of the 2019 LRDP would not conflict with or obstruct implementation of the applicable air quality plan.	LS	No mitigation is required.	LS
Cumulative Increase in Criteria Pollutant Emissions	Implementation of the 2019 LRDP could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.	PS (Phases 2A and 2B)	**AIR-2: Architectural Coatings.** Architectural coating activities in Phases 2A and 2B shall not occur simultaneously with any of the following construction activities: demolition, earthwork and grading, or paving. Architectural coating can occur simultaneously with building construction. In the absence of architectural coating, building construction may occur simultaneously with demolition, earthwork and grading, or paving activities. This measure shall be included on the final grading and construction plans for Phase 2A and 2B and shall be implemented by the construction contractor.	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Sensitive Receptors	Construction under the 2019 LRDP could expose sensitive receptors to substantial pollutant concentrations.	PS	**AIR-3: Construction Equipment Performance Standards.** UC San Diego, through bid and contract specifications, shall require the construction contractor to implement the following performance standards for the use of heavy-duty construction equipment during all construction activities: • Use off-road construction diesel engines that meet, at a minimum, the Tier 4 interim California Emissions Standards, unless such an engine is not available for a particular item of equipment. Tier 3 engines shall be allowed on a project-by-project basis when the contractor has documented that no Tier 4 interim equipment or emissions equivalent retrofit equipment is available or feasible for the project. • To the extent feasible and available, use high-performance renewable diesel fuel.	SU
Odors	Implementation of the 2019 LRDP could result in minor amounts of odorous emissions.	LS	No mitigation is required.	LS
3.3 Biological Resources				
Candidate, Sensitive, or Special-Status Plant Species	Implementation of the 2019 LRDP would have the potential to impact candidate, sensitive, or special-status species.	PS (Phases 2A, 2B, 3)	**BIO-1A: Sensitive Plant Surveys.** During the project planning process, updated sensitive plant surveys shall be conducted for all project areas that support potential habitat for sensitive plant species and have not been surveyed within the preceding year. Sensitive plant surveys shall be conducted by a qualified Biologist retained by UC San Diego during the appropriate season for detecting the species as part of the project design phase. Surveys shall be floristic in nature and include lists of all plants identified in the survey area. Surveys shall be conducted on foot, employing a level of effort sufficient to provide comprehensive coverage. The locations and prevalence (estimated total numbers/percent cover, as applicable) of sensitive plants shall be recorded. If site-specific surveys are not required because a survey was conducted within the last 12 months, impact assessment and minimization/mitigation requirements shall be based on the most recent available survey, shall include an analysis of the potential for sensitive plant species to occur on the site based on existing site	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Candidate, Sensitive, or Special-Status Plant Species			conditions, and shall be consistent with the most recent USFWS and CDFW survey protocols (USFWS 2018d; CDFW 2014). If sensitive plant species are observed, they shall be avoided if possible. If species cannot be avoided, impacts to those species must be evaluated and any significant impacts shall be mitigated through plant relocation or conservation of habitat on campus that supports the impacted species in accordance with Mitigation Measures BIO-1B, BIO-1C, and BIO-1D.	
Candidate, Sensitive, or Special-Status Plant Species	Implementation of the 2019 LRDP would have the potential to impact candidate, sensitive, or special-status species.	PS (Phases 2A, 2B, 3)	**BIO-1B: San Diego Barrel Cactus.** If San Diego barrel cactus is observed during sensitive plant surveys conducted under Mitigation Measure BIO-1A, mitigation for impacts to San Diego barrel cactus shall occur through salvage and translocation of any impacted San Diego barrel cactus within the project area(s) to appropriate open space canyon locations on site where they would not be disturbed.	LS
Candidate, Sensitive, or Special-Status Plant Species	Implementation of the 2019 LRDP would have the potential to impact candidate, sensitive, or special-status species.	PS (Phases 2A, 2B, 3)	**BIO-1C: San Diego Goldenstar.** If San Diego goldenstar is observed during sensitive plant surveys conducted under Mitigation Measure BIO-1A, mitigation for impacts to San Diego goldenstar shall occur through salvage and translocation of any impacted San Diego goldenstar corms (swollen underground plant stems/storage organs) within the project area(s) to appropriate open space canyon locations on site where they would not be disturbed.	LS
Candidate, Sensitive, or Special-Status Plant Species	Implementation of the 2019 LRDP would have the potential to impact candidate, sensitive, or special-status species.	PS (Phases 2A, 2B, 3)	**BIO-1D: Wart-Stemmed Ceanothus.** If wart-stemmed ceanothus is observed during sensitive plant surveys conducted under Mitigation Measure BIO-3A, mitigation for impacts to wart-stemmed ceanothus shall occur through inclusion of wart-stemmed ceanothus seeds in native plant landscaping seed mix for application in the Canyon District.	LS
Candidate, Sensitive, or Special-Status Animal Species	Implementation of the 2019 LRDP would have the potential to impact sensitive animal species.	PS (Phases 1A, 2A, 2B, 3, 5)	**BIO-2A: Coastal California Gnatcatcher (CAGN) Surveys.** Beginning in 2022, when a construction project is proposed that would directly or indirectly impact Diegan coastal sage scrub, six surveys at least 7 days apart shall be conducted during the peak breeding season, March 15 to June 30, or nine surveys from July 1 to March 14 at least 2 weeks apart in accordance with the current USFWS protocol (USFWS 1997). The permittee must submit the 15-day pre-survey notification to the USFWS	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Candidate, Sensitive, or Special-Status Animal Species			Carlsbad Permits Division, including an explanation that six or nine surveys shall be conducted. Documentation of the survey results shall be provided to USFWS in accordance with current protocol survey guidelines.	
Candidate, Sensitive, or Special-Status Animal Species	Implementation of the 2019 LRDP would have the potential to impact sensitive animal species.	PS (Phases 1A, 2A, 2B, 3, 5)	**BIO-2B: USFWS Permitting.** If Diegan coastal sage scrub within the open space canyon areas is determined to be occupied by the CAGN based on surveys conducted in accordance with Mitigation Measure BIO-2A, UC San Diego shall contact USFWS to discuss project permitting options that could be accomplished through Section 7 or Section 10(a) of FESA. Impacts to any CAGN and CAGN-occupied habitat shall be avoided/mitigated by the following measures (additional measures could be required as a result of the consultation/permitting process): 1. Diegan coastal sage scrub occupied by CAGN shall not be removed during the CAGN breeding season (February15 through August 31). If CAGN are not present, then only mitigation for the habitat loss shall be required as described in Mitigation Measures BIO-3B, and habitat clearing can occur at any time of the year following the survey. 2. If construction activities commence during the CAGN breeding season and CAGN are found within 500 feet of the grading limits based on the surveys required in BIO-2A, a qualified acoustician shall be consulted to identify appropriate measures for reducing construction noise levels to 60 decibel hourly L_{eq} or ambient, whichever is higher, during the part of the breeding season when active nests are most likely. If noise reduction measures are determined necessary, the construction contractor shall implement the measures and the acoustician shall confirm, through field measurements, that noise attenuation measures are effective at maintaining noise at or below the specified threshold. 3. Permanent impacts to Diegan coastal sage scrub (regardless of CAGN occupancy) shall be mitigated at a 2:1 ratio as described in Mitigation Measure BIO-3B.	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Candidate, Sensitive, or Special-Status Animal Species	Implementation of the 2019 LRDP would have the potential to impact sensitive animal species.	PS	**BIO-2C: Pre-Construction Raptor Nest Surveys.** If project construction is scheduled to commence during the raptor nesting season (generally January 15 through August 31), pre-construction surveys for raptor nests shall be performed by a qualified Biologist within 500 feet of project construction activities no more than seven days prior to the initiation of construction. Construction activities within 500 feet of an identified active raptor nest shall not commence during the breeding season until a qualified Biologist determines that the nest is no longer active and any young birds in the area have adequately fledged and are no longer reliant on the nest. Trees with inactive nests can be removed outside the breeding season without causing an impact.	LS
Candidate, Sensitive, or Special-Status Animal Species	Implementation of the 2019 LRDP would have the potential to impact sensitive animal species.	PS	**BIO-2D: Pre-Construction Nesting Bird Surveys.** No grubbing, trimming, or clearing of vegetation (including fuel management) from project areas shall occur during the general avian breeding season (February 15 through August 31). If grubbing, trimming, or clearing cannot feasibly occur outside of the general avian breeding season, a qualified Biologist shall perform a pre-construction nesting bird survey no more than seven days prior to the commencement of vegetation clearing or grubbing to determine if active bird nests are present in the affected areas. Should an active migratory bird nest be located, the project Biologist shall direct vegetation clearing away from the nest until it has been determined by the project Biologist that the young have fledged, or the nest has failed. If there are no nesting birds (includes nest building or other breeding/nesting behavior) within the survey area, clearing, grubbing, and grading shall be allowed to proceed.	LS
Candidate, Sensitive, or Special-Status Animal Species	Implementation of the 2019 LRDP would have the potential to impact sensitive animal species.	PS	**BIO-1A, BIO-1B, BIO-1C** (see above).	LS
Riparian Habitat and Other Sensitive Natural Communities	Implementation of the 2019 LRDP would have the potential to impact riparian habitat or	PS	**BIO-3A: Vegetation Mapping.** In areas proposed for construction that are mapped as supporting a sensitive vegetation community and vegetation community mapping has not been conducted on the site in the preceding 5 years, updated vegetation mapping shall be conducted by a	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Riparian Habitat and Other Sensitive Natural Communities	other sensitive natural communities.		qualified biologist as part of the project planning and environmental review process.	
Riparian Habitat and Other Sensitive Natural Communities	Implementation of the 2019 LRDP would have the potential to impact riparian habitat or other sensitive natural communities.	PS	**BIO-3B: Permanent Impacts to Upland Habitats.** Permanent impacts to sensitive upland vegetation communities shall be mitigated through the preservation of habitat, habitat creation, and/or enhancement, or combination thereof on the Hillcrest Campus or off campus through habitat acquisition and preservation or purchase of credits from an approved conservation bank. Mitigation for impacts to upland communities shall be in-kind. Permanent impacts to sensitive Diegan coastal sage scrub shall be mitigated at a ratio of 2:1. Permanent impacts to sensitive non-native grassland shall be mitigated at a ratio of 0.5:1.	LS
Riparian Habitat and Other Sensitive Natural Communities	Implementation of the 2019 LRDP would have the potential to impact riparian habitat or other sensitive natural communities.	PS	**BIO-3C: Permanent Impacts to Riparian Habitats.** Impacts to sensitive riparian vegetation communities shall be mitigated on or off campus through habitat enhancement or preservation or purchase of credits from an approved conservation bank. Permanent impacts to southern willow scrub-disturbed shall be mitigated at a ratio of 3:1. Permanent impacts to non-vegetated channel shall be mitigated at a ratio of 2:1. If the impacted non-vegetated channel and southern willow scrub–disturbed habitat within the Hillcrest Campus is under the jurisdiction of the ACOE, RWQCB, and/or CDFW then the applicable wetland permit conditions shall be implemented.	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Riparian Habitat and Other Sensitive Natural Communities	Implementation of the 2019 LRDP would have the potential to impact riparian habitat or other sensitive natural communities.	PS	**BIO-3D: Temporary Impacts to Sensitive Vegetation Communities.** Temporary impacts to sensitive vegetation communities including Diegan coastal sage scrub and non-native grassland shall be restored in place at a 1:1 ratio. Restoration shall be implemented in the final phase of construction or during an earlier phase if no additional impacts from future construction phases would occur. A Revegetation Plan including development of reasonable success criteria and appropriate monitoring protocols and timelines shall be developed for restoration of temporarily impacted areas. UC San Diego Campus Planning shall provide guidance for and oversight of the Restoration Plan and implementation respectively. The process for establishing and sampling a representative Diegan coastal sage scrub and non-native grassland reference site within the Hillcrest Campus shall be described in the Restoration Plan. The Restoration Plan shall include a criterion for removing and minimizing non-native plant species listed as invasive by the California Invasive Plant Council.	LS
Riparian Habitat and Other Sensitive Natural Communities	Implementation of the 2019 LRDP would have the potential to impact riparian habitat or other sensitive natural communities.	PS	**BIO-3E: Jurisdictional Delineation.** During the project planning process, if the area of disturbance is within a storm drain outlet; mapped as a potential drainage or wetland; or the project area contains or is located immediately adjacent to a natural drainage course, a qualified Biologist shall conduct a jurisdictional delineation. The jurisdictional delineation shall use current regulatory guidance from ACOE, RWQCB, and CDFW to identify the presence of potential regulated wetlands, waters, and habitats in the project vicinity. If there is potential for the project to adversely affect wetlands or waters, impacts shall be avoided and minimized during the final design phase, to the extent practicable. Unavoidable impacts shall be mitigated through implementation of Mitigation Measure BIO-3C, as applicable, and conformance with applicable wetland permit condition.	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Riparian Habitat and Other Sensitive Natural Communities	Implementation of the 2019 LRDP would have the potential to impact riparian habitat or other sensitive natural communities.	PS	**BIO-3F: Pre-Construction Meeting.** Prior to construction, a pre-construction meeting shall be held between the qualified Biologist, UC San Diego Project Manager and Campus Planning staff, and Construction Manager and/or Grading Contractor to ensure the appropriate personnel are informed of the sensitivity of habitats in the open space canyon areas: 1. Prior to commencement of clearing or grading activities, fencing (e.g., silt fencing, orange construction fencing, and/or chain-link fencing as determined by UC San Diego Campus Planning) shall be installed around the approved limits of disturbance to prevent errant disturbance of sensitive biological resources by construction vehicles or personnel. Installation of fencing to demarcate the approved limits of disturbance shall be verified by a qualified Biologist prior to initiation of clearing or grading activities. All movement of construction vehicles, including ingress and egress of equipment and personnel, shall be limited to designated construction zones. The fencing shall be removed upon completion of all construction activities. 2. No temporary storage or stockpiling of construction materials shall be allowed within the open space canyon areas. This prohibition shall not be applied to facilities that are planned to traverse the open space canyon areas (e.g., driveways, roads, utilities corridors). Staging areas and construction sites in proximity to the open space canyon areas shall be kept free of trash, refuse, and other waste; no waste dirt, rubble, or trash shall be deposited in these areas.	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Riparian Habitat and Other Sensitive Natural Communities	Implementation of the 2019 LRDP would have the potential to impact riparian habitat or other sensitive natural communities.	PS	**BIO-3G: Errant Construction Activities.** If errant construction activities result in inadvertent impacts to biological resources outside of the approved limits of disturbance, such impacted areas shall be evaluated and quantified by a qualified Biologist and revegetation options coordinated with UC San Diego Campus Planning staff. Errant construction impacts to non-sensitive vegetation communities and non-native grassland shall be revegetated with an appropriate native erosion control seed mix. Errant construction impacts to wetland vegetation communities and native upland vegetation communities shall be restored to the pre-impact vegetation community.	LS
Riparian Habitat and Other Sensitive Natural Communities	Implementation of the 2019 LRDP would have the potential to impact riparian habitat or other sensitive natural communities.	PS	**BIO-3H: Fire Prevention during Construction.** Equipment to extinguish small brush fires (e.g., from trucks or other vehicles) shall be present on site during all phases of project construction, along with personnel trained in the use of such equipment. Smoking shall be prohibited in construction areas adjacent to flammable vegetation.	LS
Riparian Habitat and Other Sensitive Natural Communities	Implementation of the 2019 LRDP would have the potential to impact riparian habitat or other sensitive natural communities.	PS	**BIO-3I: Construction Monitoring.** During project construction, a qualified Biologist shall visit the site at the start of each construction project to conduct a pre-construction environmental meeting with the construction contractor's Construction Manager and other appropriate personnel. The monitor shall conduct regular visits during site preparation, vegetation removal, and grading activities within or adjacent to native vegetation and during the raptor and general avian breeding season (refer to BIO-2C and 2D). During site visits, the monitor shall be responsible for ensuring that the construction activities and staging areas are restricted to the approved limits of work, and protective fencing is adequately maintained. The biological monitor shall be responsible for ensuring that the contractor adheres to the other provisions described in Mitigation Measures BIO-3F through BIO-3J. The monitor, in cooperation within the construction project manager, shall have the authority to halt construction activities in the event that these provisions are not met. The biological monitor shall submit regular reports to UC San Diego Campus Planning during construction documenting the implementation of all grading and construction minimization measures.	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Riparian Habitat and Other Sensitive Natural Communities	Implementation of the 2019 LRDP would have the potential to impact riparian habitat or other sensitive natural communities.	PS	**BIO-3J: Night Lighting.** If temporary night lighting is necessary during construction, lights shall be directed away from sensitive vegetation communities and shielded to minimize temporary lighting of the surrounding habitat.	LS
Riparian Habitat and Other Sensitive Natural Communities	Implementation of the 2019 LRDP would have the potential to impact riparian habitat or other sensitive natural communities.	PS (Operation)	**BIO-3K: Runoff and Water Quality.** Irrigation and pest management for the Hillcrest Campus shall be implemented as described below to minimize runoff and impacts to water quality: • Irrigation for project landscaping shall be minimized and controlled in areas in and adjacent to the steep slope canyon areas through efforts such as designing irrigation systems to match landscaping water needs, using sensor devices to prevent irrigation during and after precipitation, and using automatic flow reducers/shut-off valves that are triggered by a decrease in water pressure from broken sprinkler heads or pipes. • Integrated Pest Management principles pursuant to the UC Integrated Pest Management Program shall be implemented to the extent practicable for areas in and adjacent to the steep slope canyon areas for chemical pesticides, herbicides, and fertilizers. Examples of such measures may include, but are not limited to, alternative weed/pest control measures (e.g., hand removal) and proper application techniques (e.g., conformance to manufacturer specifications and legal requirements).	LS
Riparian Habitat and Other Sensitive Natural Communities	Implementation of the 2019 LRDP would have the potential to impact riparian habitat or other sensitive natural communities.	PS	**BIO-3L: Invasive Plant Species Prevention.** During construction and landscaping within the Hillcrest Campus the following measures shall be implemented to minimize the spread of invasive plant species: • Construction equipment shall be cleaned before coming to the Hillcrest Campus. • Weed-free straw wattles shall be used for erosion control. • Appropriate landscaping species shall be selected based on the vegetation communities within the steep slope canyon	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation

Cont'd Riparian Habitat and Other Sensitive Natural Communities			areas adjacent to the project. In areas supporting native (or disturbed native) vegetation communities, revegetation of impacted slopes shall be with appropriate native plant materials.
			• Landscaping adjacent to the steep slope canyon areas shall comply with the following requirements to prevent the introduction of invasive species:
			  • Appropriate landscaping shall be selected based on the vegetation communities within the portion of the steep slope canyon areas adjacent to the project. In areas supporting native (or disturbed native) vegetation communities, revegetation of impacted slopes shall be with appropriate native plant materials. In particular, where the steep slope canyon areas are disturbed by construction, installation of native plants, including but not limited to California sagebrush, California buckwheat, lemonadeberry, deerweed (*Acmispon glaber*), monkey flower (*Diplacus aurantiacus*), and black sage (*Salvia mellifera*), is recommended to make the steep slope canyon areas more impenetrable to people while reinforcing the boundaries and edges of canyon areas.
			  • Only non-invasive plant species shall be included in the landscape plans for projects within Fuel Management Zone 1 (species not listed on the California Invasive Plant Inventory prepared by the California Invasive Plant Council). A qualified landscape architect and/or qualified Biologist shall review landscape plant palettes prior to implementation to ensure that no invasive species are included.
			  • Any planting stock brought onto a project site adjacent to the open space canyon areas for landscaping or habitat restoration shall be inspected to ensure it is free of pest species that may invade natural areas, including but not limited to Argentine ants (*Linepithema humile*) and South	

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Riparian Habitat and Other Sensitive Natural Communities			American fire ants (*Solenopsis* spp.). Inspections of planting stock for habitat restoration shall be by a qualified Biologist, and inspections of planting stock for landscaping shall be the responsibility of a qualified UC San Diego project manager or their designated assignee. Any planting stock found to be infested with such pests shall be quarantined, treated, or disposed of according to best management practices by qualified personnel, in a manner that precludes invasions into natural habitats.	
Riparian Habitat and Other Sensitive Natural Communities	Implementation of the 2019 LRDP would have the potential to impact riparian habitat or other sensitive natural communities.	PS (Phase 2A)	**BIO-3M: Wildlife Mortality Avoidance.** Roads and driveways along the steep slope canyon areas shall have barriers to discourage wildlife from entering the roads.	LS
Riparian Habitat and Other Sensitive Natural Communities	Implementation of the 2019 LRDP would have the potential to impact riparian habitat or other sensitive natural communities.	PS (Operation)	**BIO-3N: Edge Effects Avoidance.** Projects adjacent to the open space canyon areas shall install permanent signage along the boundary, indicating the presence of lands supporting sensitive habitat to discourage access outside of established trails. Projects adjacent to the open space canyon areas shall install other visual/physical barriers (such as appropriate landscaping) to discourage human encroachment into the canyon areas where trespass is likely to occur (gradual slopes, areas of low, open vegetation, areas of previous disturbance). Maintenance of storm water facilities shall be conducted in a manner to minimize impacts to adjacent sensitive habitats. Maintenance shall be overseen by a qualified Biologist and would occur outside the general bird-breeding season, which extends from January 15 through August 31.	LS
Riparian Habitat and Other Sensitive Natural Communities	Implementation of the 2019 LRDP would have the potential to impact riparian habitat or other sensitive natural communities.	PS	**BIO-3O: Non-Native Insects Avoidance.** The following measures shall be implemented for each project or construction phase that would remove or install tree species on the Hillcrest Campus that may be used as host trees by SHBs: • Trees to be planted on the Hillcrest Campus shall be obtained from a reliable source and be free of sign of SHB infestation.	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Riparian Habitat and Other Sensitive Natural Communities			• An education program for on-site workers responsible for tree installation shall be implemented. The program shall describe the signs of SHB infestation (e.g., sugary exudate on trunks or branches, and SHB entry/exit holes [approximately the size of the tip of a ballpoint pen]). • Sign of SHB infestation shall be reported to CDFW and UC's Eskalen Lab (https://ucanr.edu/sites/eskalenlab/) by the UC San Diego project manager and/or the project Biologist. • Trees with sign of SHB infestation shall be pruned or removed, as appropriate, and potential host materials shall be chipped to less than one inch prior to composting on site or transfer to a landfill. • Equipment that is used to prune or remove SHB-infected trees shall be disinfected prior to additional use. • Biologists monitoring mitigation sites shall be knowledgeable regarding sign of SHB infestation.	
Wetlands	Implementation of the 2019 LRDP would have the potential to impact federal jurisdictional wetlands.	PS	**BIO-3E, BIO-3C, BIO-3E through BIO-3O** (see above).	LS
Native Resident or Migratory Fish or Wildlife Species	Implementation of the 2019 LRDP would not 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.	NI	No mitigation is required.	NI
Tree Preservation	Implementation of the 2019 LRDP would not conflict with any local policies or ordinances protecting biological resources,	NI	No mitigation is required.	NI

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Tree Preservation	such as tree preservation policy or ordinance.			
Habitat Conservation Plan	Implementation of the 2019 LRDP would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	NI	No mitigation is required.	NI
3.4 Cultural and Tribal Cultural Resources				
Historical Resources	Implementation of the 2019 LRDP would alter a historical resource causing a substantial adverse change in the significance.	PS (Phase 1A)	**CUL-1: HABS Level 1 Documentation.** UC San Diego shall prepare archival Historic American Building Survey (HABS) Level 1 documentation for the single-family residence located at 101 Dickinson Street. Documentation of the existing conditions shall be undertaken prior to demolition of the structure. If requested, copies of HABS documentation shall be provided to the Hillcrest History Guild, the San Diego History Center, and other interested parties to be identified. HABS Level 1 documentation shall consist of the following: • Architectural and historical narrative; • Archival drawings; • If adequate archival drawings are not available, measured drawings shall be produced; and • Large-format photography.	SU
Archaeological Resources	Implementation of the 2019 LRDP could result in impacts to unrecorded subsurface archaeological resources resulting from land disturbance associated with project development.	PS	**CUL-2A: On-Campus Review Grading Plans.** To address potentially significant impacts to unknown archaeological resources on the Hillcrest Campus mesa within the campus property boundary, the following measures shall be followed prior to the start of construction: 1. Prior grading plans shall be reviewed, if available, to determine if prior grading activity has removed the top 2 or more feet of soil on mesas, cliffs, and other flat areas.	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Archaeological Resources			a. If 2 or more feet have been previously removed, no further work is required. b. If it cannot be verified that prior grading has removed 2 or more feet of soil, a qualified Archaeologist shall monitor grading activities during the removal of the top 2 to 3 feet of soil or if bedrock is encountered. 2. A qualified Archaeologist shall monitor all grading activities within areas of natural deposition. 3. Monitoring shall cease if grading reaches underlying formational material, regardless of how shallow or in what location it is found. 4. All monitoring shall be conducted in accordance with Mitigation Measure CUL-2B	
Archaeological Resources	Implementation of the 2019 LRDP could result in impacts to unrecorded subsurface archaeological resources resulting from land disturbance associated with project development.	PS (Phases 1A, 1B, 2A, 2B, 3, 5)	**CUL-2B: Construction Monitoring.** If construction monitoring is determined to be required on the Hillcrest Campus by Mitigation Measure CUL-2A or construction occurs off campus in Mission Valley, the following measures shall be followed. The following measure shall be implemented during all ground disturbance associated with the off-site portion of Bachman Place widening within 500 feet of the Hotel Circle South intersection: 1. Prior to beginning any work that requires monitoring: a. A preconstruction meeting shall be held that includes the qualified Archaeologist, the UC San Diego Project Manager and Campus Planning staff, Construction Manager and/or Grading Contractor, and other appropriate personnel so the Archaeologist can make comments and/or suggestions concerning the monitoring program to the Construction Manager and/or Grading Contractor. b. The Archaeologist shall (at that meeting or subsequently) submit to the UC San Diego Project Manager a copy of the site/grading plan (reduced to 11 x 17 inches) that identifies areas to be monitored as well as areas that may require delineation of grading limits. c. The Archaeologist shall also coordinate with the UC San Diego Project Manager on the construction schedule to identify when	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Archaeological Resources			and where monitoring is to begin, including the start date for monitoring. 2. The qualified Archaeologist and a Native American Monitor shall be present during grading/excavation and shall document such activity on a standardized form. A record of activity shall be sent to the UC San Diego Environmental Planner and Project Manager each month. 3. Discoveries a. Discovery Process. In the event of a discovery, and when requested by the Archaeologist or the Archaeological Principal Investigator (PI), the UC San Diego Project Manager shall be contacted and shall divert, direct, or temporarily halt ground-disturbing activities in the area of discovery to allow for preliminary evaluation of potentially significant archaeological resources. The PI shall also immediately notify UC San Diego Campus Planning of such findings at the time of discovery. b. Determination of Significance. The significance of the discovered resources shall be determined by the PI in consultation with UC San Diego Campus Planning and the Native American Community, as appropriate. UC San Diego Campus Planning must concur with the evaluation before grading activities will be allowed to resume. For archaeological resources considered significant by the PI, a Research Design and Data Recovery Program shall be prepared, approved by UC San Diego Campus Planning, and carried out to mitigate impacts before ground-disturbing activities in the area of discovery will be allowed to resume. 4. If human remains are discovered, work shall halt in that area and the procedures detailed in the California Health and Safety Code (Section 7050.5) and the California Public Resources Code (Section 5097.98), if applicable, will be followed. 5. Notification of Completion. The Archaeologist shall notify UC San Diego Campus Planning, as appropriate, in writing of the end date of monitoring.	

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Archaeological Resources			6. Handling and Curation of Significant Artifacts and Letter of Acceptance a. The Archaeologist shall ensure that all significant cultural resources or artifacts collected are cleaned, catalogued, and permanently curated with an appropriate institution; that a letter of acceptance from the curation institution has been submitted to UC San Diego Campus Planning; that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate. b. Curation of artifacts associated with the survey, testing, and/or data recovery for the project shall be completed in consultation with UC San Diego Campus Planning, as applicable. 7. Final Results Reports (Monitoring and Research Design and Data Recovery Program). Prior to completion of the 2019 LRDP, two copies of the Final Results Report (even if no significant resources were found) and/or evaluation report, if applicable, which describe the results, analysis, and conclusions of the Archaeological Monitoring Program (with appropriate graphics) shall be submitted to UC San Diego Campus Planning for approval. For significant archaeological resources encountered during monitoring, the Research Design and Data Recovery Program shall be included as part of the Final Results Report. 8. Recording Sites with State of California Department of Park and Recreation. The qualified Archaeologist shall record (on the appropriate State of California Department of Park and Recreation forms (DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program and submit such forms to the South Coastal Information Center with the Final Results Report	
Human Remains	Implementation of the 2019 LRDP could result in potential impacts to human remains	PS (Phases 1A, 1B, 2A, 2B, 3, 5)	**CUL-2A and CUL-2B** (see above).	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Human Remains	located in recorded and unrecorded subsurface sites.			
Tribal Cultural Resources	Implementation of the 2019 LRDP could result in potential impacts to unknown TCRs located in unrecorded subsurface sites.	PS (Phases 1A, 1B, 2A, 2B, 3, 5)	**CUL-2A and CUL-2B** (see above).	LS
3.5 Energy				
Wasteful or Inefficient Energy Usage	Implementation of the 2019 LRDP could result in the wasteful, inefficient, or unnecessary use of energy.	PS	**ENE-1: Construction Fuel Use.** For all construction activities, the construction contractor shall implement the following measures during construction: 1. When more than one piece of construction equipment is available to complete a task, the contractor shall use the most fuel-efficient equipment. 2. Newer or more fuel-efficient models shall be selected from the contractor fleet for use. 3. Workers shall be encouraged to carpool or use public transit to access the campus during construction. Construction contractor shall facilitate carpooling by providing means to organize carpools or request transit center pickups. 4. When haul trucks are available with a haul capacity larger than 15 cubic yards but a fuel efficiency similar to a 15-cubic-yard-capacity truck, the larger capacity trucks shall be used to reduce total truck trips.	LS
Conflict with Renewable or Energy Efficiency Plan	Implementation of the 2019 LRDP would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	LS	No mitigation is required.	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
3.6 Geology and Soils				
Exposure to Seismic-Related Hazards	The Hillcrest Campus contains potential seismic hazards but compliance with the CBC and UC Seismic Safety Policy would reduce seismic related hazards to people and structures.	LS	No mitigation is required.	LS
Soil Erosion or Topsoil Loss	Implementation of the 2019 LRDP would not result in substantial soil erosion or loss of topsoil associated with development of the Hillcrest Campus.	LS	No mitigation is required.	LS
Geologic Stability	Steep, unstable slopes or differential settlement of soils may be found on campus; however, compliance with applicable regulations would ensure that the project would not expose people or structures to hazards associated with soil stability issues.	LS	No mitigation is required.	LS
Expansive Soils	Expansive soils may be found on campus; however, compliance with applicable regulations would ensure they would not pose a substantial hazard to life or property.	LS	No mitigation is required.	LS
Paleontological Resources	Implementation of the 2019 LRDP could potentially impact significant paleontological resources during construction grading and excavation.	PS (Phases 1A, 1B, 2A, 2B, 3, 5)	**GEO-5: Paleontological Monitoring during Construction.** To address potentially significant impacts to previously undocumented paleontological resources within highly sensitive geologic formations, a monitoring program shall be implemented. Grading and excavation equating to 1,000 cubic yards or more within highly sensitive Mission	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Paleontological Resources			Valley Formation shall require monitoring by a qualified Paleontologist and shall include the following measures: 1. Prior to beginning any grading/excavation work: a. A preconstruction meeting shall be held that includes the qualified Paleontologist, the UC San Diego Project Manager and Campus Planning staff, Construction Manager and/or Grading Contractor, and other appropriate personnel so the Paleontologist can make comments and/or suggestions concerning the monitoring program to the Construction Manager and/or Grading Contractor. b. The Paleontologist shall (at that meeting or subsequently) submit to the UC San Diego Project Manager a copy of the site/grading plan (reduced to 11 x 17 inches) that identifies areas to be monitored as well as areas that may require delineation of grading limits. c. The Paleontologist shall also coordinate with the UC San Diego Project Manager on the construction schedule to identify when and where monitoring is to begin and to specify the start date for monitoring. 2. The Paleontologist shall be present during grading/excavation and shall document such activity on a standardized form. A record of activity shall be sent to UC San Diego Campus Planning and the UC San Diego Project Manager each month. 3. For excavations in geologic units of known high sensitivity for paleontological resources (i.e., Mission Valley Formation), a qualified Paleontologist shall be present initially during 100 percent of the earth moving activities. After 50 percent of the excavations are complete within the unit, if no significant fossils have been recovered, the level of monitoring may be reduced or suspended entirely at the Paleontologist's discretion and in consultation with UC San Diego Campus Planning. 4. Excavations in formations of low and moderate paleontological sensitivity, such as the Linda Vista Terrace Formation, do not require paleontological monitoring.	

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Paleontological Resources			5. Discoveries: a. **Discovery Process.** In the event of a discovery, and when requested by the Paleontologist, the UC San Diego Project Manager shall be contacted and shall divert, direct, or temporarily halt ground-disturbing activities in the area of discovery to allow for preliminary evaluation of potentially significant paleontological resources. The Paleontologist shall also immediately notify UC San Diego Campus Planning of such findings at the time of discovery. b. **Determination of Significance.** The significance of the discovered resources shall be determined by the Paleontologist in consultation with UC San Diego Campus Planning. UC San Diego Campus Planning must concur with the evaluation before grading activities shall be allowed to resume. c. **Documentation and Treatment of Finds**. Based on the scientific value and/or uniqueness of the find, the qualified Paleontologist may record the find and allow work to continue, or recommend salvage and recovery of the fossil. If treatment and salvage are required, recommendations shall be consistent with Society of Vertebrate Paleontology 2010 guidelines and currently accepted scientific practice. Work in the affected area may resume once the fossil has been assessed and/or salvaged and a paleontological monitor is present. 6. **Notification of Completion.** The Paleontologist shall notify UC San Diego Campus Planning, as appropriate, in writing of the end date of monitoring. 7. **Handling and Curation of Significant Paleontological Specimens and Letter of Acceptance.** The Paleontologist shall ensure that all significant fossils collected are appropriately prepared and permanently curated with an appropriate institution, and that a letter of acceptance from the curation institution has been submitted to UC San Diego Campus Planning. 8. **Final Results Reports (Monitoring and Research Design and Recovery Program).** Prior to completion of the 2019 LRDP, two	

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Paleontological Resources			copies of the Final Results Report (even if no significant resources were found) and/or evaluation report, if applicable, which describe the results, analysis, and conclusions of the Paleontological Monitoring Program (with appropriate graphics) shall be submitted to UC San Diego Campus Planning for approval.	
3.7 Greenhouse Gas Emissions				
Generate Greenhouse Gas Emissions	Implementation of the 2019 LRDP would not generate GHG emissions that would have a significant impact on the environment.	LS	No mitigation is required.	LS
Consistency with Applicable Plan	Implementation of the 2019 LRDP would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.	LS	No mitigation is required.	LS
3.8 Hazards and Hazardous Materials				
Transport, Use, and Disposal of Hazardous Materials	The proposed 2019 LRDP would result in increased transport, use, and disposal of hazardous materials that could pose a hazard to the public and environment; however, these activities would be comprehensively managed by UC San Diego pursuant to state and federal law and would not result in a significant hazard.	LS	No mitigation is required.	LS
Accidental Releases	Construction activities associated with the proposed 2019 LRDP could not potentially create a significant hazard to the	PS (Phases 1A, 1B, 2B, 4)	**HAZ-2A: Demolition Procedure.** Prior to the initiation of demolition activities, the UC San Diego Project Manager shall consult with EH&S regarding existing aging campus buildings, which shall be sampled and have laboratory tests completed for the presence of asbestos, lead,	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Accidental Releases	public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials due to compliance with state and federal laws.		biohazardous waste, pharmaceutical waste, and radioactive waste. If any lead and/or asbestos is detected in the building material, a Remediation Plan shall be prepared in coordination with EH&S to adhere to the proper agency remediation guidelines (i.e., APCD, Cal/OSHA, USEPA, CDPH, NRC) followed by a clearance report. Prior to demolition of the campus buildings, a third-party consultant shall provide to the UC San Diego Project Manager the clearance report stating that the lead and/or asbestos concentrations are below Cal/OSHA permissible exposure limits.	
Accidental Releases	Construction activities associated with the proposed 2019 LRDP could not potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials due to compliance with state and federal laws.	PS (Phases 2A, 3)	**HAZ-2B: Assessment and Remediation.** During project planning, EH&S shall be consulted in order to identify if any past contamination, USTs, ASTs, or other contamination could potentially occur in areas to be impacted. If it is determined that contamination has potential to exist on a project site, the licensed contractor shall screen export soils generated during construction activities in the area of the known contamination to determine if contamination is present. If contamination is encountered and if it poses a risk to human health or the environment, actions shall be taken prior to any construction, pursuant to applicable regulations, to remove or otherwise remediate the contamination through appropriate measures such as natural attenuation, active remediation, and engineering controls. Assessment and remediation activities shall incorporate the following conditions 1. All assessment and remediation activities shall be conducted in accordance with a work plan that is approved by the regulatory agency having oversight of the activities. 2. It may be necessary to excavate existing soil within the project site or to bring fill soils into the site from off-site locations. At sites that have been identified as being contaminated or where soil contamination is suspected, appropriate sampling and classification are required prior to disposal of excavated soil. Contaminated soil shall be properly disposed of at an approved off-site facility. Fill soils also shall be sampled to ensure that imported soil parameters are within acceptable levels.	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Accidental Releases			3. Caution shall be taken during excavation activities near existing groundwater monitoring wells so that they are not damaged. Existing groundwater monitoring wells may have to be abandoned and reinstalled if they are located in an area that is undergoing redevelopment.	
Accidental Releases	Construction activities associated with the proposed 2019 LRDP could not potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials due to compliance with state and federal laws.	PS (Phases 2A, 3)	**HAZ-2C: Contamination, Remediation, and Removal.** In the event that USTs not identified in consultation with EH&S or undocumented areas of contamination are encountered during construction or redevelopment activities, work shall be discontinued until appropriate health and safety procedures are implemented. Either the County of San Diego DEH or the SDRWQCB, depending on the nature of the contamination, must be notified regarding the contamination. Each agency and program within the respective agency has its own mechanism for initiating an investigation. The appropriate program (e.g., the DEH Local Oversight Program for tank release cases, the County DEH Voluntary Assistance Program for non-tank release cases, the RWQCB for non-tank cases involving groundwater contamination) shall be selected based on the nature of the contamination identified. The contamination remediation and removal activities shall be conducted in accordance with pertinent regulatory guidelines under the oversight of the appropriate regulatory agency.	LS
Accidental Releases	Construction activities associated with the proposed 2019 LRDP could not potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials due to compliance with state and federal laws.	PS (Phases 2A, 3)	**HAZ-2D: Groundwater Pretreatment.** Prior to groundwater dewatering activities, the contractor should consult with EH&S in the area of known contamination. Whenever possible, extracted groundwater should be discharged to surface waters under the current general National Pollutant Discharge Elimination System permit adopted by the SWRCB. However, to protect water quality in the San Diego area, the City recognizes that it may be necessary to accept discharges of extracted contaminated groundwater to the Metropolitan Sewerage System and its tributary systems. Prior to the necessary discharge of groundwater from dewatering activities for construction of the Replacement Hospital and north access driveway, the City would require groundwater sampling analytical results of a representative sample or multiple samples of the groundwater to be discharged. If determined that the discharged	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Accidental Releases			groundwater is contaminated, an application would be filed with the City. Prior to the start of construction, necessary pretreatment equipment would be installed, operated, and maintained during the length of dewatering activities in compliance with the terms of the permit and with the General and Specific Prohibitions outlined in the City's program. When discharges originate from sites contaminated with petroleum products (e.g., gasoline, diesel, AvGas, JP) or organic solvents, the permittee must provide pretreatment equivalent to the SWRCB's pretreatment technology standards for organics (carbon adsorption or air stripping). Additionally, if free product is present or expected, the pretreatment system must include a free product recovery system/method to prevent pass through, and the pretreatment equipment must be equipped with a feature, such as an automatic sensor with shut-off, that would cease all discharges to the sewer in the event of breakthrough (free product release from the recovery device). For the purposes of this requirement, free product is defined as an immiscible liquid phase hydrocarbon existing in the subsurface with a positive pressure such that it can flow into a well. Pretreatment equipment may also be necessary to remove silt, sand, or other solid material from the wastewater prior to disposal. All pretreatment equipment must be in place and fully operational prior to commencing discharges to sewer.	
Hazards to Nearby Schools	Hazardous materials and waste would be handled within one-quarter mile of existing schools; however, the materials are not anticipated to occur in quantities that would pose a risk to occupants of the existing schools or the campus community.	LS	No mitigation is required.	LS
Hazards from Nearby Airports	Activities from San Diego International Airport pose minimal safety hazards to people residing or working in the	LS	No mitigation is required.	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Hazards from Nearby Airports	project area as a result of implementation of the 2019 LRDP.			
Emergency Response and Evacuation Plans	2019 LRDP construction-related road closures or detours could require alternate emergency response or evacuation routes on campus.	PS (Phases 1A, 1B, 2A, 2B, 3, 4)	**HAZ-5: Emergency Services Notification.** In the event that the construction of a project requires a lane or roadway closure on campus, prior to construction the contractor and/or Project Manager shall ensure that the Hillcrest Campus Fire Marshal and campus community at large are notified. If determined necessary by the Hillcrest Campus Fire Marshal, local emergency services shall be notified by the Fire Marshal of the closure.	LS
Wildland Fires	Portions of the campus contain natural canyon areas, which lie within a very high fire hazard severity zone; however, implementation of fire protection measures, brush management guidelines, and compliance with associated regulations would reduce impacts to a less than significant level.	LS	No mitigation is required.	LS
Listed Hazardous Materials Sites	Implementation of the 2019 LRDP would not result in activities located on a listed hazardous materials site compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or environment.	NI	No mitigation is required.	NI

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
3.9 Hydrology and Water Quality				
Water Quality	Implementation of the 2019 LRDP would have the potential to generate pollutants during construction and post-construction activities; however, compliance with applicable regulations would ensure that downstream water quality is not impacted.	LS	No mitigation is required.	LS
Site Drainage and Hydrology	Implementation of the 2019 LRDP could substantially alter drainages and hydrology; however, compliance with applicable regulations would ensure it would not result in flooding, exceedance of the existing storm water drainage system, or erosion.	LS	No mitigation is required.	LS
Water Quality Control Plan or Sustainable Groundwater Management Plan	Implementation of the 2019 LRDP would have the potential to generate pollutants during construction and post-construction activities; however, compliance with applicable regulations would ensure that it would not conflict with or obstruct the implementation of the San Diego Basin Plan.	LS	No mitigation is required.	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Groundwater Supplies	Implementation of the 2019 LRDP would not substantially deplete decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	NI	No mitigation is required.	NI
Seiches, Tsunamis, or Mudflows	Implementation of the 2019 LRDP would not expose people or structures to inundation as a result of tsunami or mudflow.	NI	No mitigation is required.	NI
3.10 Land Use and Planning				
Conflict with Applicable Land Use Plans, Policies, and Regulations	Implementation of the 2019 LRDP would not result in inconsistencies with applicable land use plans, policies, or regulations.	LS	No mitigation is required.	LS
Physically Divide a Community	Implementation of the 2019 LRDP would not physically divide an established community.	NI	No mitigation is required.	NI
3.11 Noise				
Exceed Noise Standards	Implementation of the 2019 LRDP would have the potential to generate substantial noise levels as a result of increases in traffic volumes, development of new stationary sources of noise, and increases in human activity throughout the Hillcrest Campus. The 2019 LRDP would also have the potential to result in temporary increases in noise levels during construction.	PS	**NOI-1A: Construction Noise.** For all construction activities, the construction contractor shall implement the following measures during construction: 1. The construction contractor shall work with proper administrative controls on equipment in order to not exceed a 12-hour average sound level of 75 dBA L_{eq} at any NSLU between 7:00 a.m. and 7:00 p.m. Monday through Saturday. 2. The construction contractor shall provide written notification to the noise-sensitive uses within 210 feet of normal construction activities and 500 feet of pile driving at least 3 weeks prior to the start of	Temporary SU (Construction)

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Exceed Noise Standards			construction activities, informing them of the estimated start date and duration of construction activities. 3. Construction activities that could generate high noise levels, such as pile driving, shall be scheduled during times that would have the least impact on sensitive receptor locations. This could include restricting the noisiest construction activities in the areas of potential impact to hours when staff and students would most likely be taking lunch and medical procedures and operation of equipment would be least likely to be scheduled or required. Days of activity shall be adjusted to avoid holidays or scheduled exam days. 4. Stationary construction noise sources, such as temporary generators, shall be located as far from nearby noise-sensitive receptors as possible. 5. Trucks shall be prohibited from idling along streets serving the construction site where noise-sensitive receptors are located. 6. Outfit construction equipment with properly maintained, manufacturer-approved or recommended sound abatement means on air intakes, combustion exhausts, heat dissipation vents, and the interior surfaces of engine hoods and power train enclosures. 7. Position (to the extent practical) construction laydown and vehicle staging areas as far from noise-sensitive land uses as feasible. 8. If the hourly average noise level is anticipated to exceed 75 dBA for a particular activity, limit simultaneous operation of construction equipment or limit construction time within another hour to reduce the 12-hour average noise level. 9. If feasible and determined to be an effective option, install temporary noise barriers around the perimeter of the construction area to minimize construction noise.	

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Exceed Noise Standards	Implementation of the 2019 LRDP would have the potential to generate substantial noise levels as a result of increases in traffic volumes, development of new stationary sources of noise, and increases in human activity throughout the Hillcrest Campus. The 2019 LRDP would also have the potential to result in temporary increases in noise levels during construction.	PS (Operation)	**NOI-1B: Mechanical Equipment Shielding.** Concurrent with design development and prior to construction of the CUP and any new building requiring HVAC equipment, a report prepared by a qualified acoustical specialist shall demonstrate that equipment is designed to ensure that noise levels from the equipment shall not exceed an exterior noise level of 65 dBA CNEL at the nearest on- and off-site NSLU. Noise from the CUP or HVAC equipment may be reduced through implementation of any individual measure or a combination of the following measures: • Locate noisiest equipment, such as cooling towers, as far from sensitive receptors as possible. • Utilize elevation and/or placement of equipment within the CUP strategically to attenuate noise from larger and noise producing equipment. • Install a permanent noise barrier or shielding surrounding all equipment, or apply acoustical treatment to building surfaces. • Install a permanent noise enclosure that completely encompasses equipment when access doors are shut. Install sound attenuation louvers and silencers on exhaust stacks where necessary, or make use of natural ventilation. • Install noise enclosures, barriers, or acoustical treatment surrounding individual pieces of equipment or exhaust. • Place equipment below grade in basement space. • Use technologies to reduce noise, such as Whisper Quiet technology, when equipment is available. Other technology may include low-speed fans, baffles, or mufflers. • Apply acoustical treatment to cooling tower intake and discharge.	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Exceed Noise Standards	Implementation of the 2019 LRDP would have the potential to generate substantial noise levels as a result of increases in traffic volumes, development of new stationary sources of noise, and increases in human activity throughout the Hillcrest Campus. The 2019 LRDP would also have the potential to result in temporary increases in noise levels during construction.	PS (Operation)	**NOI-1C: Special Event Noise.** Use of sound amplifying equipment at events at Hillcrest Campus outdoor areas between the hours of 10:00 p.m. and 8:00 a.m. shall be limited to a noise level that is not plainly audible at a distance of 50 feet from the area where it is located. Options for limiting noise include but are not limited to committing to not use amplified noise or, when amplified noise is required, using directional speakers or limiting low-frequency bass music noise levels. Prior to hosting an event, event organizers shall be required to fill out an event application that includes this condition as an event requirement. Campus security shall have the authority to shut down events that do not comply with this requirement.	LS
Exceed Noise Standards	Implementation of the 2019 LRDP would have the potential to generate substantial noise levels as a result of increases in traffic volumes, development of new stationary sources of noise, and increases in human activity throughout the Hillcrest Campus. The 2019 LRDP would also have the potential to result in temporary increases in noise levels during construction.	PS (Operation)	**NOI-1D: Interior Noise Levels.** Prior to issuance of a certificate of occupancy for any new campus noise-sensitive land uses (residences, inpatient facilities, or classrooms and related learning spaces), a site-specific acoustical analysis shall be prepared by a qualified acoustical specialist to demonstrate that the sound level in all habitable rooms would be 45 dBA CNEL or less or 50 dBA or less for learning spaces/classrooms. The analysis shall specifically take into consideration stationary noise sources, such as building HVAC systems. Noise reduction measures for structures may include insulation between rooms or floors, or specific window treatments, such as multiple-pane and/or laminated glazing, which shall be integrated into the project design.	LS
Excessive Groundborne Vibration or Noise	Construction of the 2019 LRDP may require heavy equipment or pile driving activities that, if occurring close to sensitive structures or facilities, housing, vibration-sensitive instruments and/or activities, may cause damage, disruption, or interruption.	PS	**NOI-1A** (see above).	Temporary SU (Construction)

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Excessive Groundborne Vibration or Noise	Construction of the 2019 LRDP may require heavy equipment or pile driving activities that, if occurring close to sensitive structures or facilities, housing, vibration-sensitive instruments and/or activities, may cause damage, disruption, or interruption.	PS	**NOI-2A: Construction Notification.** The construction contractor shall provide written notification to the vibration-sensitive uses within the following screening distances at least three weeks prior to the start of construction activities informing them of the estimated start date and duration of daytime vibration-generating construction activities: • Existing or new residences within 75 feet of normal construction or 160 feet of pile driving • Institutional buildings with primarily daytime uses that do not require vibration-sensitive equipment within 60 feet of normal construction or 125 feet of pile driving • Uses requiring vibration-sensitive equipment, such as the hospital, within 210 feet of normal construction or 450 feet of pile driving This notification shall include information warning about the potential for impacts related to vibration-sensitive equipment. UC San Diego shall provide a phone number for the affected businesses and residents to call if they have vibration-sensitive equipment on their sites. Notification requirements shall also apply to any new businesses within 450 feet of the Hillcrest Campus potentially containing vibration-sensitive uses for which licenses are issued prior to completion of construction.	Temporary SU (Construction)
Excessive Groundborne Vibration or Noise	Construction of the 2019 LRDP may require heavy equipment or pile driving activities that, if occurring close to sensitive structures or facilities, housing, vibration-sensitive instruments and/or activities, may cause damage, disruption, or interruption.	PS	**NOI-2B: Vibration Best Management Practices.** Prior to the commencement of construction projects that would involve heavy earth-moving equipment within the following applicable screening distances, UC San Diego shall retain a qualified acoustician to prepare a construction vibration mitigation program to be implemented by the construction contractor(s): • Existing or new residences within 75 feet of normal construction or 160 feet of pile driving. • Institutional buildings with primarily daytime uses that do not require vibration-sensitive equipment within 60 feet of normal construction or 125 feet of pile driving. • Structures potentially requiring vibration-sensitive equipment within 210 feet of normal construction or 450 feet of pile	Temporary SU (Construction)

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Excessive Groundborne Vibration or Noise			driving. If, during the notification process outlined in Mitigation Measure NOI-2A, existing receptors are identified that involve activities that are vibration-sensitive at a level more stringent than VC-A (as defined by the Federal Transit Administration as medium- to high-power optical microscopes (400X), microbalances, optical balances, and similar specialized equipment), vibration shall be estimated at this structure, regardless of distance, and this measure shall apply if a potential impact is identified. • The construction vibration mitigation program shall identify and require measures to reduce vibration, such as maintaining equipment and operating equipment as far from sensitive receptors as possible, resulting from construction activities to the maximum extent practicable, as well as detail construction activity notification and monitoring processes that include, but are not limited to, vibration monitoring. • Vibration monitoring shall be performed during construction to establish the level of vibration produced by high impact activities. Baseline vibration levels at specified locations shall be established prior to the construction activity. Monitoring shall be conducted when any construction activity would occur within the above-described screening distances. Monitoring shall be conducted using portable vibration-monitoring instrumentation that provides a calibrated record of local ground movement/accelerations. If construction vibration exceeds the appropriate threshold, work should be stopped and resumed when all feasible alternative work methods and equipment intended to reduce vibration levels have be implemented.	
Aircraft Noise	The SDIA would not generate excessive noise levels at the Hillcrest Campus. In addition, implementation of the 2019 LRDP would not increase the exposure to	LS	No mitigation is required.	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Cont'd Aircraft Noise	helicopter noise because similar emergency services would be provided on-campus.			
3.12 Population and Housing				
Inducement of Substantial Population Growth	Implementation of the 2019 LRDP would not result in direct or indirect inducement of substantial population growth in the area.	LS	No mitigation is required.	LS
Displacement of Housing or People	Implementation of the 2019 LRDP would not result in the displacement of a substantial number of existing people or housing.	LS	No mitigation is required.	LS
3.13 Public Services				
Fire Protection Services	Implementation of the 2019 LRDP would not result in increased demand for fire services that would require new facilities that could result in a significant physical impact to the environment.	LS	No mitigation is required.	LS
Police Protection Services	Implementation of the 2019 LRDP would not result in increased demand for police services that would require new facilities that could result in a significant physical impact to the environment.	LS	No mitigation is required.	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Public Schools Services	Implementation of the 2019 LRDP would not result in the need for new or altered school facilities that could result in a significant physical impact to the environment.	LS	No mitigation is required.	LS
3.14 Recreation				
Deterioration of Parks and Recreational Facilities	The 2019 LRDP would increase the Hillcrest Campus population, which could increase the use of off-campus recreational facilities. However, substantial deterioration of the facilities is not anticipated.	LS	No mitigation is required.	LS
Construction or Expansion of New Recreational Facilities	Implementation of the 2019 LRDP would include the construction and expansion of recreational facilities that may have an adverse physical effect on the environment.	PS (Phases 2A, 2B, 5)	Applicable mitigation measures in other sections of this 2019 LRDP EIR. No additional mitigation is required.	LS
3.15 Transportation				
Circulation System Performance	Implementation of the proposed 2019 LRDP would cause a conflict with an applicable plan or policy addressing the circulation system during construction and operation.	PS (Phase 1A)	**TRA-1A: Hotel Circle South from Bachman Place to Camino De La Reina.** To address the impacts along the Hotel Circle South segment from Bachman Place to Camino De La Reina, the roadway shall be widened to a Three-Lane Collector prior to occupancy of Phase 1A. However, the provision of a third lane along the majority of this segment is physically infeasible due to the existing roadway width, right-of-way, and the location of the support columns for the I-8 undercrossing on Hotel Circle South. A portion of the segment near Camino De La Reina would be restriped to provide three lanes, which would improve operations and partially mitigate the impact. However, the impact would be considered significant and unavoidable.	SU

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Circulation System Performance	Implementation of the proposed 2019 LRDP would cause a conflict with an applicable plan or policy addressing the circulation system during construction and operation.	PS (Phases 1A, 1B, 2A 2B)	**TRA-1B: Bachman Place from Hotel Circle South to the Hillcrest Campus Boundary.** To address the impact to Bachman Place from Hotel Circle South to the Hillcrest Campus Boundary, a second southbound lane shall be constructed prior to occupancy of Phase 1A. However, improvements to the adjacent segment of Bachman Place from the Hillcrest Campus Boundary to the Bachman Parking Structure, which would be improved as a project feature (as described in Chapter 2, Project Description, if this 2019 LRDP EIR), cannot be completed until the existing Bachman Parking Structure is removed during Phase 2B. To provide a cohesive improvement program, UC San Diego proposes completing the improvements to Bachman Place between Hotel Circle South and the Hillcrest Campus Boundary when the adjacent segment of Bachman Place to the south is improved during Phase 2B. Therefore, a temporary significant and unavoidable impact would occur along this segment between the completion of Phase 1A to the completion of Phase 2B. At the completion of Phase 2B, the mitigation measures would be implemented, and the impact would be mitigated to a less than significant level.	SU until MM is implemented in Phase 2B; then LS
Circulation System Performance	Implementation of the proposed 2019 LRDP would cause a conflict with an applicable plan or policy addressing the circulation system during construction and operation.	PS (Phases 2A, 2B, Operation)	**TRA-1C: Hotel Circle South/Bachman Place Intersection.** Provision of right-turn overlap signal phasing at the northbound approach would mitigate the 2019 LRDP's cumulative impact under Year 2035 conditions.	LS
Induce Substantial Vehicle Miles Traveled	Implementation of the proposed 2019 LRDP would not cause substantial additional VMT that exceeds regional averages.	LS	No mitigation is required.	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Inadequate Emergency Access	Implementation of the 2019 LRDP could result in inadequate emergency access with construction related road closures.	PS (Phases 1A, 1B, 2A, 3)	**HAZ-5** (See above).	LS
Increase in Hazards due to a Geometric Design Feature	Implementation of the 2019 LRDP would not substantially increase hazards due to a geometric design feature or incompatible uses.	NI	No mitigation is required.	NI
3.16 Utilities and Service Systems				
New Utilities Facilities	Implementation of the proposed 2019 LRDP would require the construction of new and expanded water and wastewater infrastructure (pipelines), drainage, electric power, natural gas and telecommunications facilities, some of which could cause significant environmental effects.	PS (Phases 1A, 1B, 2A, 2B, 3, 5)	Applicable mitigation measures in other sections of this 2019 LRDP EIR. No additional mitigation is required.	LS
Water Supply Availability	Sufficient water supplies from existing entitlements and resources would be available to serve the proposed 2019 LRDP and associated impacts would not occur.	LS	No mitigation is required.	LS
Wastewater Treatment Capacity	Implementation of the 2019 LRDP would not exceed the wastewater treatment provider's capacity.	LS	No mitigation is required	LS

Table ES-1. Environmental Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation[1]	Mitigation Measures	Significance After Mitigation
Compliance with Solid Waste Regulations	The 2019 LRDP would comply with statues and regulations related to solid waste management.	LS	No mitigation is required.	LS
Generate Solid Waste	Implementation of the 2019 LRDP would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.	NI	No mitigation is required.	NI
3.17 Wildfire				
Emergency Response Plan or Emergency Evacuation Plan	Implementation of the 2019 LRDP could impair an adopted emergency response plan or emergency evacuation plan during temporary construction-related road closures.	PS (Phases 1A, 1B, 2A, 2B 3, 4)	**HAZ-5** (see above).	LS
Pollutant Concentrations	Development under the proposed 2019 LRDP would not exacerbate wildfire risks.	LS	No mitigation is required.	LS
Installation or Maintenance of Associated Infrastructure	Implementation of the 2019 LRDP would not exacerbate fire risk through the installation or maintenance of new infrastructure.	LS	No mitigation is required.	LS
Flooding or Landslides	Implementation of the 2019 LRDP would not expose people downslope to flooding or landslides as a result of run-off, post-fire slope instability or drainage changes.	LS	No mitigation is required.	LS

Notes: LS = Less than Significant Impact; NI = No Impact; PS = Potentially Significant Impact; SU = Significant and Unavoidable

[1] Phases correspond to the phase for which the impact would be potentially significant (PS) and mitigation would be required. A PS label on its own indicates that mitigation is required for all phases.

Table ES-2. Cumulative Impacts and Mitigation Measures

Issue	Geographic Scope of Cumulative Impact Analysis	2019 LRDP Contribution	Mitigation Measure	2019 LRDP Significance Considering Mitigation
3.1 Aesthetics				
Degradation of scenic vista(s)	Hillcrest Campus and other reasonably foreseeable development in the vicinity of the region	Not cumulatively considerable	Not applicable	Not applicable
Degradation of existing community character or conflict with applicable zoning or regulations	Hillcrest Campus and other reasonably foreseeable development in the vicinity of the region	Potentially significant	**AES-2A and AES-2B** (see Table ES-1)	Not cumulatively considerable
New source of substantial light or glare on campus	Hillcrest Campus and other reasonably foreseeable development in the vicinity of the region	Not cumulatively considerable	Not applicable	Not applicable
3.2 Air Quality				
Consistency with applicable air quality plan	San Diego Air Basin	Not cumulatively considerable	Not applicable	Not applicable
Cumulative increase in criteria pollutant emissions	San Diego Air Basin	Not cumulatively considerable	**AIR-2** (see Table ES-1)	Not applicable
Expose sensitive receptors to substantial pollutant concentrations	San Diego Air Basin	Potentially significant	**AIR-3** (see Table ES-1)	Cumulatively considerable and unavoidable
Result in other emissions (such as those leading to odors)	Immediate vicinity of the odor source	Not cumulatively considerable	Not applicable	Not applicable
3.3 Biological Resources				
Regional loss of sensitive plant and vegetation communities	San Diego region	Potentially significant	**BIO-1A through BIO-1D, BIO-3L through BIO-3O** (see Table ES-1)	Not cumulatively considerable
Regional loss of sensitive animal species	San Diego region	Potentially significant	**BIO-2A through BIO-2D** (see Table ES-1)	Not cumulatively considerable

Table ES-2. Cumulative Impacts and Mitigation Measures

Issue	Geographic Scope of Cumulative Impact Analysis	2019 LRDP Contribution	Mitigation Measure	2019 LRDP Significance Considering Mitigation
Regional loss of riparian or other sensitive natural communities	San Diego region	Potentially significant	**BIO-3A through BIO-3O** (see Table ES-1)	Not cumulatively considerable
Federally protected wetlands	San Diego region	Potentially significant	**Bio-3C, BIO-3E through BIO-3O** (see Table ES-1)	Not cumulatively considerable
3.4 Cultural and Tribal Cultural Resources				
Loss of historical resources	Uptown Community limits	Potentially significant	**CUL-1** (see Table ES-1)	Cumulatively considerable and unavoidable
Regional loss of archaeological resources	San Diego County region	Potentially significant	**CUL-2A and CUL-2B** (see Table ES-1)	Not cumulatively considerable
Regional loss of human remains	San Diego County region	Potentially significant	**CUL-2A and CUL-2B** (see Table ES-1)	Not cumulatively considerable
Regional loss of tribal cultural resources	San Diego County region	Potentially significant	**CUL-2A and CUL-2B** (see Table ES-1)	Not cumulatively considerable
3.5 Energy				
Wasteful, inefficient, or unnecessary use of energy	San Diego region	Not cumulatively considerable	**ENE-1** (see Table ES-1)	Not cumulatively considerable
Conflict with or obstruct a state or local plan for renewable energy or energy efficiency	San Diego region	Not cumulatively considerable	Not applicable	Not applicable
3.6 Geology and Soils				
Exposure of persons to seismic-related hazards	Hillcrest Campus	Not cumulatively considerable	Not applicable	Not applicable
Soil erosion or topsoil loss	Hillcrest Campus and immediate vicinity	Not cumulatively considerable	Not applicable	Not applicable
Geologic Stability	Hillcrest Campus	Not cumulatively considerable	Not applicable	Not applicable
Expansive soils	Hillcrest Campus	Not cumulatively considerable	Not applicable	Not applicable

Table ES-2. Cumulative Impacts and Mitigation Measures

Issue	Geographic Scope of Cumulative Impact Analysis	2019 LRDP Contribution	Mitigation Measure	2019 LRDP Significance Considering Mitigation
Loss of paleontological resources	San Diego County region	Potentially significant	**GEO-5** (see Table ES-1)	Not cumulatively considerable
3.7 Greenhouse Gas Emissions				
Generate substantial GHG emissions	Global scale	Not cumulatively considerable	Not applicable	Not applicable
Consistency with applicable plan, policy or regulation	Global scale	Not cumulatively considerable	Not applicable	Not applicable
3.8 Hazards and Hazardous Materials				
Transport, use and disposal of hazardous materials	Immediately surrounding area to San Diego region	Not cumulatively considerable	Not applicable	Not applicable
Accidental releases	Immediately surrounding area to San Diego region	Not cumulatively considerable	**HAZ-2A, HAZ-2B, HAZ-2C, HAZ-2D** (see Table ES-1)	Not applicable
Hazards to nearby schools	Immediately surrounding area to San Diego region	Not cumulatively considerable	Not applicable	Not applicable
Hazards from nearby airports	Immediately surrounding area to San Diego region	Not cumulatively considerable	Not applicable	Not applicable
Emergency response and evacuation plans	Hillcrest Campus and immediately surrounding area to San Diego region	Not cumulatively considerable	**HAZ-5** (see Table ES-1)	Not cumulatively considerable
Wildland fires	Immediately surrounding area to San Diego region	Not cumulatively considerable	Not applicable	Not applicable
3.9 Hydrology and Water Quality				
Water quality	San Diego River Hydrologic Unit, within which the Hillcrest Campus is located	Not cumulatively considerable	Not applicable	Not applicable
Site drainage and hydrology	San Diego River Hydrologic Unit, within which the Hillcrest Campus is located	Not cumulatively considerable	Not applicable	Not applicable

Table ES-2. Cumulative Impacts and Mitigation Measures

Issue	Geographic Scope of Cumulative Impact Analysis	2019 LRDP Contribution	Mitigation Measure	2019 LRDP Significance Considering Mitigation
Water quality control plan or sustainable groundwater plan	San Diego River Hydrologic Unit, within which the Hillcrest Campus is located	Not cumulatively considerable	Not applicable	Not applicable
3.10 Land Use and Planning				
Conflict with applicable land use plans, policies, and regulations	Portions of Mission Hills, Hillcrest, and University Heights	Not cumulatively considerable	Not applicable	Not applicable
3.11 Noise				
Exceed noise standards construction impacts	Varies based on the type of noise impact being analyzed	Potentially significant	**NOI-1A, NOI-1B, NOI-1C, NOI-1D** (see Table ES-1)	Not cumulatively considerable
Excessive groundborne vibration or noise	Hillcrest Campus and adjacent communities	Potentially significant	**NOI-1A, NOI-2A, NOI-2B** (see Table ES-1)	Not cumulatively considerable
Aircraft noise	Varies based on the type of noise impact being analyzed	Not cumulatively considerable	Not applicable	Not applicable
3.12 Population and Housing				
Induce substantial population growth	San Diego region	Not cumulatively considerable	Not applicable	Not applicable
Displacement of people or housing	San Diego region	Not cumulatively considerable	Not applicable	Not applicable
3.13 Public Services				
Fire protection services	City of San Diego near the Hillcrest Campus and San Diego region	Not cumulatively considerable	Not applicable	Not applicable
Police protection services	City of San Diego near the UC San Diego campus and San Diego region	Not cumulatively considerable	Not applicable	Not applicable
School services	San Diego Unified School District and San Diego region	Not cumulatively considerable	Not applicable	Not applicable

Table ES-2. Cumulative Impacts and Mitigation Measures

Issue	Geographic Scope of Cumulative Impact Analysis	2019 LRDP Contribution	Mitigation Measure	2019 LRDP Significance Considering Mitigation
3.14 Recreation				
Deterioration of parks and recreational facilities	Uptown Community	Not cumulatively considerable	Not applicable	Not applicable
Construction or expansion of new recreational facilities	Uptown Community	Potentially significant	Mitigation measures in other sections of this 2019 LRDP EIR. No additional mitigation is required.	Not cumulatively considerable
3.15 Transportation				
Compliance with measures of effectiveness for circulation system performance	Off-campus related projects and other future development within the general boundaries of the Uptown Community	Potentially significant	**TRA-1A, TRA-1B, TRA-1C,** (see Table ES-1)	Cumulatively considerable and unavoidable
Induce substantial vehicle miles traveled	Off-campus related projects and other future development within the general boundaries of the Uptown Community	Not cumulatively considerable	Not applicable	Not applicable
Inadequate emergency access	Off-campus related projects and other future development within the general boundaries of the Uptown Community	Not cumulatively considerable	**HAZ-5**	Not applicable
3.16 Utilities and Service Systems				
New utilities facilities	Hillcrest Campus and surrounding Uptown Community	Not cumulatively considerable	Mitigation measures in other sections of this 2019 LRDP EIR. No additional mitigation is required.	Not applicable
Water supply	City water service area	Not cumulatively considerable	Not applicable	Not applicable
Wastewater treatment	Point Loma Wastewater Treatment Plant service area	Not cumulatively considerable	Not applicable	Not applicable
Solid waste regulations	County and City landfill system	Not cumulatively considerable	Not applicable	Not applicable

Table ES-2. Cumulative Impacts and Mitigation Measures

Issue	Geographic Scope of Cumulative Impact Analysis	2019 LRDP Contribution	Mitigation Measure	2019 LRDP Significance Considering Mitigation
3.17 Wildfire				
Emergency response plan or emergency evacuation plan	Hillcrest Campus and immediate surrounding City area	Not cumulatively considerable	**HAZ-5**	Not applicable
Pollutant concentrations	City of San Diego	Not cumulatively considerable	Not applicable	Not applicable
Installation or maintenance of associated infrastructure	Hillcrest Campus and immediate surrounding area	Not cumulatively considerable	Not applicable	Not applicable
Flooding or landslides	Hillcrest Campus and immediate surrounding area	Not cumulatively considerable	Not applicable	Not applicable

Table ES-3. Summary of Analysis for Alternatives to the 2019 LRDP

Issue Areas	Proposed 2019 LRDP		Alternatives				
	Without Mitigation	With Mitigation	No Project (1995 LRDP)	No Residential	No Cogeneration	No North Access Driveway	Reduced Scale
3.1 Aesthetics							
Scenic Vistas	LS	LS	<	<	=	<	<
Degradation of Existing Community Character or Conflict with Zoning or Regulations for Scenic Quality	PS	LS	<	<	<	<	<
Light and Glare	LS	LS	<	<	=	<	=
3.2 Air Quality							
Consistency with Applicable Air Quality Plan	LS	LS	=	=	<	=	=
Cumulative Increase in Criteria Pollutant Emissions	PS	LS	<	<	=	=	<
Sensitive Receptors	PS	SU	<	<	=	=	<
Odors	LS	LS	<	=	<	=	=
3.3 Biological Resources							
Candidate, Sensitive, or Special-Status Plant Species	PS	LS	=	<	=	<	<
Candidate, Sensitive, or Special-Status Animal Species	PS	LS	=	<	=	<	<
Riparian Habitat and Other Sensitive Natural Communities	PS	LS	=	<	=	<	<
Wetlands	PS	LS	=	<	=	<	<
3.4 Cultural and Tribal Cultural Resources							
Historical Resources	PS	SU	=	=	=	=	<
Archaeological Resources	PS	LS	<	=	=	<	=
Human Remains	PS	LS	<	=	=	<	=
Tribal Cultural Resources	PS	LS	<	=	=	<	=

Table ES-3. Summary of Analysis for Alternatives to the 2019 LRDP

Issue Areas	Proposed 2019 LRDP		Alternatives				
	Without Mitigation	With Mitigation	No Project (1995 LRDP)	No Residential	No Cogeneration	No North Access Driveway	Reduced Scale
3.5 Energy							
Wasteful or Inefficient Energy Usage	PS	LS	<	<	<	<	<
Conflict with Renewable or Energy Efficiency Plan	LS	LS	<	<	<	<	<
3.6 Geology and Soils							
Exposure to Seismic-Related Hazards	LS	LS	<	=	=	=	=
Soil Erosion or Topsoil Loss	LS	LS	<	=	=	=	=
Geologic Stability	LS	LS	<	=	=	=	=
Expansive Soils	LS	LS	<	=	=	=	=
Paleontological Resources	PS	LS	<	=	=	=	=
3.7 GHG Emissions							
Generate GHG Emissions	LS	LS	<	<	<	<	<
Conflict with an Applicable Plan	LS	LS	<	<	<	<	<
3.8 Hazards and Hazardous Materials							
Transport, Use, and Disposal of Hazardous Materials	LS	LS	=	=	=	=	<
Accidental Releases	PS	LS	=	=	=	=	<
Hazards to Nearby Schools	LS	LS	=	=	=	=	<
Hazards from Nearby Airports	LS	LS	=	=	=	=	=
Emergency Response or Evacuation Plans	PS	LS	<	=	=	>	=
Wildland Fires	LS	LS	=	=	=	>	=

Table ES-3. Summary of Analysis for Alternatives to the 2019 LRDP

Issue Areas	Proposed 2019 LRDP		Alternatives				
	Without Mitigation	With Mitigation	No Project (1995 LRDP)	No Residential	No Cogeneration	No North Access Driveway	Reduced Scale
3.9 Hydrology and Water Quality							
Water Quality	LS	LS	=	=	=	=	<
Site Drainage and Hydrology	LS	LS	=	=	=	=	<
Water Quality Control Plan or Sustainable Groundwater Management Plan	LS	LS	=	=	=	=	<
3.10 Land Use and Planning							
Conflict with Applicable Land Use Plans, Policies, and Regulations	LS	LS	=	=	=	=	=
3.11 Noise							
Exceed Noise Standards	PS	SU (Construction)	<	<	= (Construction) < (Operation)	=	<
Excessive Groundborne Vibration or Noise	PS	SU (Construction)	<	<	=	=	<
Aircraft Noise	LS	LS	=	<	=	=	=
3.12 Population and Housing							
Induce Substantial Population Growth	LS	LS	<	<	=	=	=
Displacement of People or Housing	LS	LS	<	>	=	=	=
3.13 Public Services							
Fire Protection Services	LS	LS	<	<	=	=	<
Police Protection Services	LS	LS	<	<	=	=	<
Public School Services	LS	LS	<	<	=	=	<

Table ES-3. Summary of Analysis for Alternatives to the 2019 LRDP

Issue Areas	Proposed 2019 LRDP		Alternatives				
	Without Mitigation	With Mitigation	No Project (1995 LRDP)	No Residential	No Cogeneration	No North Access Driveway	Reduced Scale
3.14 Recreation							
Deterioration of Parks and Recreational Facilities	LS	LS	<	<	=	=	=
Construction or Expansion of Recreational Facilities	PS	LS	<	<	=	=	=
3.15 Transportation							
Circulation System Performance	PS	SU	<	<	=	=	<
Induce Substantial Vehicle Miles Traveled	LS	LS	<	<	=	=	<
Inadequate Emergency Access	PS	LS	<	<	=	>	=
3.16 Utilities and Service Systems							
New Utilities Facilities	PS	LS	<	<	=	=	<
Water Supply Availability	LS	LS	<	<	=	=	<
Wastewater Treatment Capacity	LS	LS	<	<	=	=	=
Compliance with Solid Waste Regulations	LS	LS	<	<	=	=	=
3.17 Wildfire							
Emergency Response Plan or Emergency Evacuation Plan	PS	LS	<	=	=	>	=
Pollutant Concentrations	LS	LS	<	=	=	=	=
Installation or Maintenance of Associated Infrastructure	LS	LS	<	=	=	=	=
Flooding or Landslides	LS	LS	<	=	=	=	=

Notes: LS = Less than Significant Impact; NI = No Impact; PS = Potentially Significant Impact; SU = Significant and Unavoidable

= Impacts would be similar to those of the proposed 2019 LRDP.

> Impacts would be greater than those of the proposed 2019 LRDP.

< Impacts would be less than those of the proposed 2019 LRDP.

Chapter 1 Introduction

This 2019 Long Range Development Plan Environmental Impact Report (2019 LRDP EIR) assesses the potentially significant environmental effects of the proposed University of California, San Diego (UC San Diego), 2019 Long Range Development Plan (2019 LRDP) for the Hillcrest Campus. The proposed 2019 LRDP is a cohesive and holistic future development framework intended to achieve UC San Diego's goal of a comprehensive redevelopment of its existing Hillcrest Campus that will further its commitment to a robust academic medical ecosystem where teaching, research, and patient care interact to create a nurturing and innovative environment. This redevelopment is coupled with a need to replace aging buildings and infrastructure to meet stringent seismic safety standards by 2030. As such, the proposed 2019 LRDP sets forth a land use plan based upon mandated facility upgrades, aligning the physical campus with UC San Diego's broader sustainability goals, a continued commitment to integrated, patient-centered, quality care, and a live-work-learn environment grounded in long-term financial stability.

As required by the California Environmental Quality Act (CEQA), this 2019 LRDP EIR:

- Assesses the potentially significant direct and indirect environmental effects of the proposed 2019 LRDP as well as the potentially significant cumulative impacts that could occur from implementation of the 2019 LRDP;
- Identifies potential feasible means of avoiding or substantially lessening significant adverse impacts; and
- Evaluates a range of reasonable alternatives to the proposed 2019 LRDP, including the required No Project Alternative.

This 2019 LRDP EIR was prepared in accordance with Public Resources Code (PRC) Section 21080.09, which specifies how CEQA applies to long range development plans for public higher education planning activities. According to PRC Section 21080.09:

- A "Long Range Development Plan" is defined as a physical development and land use plan to meet the academic and institutional objectives for a particular campus or medical center of public higher education.
- The approval of an LRDP is subject to CEQA and requires the preparation of an EIR.
- Approval of a project on a campus may be addressed in a tiered environmental analysis based on an LRDP EIR.

Compliance with PRC Section 21080.09 satisfies the obligations of public higher education institutions to consider the environmental impact of academic plans as they affect campuses or medical centers, provided that any such plans shall become effective only after the environmental effects of those plans have been analyzed in a long range development plan environmental impact report or tiered analysis.

The UC is the "lead agency" for the 2019 LRDP EIR. The UC is governed by the Board of Regents of the UC (UC Regents), which under Article IX, Section 9, of the California Constitution, has "full powers of organization and government" subject only to very specific areas of legislative control. The UC Regents has the principal responsibility for approving the 2019 LRDP and other UC San Diego projects. When certified, this 2019 LRDP EIR will serve as the base, or first-tier, environmental document for the proposed 2019 LRDP. Section 1.2, Purpose of the 2019 LRDP EIR, addresses the purpose of this 2019 LRDP EIR, while Section 1.3, Type of EIR, describes its scope.

1.1 Background

The UC first acquired the hospital in 1965 when an operating agreement was reached between UC San Diego and the County of San Diego (County) in which the County would retain ownership of the Hillcrest Campus, while UC San Diego personnel would administer it in conjunction with the UC San Diego School of Medicine. UC San Diego officially purchased the hospital and its ancillary structures from the County in 1981. The UC Regents approved the first LRDP for the Hillcrest Campus in 1978, which stemmed from UC San Diego's desire to convert the existing County hospital into a multi-functional academic medical center by incorporating research and academic uses. For the first time, the 1978 LRDP provided a 15- to 20-year framework for growth and development at the Hillcrest Campus and articulated a future campus development pattern that prioritized clustering buildings by function. The 1978 LRDP provided a set of goals and principles for the School of Medicine to use in its future development decisions. Overall, the 1978 LRDP identified potential campus use of 28 privately owned parcels along Front Street and Dickinson Street, as well as undeveloped County land northeast of the campus and a portion of First Avenue. By 1995, UC San Diego had acquired almost all of this land except for the northeastern County land. The most recent revision to the LRDP was the 1995 LRDP, which reinforced many of the same core principles as the 1978 LRDP and called for the future acquisition of 4 additional acres to facilitate campus expansion. It set forth a strategy for more orderly consolidation of programs and parking areas with the introduction of program-specific geographic zones to improve patient, faculty, student, and staff experience. The 1995 LRDP projected a future affiliated population of approximately 5,400 persons on the Hillcrest Campus by 2010 and a maximum campus development capacity of approximately 1.7 million gross square feet (gsf). Between 1994 and 2017, the campus grew by approximately 475,000 gsf, which is approximately 185,000 gsf less than the maximum increase in development capacity identified in the 1995 LRDP. As of 2017, the Hillcrest Campus occupies 62 acres and approximately 1.1 million gsf of building space, including 21 on-campus residential units and an existing non-residential population of 4,450 student, staff, and faculty. The maximum buildout development potential of the Hillcrest Campus with implementation of the 2019 LRDP would be 2.7 million gsf, including up to 1,000 on-campus residential units and 5,200 students, staff, and faculty.

1.2 Purpose of the 2019 LRDP EIR

The UC has prepared this 2019 LRDP EIR for the following purposes:

- To satisfy the requirements of CEQA, pursuant to PRC Section 21080.09;
- To serve as an informational document for the decision makers; general public; local community; responsible, trustee, state, and federal public agencies; elected officials; and interested groups/individuals of the scope of the proposed 2019 LRDP, its potential significant environmental effects, potentially feasible measures to mitigate those effects, and reasonable potentially feasible alternatives to the proposed 2019 LRDP;
- To enable the UC to consider the environmental consequences of approving the proposed 2019 LRDP;
- To provide a project-level environmental analysis of the proposed 2019 LRDP, which specifically addresses its implementation pursuant to CEQA Guidelines, Sections 15168;
- To provide a basis for tiering later environmental documents from the 2019 LRDP EIR pursuant to CEQA Guidelines, Sections 15152, 15168(c), and 15183.55, if necessary; and
- For consideration by responsible agencies in issuing permits and approvals for the development that occurs from the implementation of the proposed 2019 LRDP.

As described in CEQA and the CEQA Guidelines, public agencies are charged with the duty to avoid or substantially lessen significant environmental effects, with consideration of other conditions, including economic, social, technological, legal, and other benefits.

The lead agency (i.e., UC) is required to consider the information in the 2019 LRDP EIR, along with any other relevant information, in making its decisions on the proposed 2019 LRDP. Although the 2019 LRDP EIR does not determine the ultimate decision that will be made regarding implementation of the 2019 LRDP, CEQA requires the UC to consider the information in the 2019 LRDP EIR prior to project approval and make findings regarding each significant environmental effect identified in the 2019 LRDP EIR.

For the proposed 2019 LRDP, CEQA requires the UC to prepare an EIR reflecting the independent judgment of the UC regarding the impacts, mitigation measures, and alternatives proposed to reduce impacts, and the level of significance of the impacts both before and after mitigation.

The EIR is circulated to responsible agencies and trustee agencies with resources affected by the 2019 LRDP, state agencies with jurisdiction by law, federal agencies, and interested parties and individuals, as described in Section 1.4, EIR Review Process. The purpose of public and agency review of the EIR includes sharing expertise, disclosing agency analysis, checking for accuracy, detecting omissions, discovering public concerns, and soliciting comments. In reviewing the EIR, reviewers should focus on the sufficiency of the document in identifying and analyzing

potentially significant effects on the environment and avoiding or mitigating the significant effects of the proposed project.

1.3 Type of EIR

The proposed 2019 LRDP would provide the planning framework and land use plan that would guide the physical redevelopment of the Hillcrest Campus. The proposed 2019 LRDP identifies five major development phases (Section 2.9, Construction Phasing, in Chapter 2, Project Description) to implement the full buildout of the plan by the planning horizon year 2035. If growth projections have not been met, development may extend beyond the planning horizon year 2035. The 2019 LRDP may be amended at any time and would be in effect until a new LRDP is prepared to replace it. The time constraints associated with Senate Bill (SB) 1953, combined with the site constraints of the Hillcrest Campus, have motivated UC San Diego to prepare a conceptual site plan and five-phase construction plan to both comply with SB 1953 and upgrade its aging facilities and infrastructure. Because the level of project information available at this stage is more detailed than a typical LRDP, a project-level analysis is possible, and this 2019 LRDP EIR includes a detailed analysis of environmental impacts by construction phase.

CEQA Guidelines, Section 15168, for a Program EIR describes the type of EIR that has been prepared for the 2019 LRDP. Specifically, Section 15168(c)(5) states that "a program EIR will be most helpful in dealing with later activities if it provides a description of planned activities that would implement the program and deals with the effects of the program as specifically and comprehensively as possible. With a good and detailed project description and analysis of the program, many later activities could be found to be within the scope of the project described in the program EIR, and no further environmental documents would be required." The 2019 LRDP EIR has been prepared as a Program EIR covering a long-term, multi-year construction project. The EIR includes sufficient project-specific detail, including a detailed project description, and analysis of proposed later project phases to streamline or minimize CEQA review of the future project phases. This approach is intended to provide flexibility within the EIR document to maximize the time available for UC San Diego to achieve the goals of SB 1953 by 2030.

1.4 EIR Review Process

In response to its decision to prepare an EIR, UC San Diego staff prepared a Notice of Preparation (NOP) in compliance with CEQA Guidelines, Section 15082, addressing the scope and contents of this 2019 LRDP EIR (Appendix A). On February 28, 2018, the NOP was mailed to a distribution list consisting of the State Clearinghouse; responsible, trustee, and other relevant local, state, and federal agencies; and interested individuals and organizations. The NOP was also published in the *San Diego Union-Tribune* newspaper and was made available electronically on the UC San Diego Campus Planning LRDP website. A 30-day comment period on the NOP commenced on March 1, 2018.

During the comment period, a scoping meeting was held at the First Unitarian Universalist Church, adjacent to the Hillcrest Campus, at 4190 Front Street, San Diego, California 92103 on March 21, 2018, to solicit input from interested agencies, individuals, and organizations on the content of and topics for this 2019 LRDP EIR. Verbal and written comments received during the scoping process have been taken into consideration during the preparation of this 2019 LRDP EIR. The NOP, the list of recipients, a summary of comments received, the actual comment letters received, handwritten comments from the scoping meeting and the transcript from the scoping meeting are included in Appendix A to this 2019 LRDP EIR. The environmental conditions evaluated as the baseline in this 2019 LRDP EIR are those that existed at the time the NOP was circulated.

The Draft 2019 LRDP EIR will be available for review and comment by the public and public agencies for 45 days beginning June 26, 2019, and ending August 9, 2019. Comments on the Draft 2019 LRDP EIR can be mailed to UC San Diego Campus Planning at 9500 Gilman Drive, No. 7400, La Jolla, California, 92093-0074 or emailed to env-review@ucsd.edu.

A hard copy of the Draft 2019 LRDP EIR will be available for review during normal operating hours for the duration of the public review period at the following locations:

- UC San Diego Campus Planning Office, 10280 North Torrey Pines Road, Suite 460, La Jolla, California 92037
- UC San Diego Hillcrest Campus, Hospital Main Lobby Information Desk, 200 West Arbor Drive, San Diego, California 92103
- UC San Diego Geisel Library – Social Sciences and Humanities Library Reference Desk, 9500 Gilman Drive No. 0175-G, La Jolla, California 92093
- San Diego Public Library, Mission Hills–Hillcrest/Knox Branch, 215 West Washington Street, San Diego, California 92103
- San Diego Public Library, Central Library, 330 Park Boulevard, San Diego, California 92101

An electronic version of the Draft 2019 LRDP EIR is available for review or downloading from the UC San Diego 2019 LRDP website (http://lrdp.ucsd.edu/hillcrest/review/index.html) during the 45-day public review period. A public hearing on the Draft 2019 LRDP EIR will be held during the public review period on July 18, 2019, at the First Unitarian Universalist Church, adjacent to the Hillcrest Campus, at 4190 Front Street, San Diego, California 92103. Noticing for the hearing is available on the UC San Diego 2019 LRDP website, as well as in the Notice of Availability of the Draft 2019 LRDP EIR that was published in the local newspaper (*San Diego Union-Tribune*). Comments addressing the scope and adequacy of the environmental analysis are being solicited from the public, public agencies and interested organizations during the Draft 2019 LRDP EIR public review.

Following the end of the public review period, UC, as lead agency, will provide responses to comments received on the Draft 2019 LRDP EIR per CEQA Guidelines, Section 15088. Detailed response to comments received during public review, a Mitigation Monitoring and Reporting Program, Findings of Fact, and a Statement of Overriding Considerations for impacts identified in the Draft 2019 LRDP EIR as significant and unavoidable, as applicable, will be prepared and compiled as part of the Final 2019 LRDP EIR, which will be available online at the UC San Diego 2019 LRDP website (http://lrdp.ucsd.edu/hillcrest/review/index.html) once complete.

The UC, as CEQA lead agency, will consider the Final 2019 LRDP EIR including the written comments received on the Draft 2019 LRDP EIR and comments made at the public hearing in making its decision whether to certify the Final 2019 LRDP EIR as complete and in compliance with CEQA, and whether to approve or deny the 2019 LRDP, or take action on a project alternative. In the final review of the proposed 2019 LRDP, environmental considerations, as well as economic and social factors, will be weighed to determine the most appropriate course of action.

1.5 Campus, Public, and Agency Outreach

The Hillcrest Advisory Council was formed so that local leaders and community representatives could engage with UC San Diego Health and Campus Planning staff on the 2019 LRDP. The Council has met throughout the 2019 LRDP process to discuss aspects of the plan related to circulation, transportation, housing, program, sustainability, amenities, and other applicable topics. These meetings provided a forum for local stakeholders and UC San Diego leadership to better understand each other's priorities and improve the collective understanding of the Hillcrest Campus's future development. Council meetings occurred on January 17, 2018, and October 3, 2018.

In addition to the NOP scoping meeting on March 21, 2018 (discussed above), the following community open house events were held to provide an opportunity for the community to learn more about the 2019 LRDP:

- Tuesday, June 6, 2017, 6:00 p.m.–7:30 p.m. at Chula Vista Civic Library Auditorium, 365 F Street, Chula Vista, California 91910
- Wednesday, June 7, 2017, 6:00 p.m.–7:30 p.m. at San Diego Indoor Sports Club, 3030 Front Street, San Diego, California 92103
- Thursday, June 8, 2017, 6:00 p.m.–7:30 p.m. at Jacobs Center for Neighborhood Innovation, 404 Euclid Avenue, San Diego, California 92114
- Wednesday, September 13, 2017, 5:30 p.m.–7:30 p.m. at First Universalist Unitarian Church, Bard Hall, 4190 Front Street, San Diego, California 92103
- Wednesday, November 28, 2018, 5:00 p.m.–8:00 p.m. at First Universalist Unitarian Church, Bard Hall, 4190 Front Street, San Diego, California 92103

Additionally, internal open houses and informational tables were held in May 2017 at both the La Jolla and Hillcrest Campuses during both daytime and nighttime shifts to inform and solicit feedback from staff employed by UC San Diego Health.

UC San Diego Campus Planning, along with UC San Diego Health Community Strategy and Advocacy staff, have also conducted the following outreach and/or made presentations to obtain feedback from campus and community stakeholders:

- UC San Diego Campus/Community Planning Committee
- UC San Diego Design Review Board
- UC San Diego Hillcrest Executive Steering Committee
- UC San Diego Real Estate Advisory Council
- San Diego City Councilmembers
- City of San Diego
- Uptown Planners
- Hillcrest Business Association
- Hillcrest Town Council
- Mission Hills Town Council
- Bankers Hill Community Group
- Mission Valley Planning Group
- San Diego Association of Governments (SANDAG)
- California Department of Transportation (Caltrans), District 11
- San Diego Regional Chamber of Commerce
- San Diego County Board of Supervisors
- Community Health Improvement Partners
- Hospital Association of San Diego and Imperial Counties
- Elected officials
- San Diego Unified School District
- Native American Heritage Commission

1.6 Uses of the 2019 LRDP EIR

This 2019 LRDP EIR will be used by the UC Regents to evaluate the environmental implications of adopting and implementing the proposed 2019 LRDP. This 2019 LRDP EIR includes sufficient project-specific detail and analysis of proposed later project phases to streamline or minimize CEQA review of the future project phases. In addition, the 2019 LRDP EIR would be relied upon by responsible agencies with permitting or approval authority over any project specific action to be advanced in the future under the 2019 LRDP.

The CEQA and CEQA Guidelines state that later activities should be examined in light of the Program EIR to determine whether project specific actions are consistent with the 2019 LRDP and additional environmental documentation must be prepared. If no new significant effects would occur, all significant effects have been adequately addressed, and no new mitigation measures would be required, the later activities within the scope of the approved LRDP could rely on the environmental analysis provided in the Program EIR, and no additional environmental analysis would be required; otherwise, additional environmental analysis must be prepared. The additional analysis, regardless of project delivery method (i.e., public-private-partnership, campus-initiated), may rely on the Program EIR, as appropriate, for general discussions, some analysis, and cumulative impacts, but would be tiered to allow the analysis to focus on more project- and site-specific impacts. Appropriate documentation associated with later activities not examined in the Program EIR would be prepared pursuant to CEQA and CEQA Guidelines.

1.7 Organization of the EIR

This 2019 LRDP EIR is organized into two volumes. Volume I addresses the impacts of the physical development of the proposed 2019 LRDP. Associated technical appendices are contained in Volume II. When the 2019 LRDP EIR is finalized, a third volume will be produced that contains the Draft 2019 LRDP EIR comments, responses, and summary of revisions, as well as the Mitigation Monitoring and Reporting Program for the 2019 LRDP.

Volume I of the 2019 LRDP EIR includes the following:

- **Executive Summary.** Summarizes the proposed 2019 LRDP, environmental impacts that would result from implementation of the 2019 LRDP, proposed mitigation measures that would avoid or reduce impacts, and the level of significance of impacts both before and after mitigation.
- **Chapter 1, Introduction.** Provides an introduction and overview describing the background of the proposed 2019 LRDP, the purpose and intended use of the 2019 LRDP EIR, and the review and certification process.
- **Chapter 2, Project Description.** Provides a detailed description of the proposed 2019 LRDP, including its location, background information, land use elements, key principles, sustainable development, conceptual site plan and landscape plan, and five project-specific development phases.
- **Chapter 3, Environmental Setting, Impacts, and Mitigation.** Contains project and cumulative analysis for various issues under several environmental topics. The section for each environmental topic contains an introduction and description of the existing setting, issues to be analyzed, standards of significance, methodology used to evaluate impacts, and impacts and appropriate mitigation measures. Document references and citations are also contained under each environmental topic addressed in this chapter:

  - Aesthetics
  - Air Quality
  - Biological Resources
  - Cultural and Tribal 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
  - Utilities and Service Systems
  - Wildfire

- **Chapter 4, Other CEQA Considerations.** Provides discussions required by CEQA regarding unavoidable significant impacts; growth-inducing impacts; and environmental effects found not to be significant, which include Agriculture and Forestry Resources and Mineral Resources.
- **Chapter 5, Alternatives.** Describes alternatives to the proposed 2019 LRDP that could avoid or substantially lessen significant effects and evaluates their environmental effects in comparison to the 2019 LRDP.
- **Chapter 6, Preparers.** Identifies the persons who prepared this 2019 LRDP EIR.

Volume II of the 2019 LRDP EIR consists of supporting materials and technical appendices as listed in the 2019 LRDP EIR Table of Contents.

When complete, Volume III will consist of the Draft 2019 LRDP EIR comments, responses to comments, Final 2019 LRDP EIR revisions, and the Mitigation Monitoring and Reporting Program.

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Chapter 2 Project Description

UC San Diego is proposing a 2019 LRDP for its Hillcrest Campus. To address the environmental impacts that would be associated with the 2019 LRDP, UC San Diego has prepared this Program Environmental Impact Report (PEIR). The proposed project consists of the redevelopment of approximately 34 acres of the 62-acre existing Hillcrest Campus anticipated through the planning horizon year 2035. The Hillcrest 2019 LRDP may be amended at any time, and would be in effect until a new one is prepared that replaces it. The need for redevelopment of the Hillcrest Campus began with the requirement to meet more stringent seismic safety standards mandated by Senate Bill 1953 and accommodate new advances in health care technology. This, paired with the aging condition of most of the structures on campus, prompted a reimagining of the entire campus from a planning perspective. The 2019 LRDP proposes to create five new districts, each of which would be defined by a predominant land use and development condition. Redevelopment of the campus would be divided into five phases (1A/1B, 2A/2B, 3, 4, and 5) and would require demolition and export of demolition materials for recycling or disposal and/or grading activities, building construction, and implementation of various underground utilities. The total development proposed under the 2019 LRDP is up to 300 hospital beds, up to 1,000 multi-family residential units (979 net new), approximately 40,000 gsf of wellbeing center facilities, approximately 4,000 gsf of freestanding retail, up to 3,900 parking spaces, and additional amenities encompassing approximately 2.7 million gsf.

2.1 Project Background and Purpose

A LRDP is defined by the California Public Resources Code (PRC), Section 21080.09, as a "physical development and land use plan to meet the academic and institutional objectives for a particular campus or medical center of public higher education." UC San Diego is proposing a new LRDP for its Hillcrest Campus (2019 LRDP). The 2019 LRDP would replace the previous LRDP adopted by the UC Regents in 1995, which emphasizes lease consolidation and campus expansion through the procurement of new property along its existing borders. The proposed 2019 LRDP would present a new vision for the campus and aim to redevelop approximately 34 acres of the 62-acre property, resulting in the removal of all but two of the existing buildings.

This redevelopment plan process began with the need to replace the existing Hillcrest Campus inpatient acute care facilities by 2030 because the medical center will need to meet more stringent seismic safety standards set forth in the California Hospital Seismic Safety Law, or Senate Bill (SB) 1953, and the Alfred E. Alquist Hospital Facilities Seismic Safety Act of 1983 (Assembly Bill [AB] 232). SB 1953 was passed in 1994 to address seismic safety requirements for acute care hospitals within the state. AB 232 established a program of seismic safety building standards for certain hospitals constructed on or after March 7, 1973, and states that a general acute care hospital building that is determined to be at potential risk for collapse or poses to be a risk of significant

loss of life in the event of seismic activity can be used only for non-acute care unless certain stipulations are met.

Efforts to retrofit the hospital to comply with previous seismic guidelines have been undertaken in the past. However, SB 1953 and AB 232 requirements are more stringent than past requirements, and the existing hospital would require a more extensive retrofit program to maintain regulatory compliance. Such a retrofit program would likely involve reinforcing the building footings, among other intrusive strategies. It would be logistically infeasible and nearly impossible for the hospital to maintain operation at current capacity and level and quality of service while simultaneously carrying out a retrofit program that would achieve compliance with the seismic safety standards. The same would be true for making the necessary replacements or upgrades to the hospital's intricate utilities network, which at nearly 60 years old, is in need of substantial upgrades to accommodate current technologies and code requirements (UC San Diego Facilities and Management 2018). While over time the campus has replaced equipment on an ad hoc basis, the age and complexity of the underground and interwoven systems makes it nearly impossible to completely repair all systems without closing the existing hospital for some time.

To attempt a seismic retrofit and/or utilities upgrade program in order to meet SB 1953 and AB 232 requirements and to correct failing utilities, hospital operations in the existing facilities would need to partially or wholly close throughout the duration of the retrofit/upgrade program(s). Even if a phased retrofit program allowed some portions of the hospital to remain open while other portions underwent the necessary renovations, active construction within the hospital building could pose health and safety risks wherein a sterile, clean environment is crucial for patient health and welfare. Also notable, the hospital building is at the end of its useful life and would continue to require more improvements in the future. The uninterrupted operation of essential emergency and medical services is a key objective of the 2019 LRDP as even a temporary closure of these services, which support the surrounding community and greater region, would have far-reaching adverse effects.

Specifically, the hospital provides unique acute care and specialty services that are either not provided anywhere else in its primary service area or are heavily relied upon by the community. These include its Level 1 trauma center (the first in the region), comprehensive stroke center (one of only two in the county), and psychiatry and behavioral health services clinic. Perhaps of most concern would be an interruption in the hospital's Regional Burn Center, which is the only such center in the San Diego area, and treats approximately 450 inpatients and hundreds more outpatients each year from San Diego and Imperial Counties (UC San Diego Health 2019). Should the Hillcrest Campus require temporary closure, the region would lose access to all of its licensed burn beds through the duration of the closure. This poses a serious concern because critical burn victims of fires, explosions, military disasters, or other accidents in the region would need to be transported much farther distances (e.g., the next nearest center is located in Irvine, which is over

90 miles north of the Hillcrest hospital) to gain treatment (UC San Diego 2005; American Burn Association 2019).

Further, the Hillcrest Campus has seen substantial increases in trauma volume in recent years, including a 15.5 percent increase from 2010 to 2016 (County of San Diego 2016). The City's population is also rising; the Uptown and Mission Valley Communities, located adjacent to the campus, are expected to see significant population growth through 2035 (SANDAG 2013). As the hospital's service population continues to increase, so will its volume of trauma patients. Because the Hillcrest Campus treats more trauma patients than any of the other five hospitals that make up the County's Trauma System, a temporary closure of the Hillcrest hospital could be extremely disruptive to the success of this regional system (County of San Diego 2016).

True to its beginnings as the County Hospital, the Hillcrest Campus has a long-standing commitment to serving the critical health needs of low-income San Diego populations. As a public institution and the only academic medical center in the San Diego region, the Hillcrest Campus is responsible for serving a wide range of patients from nearby communities, including a higher percentage of patients undercompensated by third-party payers than any other facility in the region. As such, interrupting service at the Hillcrest Campus could disproportionately affect low-income, homeless, and elderly populations.

For the above reasons, UC San Diego intends to maintain its commitment to serving the community and greater region by avoiding any lapse in essential services at the Hillcrest Campus. In order for the campus to comply with SB 1953 and improve its failing utility systems, the hospital must be replaced with a new hospital building that meets seismic requirements and has a functioning and efficient utilities network. To avoid interrupting critical services, the new on-campus hospital needs to be constructed and in operation before the existing hospital can be decommissioned and removed. To provide a site for the new hospital on the mostly built-out campus, demolition of existing structures would be required. New buildings would be intentionally designed in accordance with new building technologies, current development codes, and sustainability considerations. The push for new technology, as well as the aging condition of most of the structures on campus, prompted a reimagining of the entire campus from a planning perspective.

Implementation of the 2019 LRDP would take into account an industry-wide shift in health care toward outpatient care due to advances in health care technology, which has contributed to the need to create a new, cohesive Hillcrest Campus that would improve the interface and compatibility of the various land uses on the campus and with the surrounding community. This would be accomplished in a thoughtful and sustainable manner and would also respond to trends in health care, academic research, and the demand for UC San Diego affiliate housing. For the purposes of this 2019 LRDP EIR, UC San Diego affiliates include staff, faculty, and students associated with UC San Diego. The complete redevelopment of the Hillcrest Campus would

provide opportunities to align the physical campus with UC San Diego's broader goals in teaching, research, and patient care while creating a healthy, sustainable campus that effectively integrates with the community.

The Hillcrest Campus hosts one of two academic medical centers that anchor UC San Diego Health; the other medical center is located on the UC San Diego La Jolla Campus, which is guided by a separate LRDP. Both medical complexes are part of a two-campus strategy that integrates research, teaching, and clinical care across both locations. This system supports acute inpatient care, emergency care, and a range of specialty medical labs and clinics and serve as core clinical teaching sites for the UC San Diego School of Medicine. The La Jolla Campus serves as the anchor campus for UC San Diego overall and hosts most of UC San Diego Health's biomedical research and educational facilities, as well as Jacobs Medical Center, Moores Cancer Center, Shiley Eye Institute, and Sulpizio Cardiovascular Center. The Hillcrest Campus has hosted a number of various research programs, but its urban location within central San Diego combined with regional and local needs have focused the campus on specialty care centers. While deeply integrated with the regionally focused UC San Diego Health at the La Jolla Campus, the Hillcrest Campus's central location within the City offers unique opportunities for the campus to serve additional roles as an everyday community health and wellness provider and as a space for community gathering and innovation.

To address the environmental impacts that would be associated with the 2019 LRDP, UC San Diego has prepared this 2019 LRDP EIR in accordance with CEQA (PRC Section 21080.09). The UC will serve as the CEQA lead agency. This 2019 LRDP EIR will be relied on for the development of the uses proposed in the 2019 LRDP, as permitted under Section 15161 of the CEQA Guidelines. Typically, a program EIR is prepared for an LRDP at a relatively general level of detail, pursuant to Section 15168 of the CEQA Guidelines. However, UC San Diego is required to comply with state mandate (SB 1953) to retrofit or replace its existing hospital by 2030. The time constraints associated with SB 1953 combined with the site constraints of the Hillcrest Campus have motivated UC San Diego to prepare a conceptual site plan and five-phase construction plan (Section 2.9, Construction Phasing) to comply with SB 1953. Because the level of project information available at this stage is more detailed than a typical LRDP, a project-level analysis is possible, and this 2019 LRDP EIR includes a detailed analysis of environmental impacts by construction phase. The advantage of preparing a program EIR with project-level analysis, as opposed to a program-level analysis EIR, is a reduction in subsequent environmental review required for future project phases. This strategy would be employed for the 2019 LRDP to maximize the time available to achieve the goals of SB 1953, specifically the replacement of the existing Hillcrest Campus hospital inpatient acute care facilities by 2030.

2.2 Existing Uses

Located in the Medical Complex neighborhood of the City's Uptown Community, the Hillcrest Campus largely resembles the hilltop campus depicted in the previous LRDP prepared for the campus in 1995. Nearly all current campus buildings existed at the time of the previous plan's adoption, and the current campus circulation system has remained relatively unchanged. This is due to its edge location bounded by steep, sloped canyons and residential neighborhoods, creating limited opportunities for the campus to expand beyond the current developed area. Currently, the campus is 62 acres, with steep, sloped canyons surrounding the western, northern, and most of the eastern perimeters of the campus and the Medical Complex neighborhood abutting the southern property line. Figure 2-1, Existing Building Use for the Hillcrest Campus, shows the existing building locations and uses on the Hillcrest Campus. The immediate surrounding Medical Complex neighborhood includes single-family detached and 2- to 3-story multi-family residential uses, worship centers, surface parking lots, and additional medical facilities and clinic buildings, including Scripps Mercy Hospital.

While the Hillcrest neighborhood to the south is characterized by a highly walkable street layout, vehicular access to and from the Hillcrest Campus within the Medical Complex neighborhood is restricted to the following three roads: First Avenue from the south, Bachman Place from the north, and Front Street to the south. First Avenue and Front Street are one-way streets off Washington Street (a four-lane major arterial) south of the campus that directs traffic into single-direction routes on First Avenue (northbound) and Front Street (southbound), both of which are two-lane collectors. The one-way streets pass through the residential neighborhood south of the campus. This existing circulation system presents significant challenges for patients, visitors, UC San Diego affiliates (staff, faculty, and students), and emergency vehicles, as it is often difficult to navigate and requires all transportation modes to take counterintuitive routes to get to destinations within the Hillcrest Campus. Campus circulation generally orients around the loop road system created by Arbor Drive, Front Street, and Dickinson Street, with a network of smaller streets, driveways, and pedestrian pathways branching off this loop. At various locations throughout the property, public rights-of-way (ROWs) turn into driveways or dead-end streets, forcing pedestrians and cars to navigate a shared roadway. As a result, pedestrians and drivers must take counterintuitive routes through the campus and often travel in the opposite direction of their destination. Entrances to buildings are often only accessible by way of a parking lot, and access to scenic views along the western edge of the campus are not commonly recognized and have limited pedestrian access. Currently, campus vehicle parking is provided through a combination of on-campus parking structures totaling approximately 1,600 spaces and surface lots totaling approximately 650 spaces. Parking is provided in the Arbor Parking Structure at the end of Arbor Drive for campus patients, physicians, and visitors; the Bachman Parking Structure for staff; and surface parking lots throughout the campus.

Many of the existing facilities on the Hillcrest Campus were constructed as temporary facilities and have reached their useful life. The gross square footage of these spaces is provided in Table 2-1, Existing and Proposed Long Range Development Plan Campus Programs. Most of the remaining structures on the Hillcrest Campus would require extensive improvements.

Today, the Hillcrest Campus provides the following services: Regional Burn Center, Level 1 Trauma Center, Certified Comprehensive Stroke Center, Comprehensive Emergency Department, Epilepsy Center, Inflammatory Bowel Disease Center, International Patient Services, Neurological Institute, and many outpatient specialties, including the region's only dedicated clinic for HIV patients, Owen Clinic. Hospital inpatient services make up the largest gross square footage of the total campus building area and are located primarily in the center of the campus. The existing hospital building, identified by the Inpatient Tower, is 11 stories (approximately 200 feet high) and encompasses over one-third of the total building square footage on the Hillcrest Campus. The majority of the inpatient admissions come through the Emergency, Trauma, Medicine, Surgical, and Psychiatric Departments. Outpatient activities encompass the second largest gross square footage, with locations throughout the campus. Medical Offices North and Medical Offices South, the former of which hosts the campus's helicopter landing zone on its roof, contain half of the outpatient services, including but not limited to procedural spaces, imaging, and clinic spaces for the Otorhinolaryngology/Head and Neck Surgery, Urology, Gastroenterology, Neurology, Neurosurgery, Plastic Surgery, Ophthalmology, and Orthopedics departments. Research, teaching, and administrative support cover the majority of the remaining building uses.

The Clinical Teaching Facility serves as the heart of the Hillcrest Campus's research activities and consists of three distinct wings. It functions as an important facility for the UC San Diego School of Medicine by providing research activities, classrooms, and teaching experiences. Infrastructure and support services form a small portion of the campus primarily located near the central utilities plant (CUP). Finally, a small amount of long-term stay housing (12 rooms) is provided at the Bannister Family House located in the northwestern corner of the Hillcrest Campus overlooking Mission Valley. This facility provides lodging for families of patients undergoing long-term care. In addition, the Dickinson housing cluster (19 residential units) located at the eastern end of Dickinson Street consists of rental housing units, and 2 additional residential units are located at 4194 First Avenue. As of 2017, the Hillcrest Campus's existing total development includes approximately 1.1 million gross square feet (gsf), not including parking (see Table 2-1). As of 2017, the Hillcrest Campus has approximately 2,250 parking spaces (see Table 2-2, Existing and Proposed Long Range Development Plan Parking).

In conformance with CEQA Guidelines, Section 15126.2, Consideration and Discussion of Significant Environmental Effects, "in assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is

published, or where no notice of preparation is published, at the time environmental analysis is commenced" (14 CCR 15126.2). Existing condition data used for the baseline were generally gathered at the end of 2017, just prior to issuance of the Notice of Preparation in March 2018. Therefore, the existing uses and activities will serve as the baseline on which the proposed 2019 LRDP uses and activities are compared and evaluated to determine the impacts of the 2019 LRDP.

Table 2-1. Existing and Proposed Long Range Development Plan Campus Programs

Program Use Category[1]		2017 Existing Space	2035 Space Projections	Net New Projected Space[3]
Health Programs	Hospital	370 beds (480,000 gsf)	300 beds (~740,000 gsf)	−70 beds (+260,000 gsf)[2]
	Other Health Care, Research, and Support	605,000 gsf	777,000 gsf	+172,000 gsf
	Long-Term Patient and Family Housing	11,000 gsf	11,000 gsf	—
Health Programs Total (rounded)		**1.1 million gsf**	**1.5 million gsf**	**+0.4 million gsf**
Residential/ Mixed Use	Residential Units	21 units (14,000 gsf)	1,000 units (~1,159,000 gsf)	+979 units (1,144,700 gsf)
	Wellbeing Center	—	40,000 gsf	+40,000 gsf
Residential/Mixed-Use Total (rounded)		**14,000 gsf**	**1.2 million gsf**	**+1.2 million gsf**
Total GSF (rounded)		**1.1 million gsf**	**2.7 million gsf**	**+1.6 million gsf**

Notes: gsf = gross square feet

[1] Campus-serving retail on campus to total 44,000 gsf, which is accounted for in related program totals.

[2] Though there would be a reduction in the number of hospital beds, an increase in gross square footage would result to allow the new hospital to be designed in accordance with current development codes, take advantage of new technologies and health care delivery methods to better serve patients, and provide updated patient and staff amenities. The reduction in beds reflects a shift in health care trends towards more outpatient services.

[3] Of the 1.1 million existing gsf, two buildings would remain, for a demolition total of 1.05 million gsf. Of the 2.7 million gsf proposed for the 2019 LRDP, two buildings are existing structures, for a net new construction total of 2.6 million gsf. Refer to Table 2-6 for a summary of demolition and construction activity.

Table 2-2. Existing and Proposed Long Range Development Plan Parking

Parking District		2017 Existing Parking Spaces	2035 Proposed Parking Spaces	Net New Parking Spaces
Health Programs	Health Care	1,600 structured 650 surface	2,400 structured	+150
Residential/Mixed Use	Residential	—	1,250 structured	+1,250
	Mixed Use[1]	—	250 structured	+250
Projected Total		**2,250 spaces**	**3,900 spaces**	**+1,650 spaces**

Notes:

[1] The new 250 parking spaces in the mixed-use parking district would be located under the Mixed-Use Residential/Wellbeing Center development and would be expected to serve all programs in the Mixed-Use District, including Mixed-Use Residential/Wellbeing Center occupants and Medical Offices South.

2.3 Project Location and Setting

The Hillcrest Campus is located in the central part of the City of San Diego, California (Figure 2-2, Regional Location Map). More specifically, the Hillcrest Campus is located within the City's Uptown Community within the Medical Complex neighborhood, atop a mesa that overlooks I-8 and Mission Valley to the north (Figure 2-3, Project Location Map). The Hillcrest Campus occupies 62 acres along the northern edge of the Uptown Community, just south of I-8, approximately 2.5 miles north of Downtown San Diego, and approximately 13 miles south of the UC San Diego La Jolla Campus. The property boundaries are generally defined on the northern, western, and most of the eastern sides of the campus by undeveloped, steep, sloped canyons, with slopes east of Bachman Place generally composing the remainder of the eastern property line. The southern boundary is generally defined by West Arbor Drive except for a portion of one city block bounded by First Avenue, Front Street, Montecito Way, and West Arbor Drive and a parcel in the southwestern corner of Front Street and Albatross Drive.

According to the Uptown Community Plan (City of San Diego 2016), the areas surrounding the Hillcrest Campus are planned for future development intensities, including Residential – High (45–73 dwelling units per acre) immediately south and east; Residential – Low (5–9 dwelling units per acre) south and west; Office Commercial (0–73 dwelling units per acre) south and east; and Open Space north, west, and east. The areas surrounding the Hillcrest Campus are currently not developed to this density. The Washington Street corridor south of the campus is identified as Community Commercial (0–73 dwelling units per acre). The off-site surrounding canyons north, west, and east of the campus are largely development constrained due to steep slopes. They also contain natural habitat and have been designated by the City as Multi-Habitat Planning Area, although this designation does not apply to UC San Diego–owned property. These surrounding land uses have played a role in shaping the Hillcrest Campus's evolution throughout the years.

The Medical Complex neighborhood is dominated by the Hillcrest Campus and Scripps Mercy Hospital to the southeast. The remaining portion of the Medical Complex neighborhood is occupied primarily by multi-family residential uses. Commercial development, which is mostly auto-oriented, is located on both sides of Washington Street. Development intensities, both residential and institutional, are generally higher in the Medical Complex neighborhood than the majority of the Uptown Community due to the hospitals and medical office buildings having a higher intensity of building floor area.

Washington Street south of the Hillcrest Campus marks the transition between the Medical Complex and Hillcrest neighborhoods. For the Hillcrest Campus, Washington Street plays a vital role as a source of walkable amenities and public transportation for the campus's patients, employees, and students.

Directly south of the Medical Complex neighborhood is the Hillcrest neighborhood, which includes a lively mixed-use residential area. The Hillcrest neighborhood consists primarily of residential land uses and is considered one of the City's oldest and most culturally distinct neighborhoods. Small-scale, densely packed parcels framed by a walkable street grid create a high-quality pedestrian-oriented environment.

North of the Hillcrest Campus and the Uptown Community lies the Mission Valley Community. This area is characterized as a suburban region with residential development, large shopping centers, a golf course, numerous hotels, and various auto-oriented commercial uses. Despite the Mission Valley area's proximity to the campus, access from the campus is limited as a result of steep canyons; large grade changes; and limited access along the northern, eastern, and western property lines and barriers generated by I-8 to the north.

2.4 Long Range Development Plan Objectives

The fundamental objectives for the proposed 2019 LRDP are described below:

1. Meet the seismic safety requirements of SB 1953 by replacing the existing hospital building by 2030 while maintaining existing community health care operations including but not limited to:
    a. San Diego's only Regional Burn Center
    b. Level 1 Trauma Center
    c. Certified Comprehensive Stroke Center
    d. Comprehensive Emergency Department
    e. Epilepsy Center
    f. Inflammatory Bowel Disease Center
    g. International Patient Services
    h. Neurological Institute
    i. The region's only dedicated clinic for HIV patients, the Owen Clinic
2. Replace aging and obsolete buildings and redevelop the Hillcrest Campus to create a modern, patient-centered environment that leverages UC San Diego Health's capabilities as an academic medical institution while also providing live-work-learn housing for UC San Diego affiliates, wellness-driven programming, and accessible open spaces
3. Organize the campus development by clearly delineating five new land use districts (Health Care, Residential, Open Space, Mixed-Use, and Canyon), each of which would be defined by a predominant land use and development condition that contribute to a cohesive campus that is aligned with UC San Diego's vision
4. Create a campus that promotes community wellness and health care in both its facilities and its site development

5. Implement a mix of land uses including residential, retail, and office space that support the financial feasibility of the campus's development and operations into the future
6. Provide up to 1,000 residential units for UC San Diego affiliates that respond to an existing and increasing demand for housing on campus and region wide, reduce commuter traffic to and from the campus, and integrate a range of resident- and neighborhood-oriented amenities
7. Improve the roadway circulation network adjacent to and within the campus while minimizing traffic impacts to adjoining neighborhoods
8. Improve transportation-related facilities including parking structures, transit stops, and passenger drop-off and pick-up areas in a way that allows for intuitive vehicular, biking, and patient-oriented access and multimodal improvements for wayfinding
9. Enhance the campus open space concept as a resource for campus patients, visitors, and employees, as well as the surrounding community
10. Provide on-site energy infrastructure that is cost effective, redundant, and energy efficient and is in compliance with regulations for acute care hospital and related medical facilities
11. Site the CUP in a location on the campus such that it does not impair construction sequencing, impact existing utilities that serve current facilities that must remain online, or impact the efficient replacement of facilities under the 2019 LRDP
12. Accommodate a robust graduate education program with research labs, instructional areas, and office administrative space

2.5 Long Range Development Plan Elements

The 2019 LRDP addresses four primary elements. These elements, and other topics, are described in more detail below:

- **Land Use:** Describes the overarching layout and intensity guidelines for future development uses on the campus, with preferred development areas identified for key land use categories.
- **Campus Open Space:** Covers the campus's different types of open space, proposed locations, and the unique role it plays within the campus's "active healing landscape."
- **Circulation:** Addresses how people would move to and from the campus and how they would move within the campus upon arrival. It considers travel experiences for all mode types and provides strategies for ensuring a navigable and integrated campus circulation system.
- **Utilities and Infrastructure:** Discusses the specific facilities and systems needed to accommodate changes in the campus's future development program, and offers strategies for achieving a more efficient campus energy system.

2.5.1 Land Use Element

2.5.1.1 Long Range Development Plan Land Use Districts

The proposed 2019 LRDP calls for the redevelopment of the campus through the creation of the following five new districts: Health Care, Residential, Open Space, Mixed-Use, and Canyon (Figure 2-4, Future Campus Land Use Districts). For the purposes of this 2019 LRDP EIR, a district is defined as a physical organizer with a predominant land use category with district boundaries subjectively defined as long as they meet the proposed 2019 LRDP goals. Each district would be defined by a distinct land use and development condition while contributing to a cohesive and holistic campus that is aligned with UC San Diego's vision. Table 2-3, Allowable Future Development Intensities and Land Uses by District, identifies the allowable future development intensities, population, and land uses by district. Each district is described below.

Health Care District. This district would function as the central medical hub, creating a consolidated and clustered arrangement to improve accessibility for patients and medical staff. Predominant uses in this district would be related to patient care and include inpatient and ambulatory services, nursing, clinical services, and surgery. Support uses in this district would consist of dining and food service, patient and visitor lounge areas, and office and administrative spaces. A new main hospital building with up to 300 beds would provide space for critical inpatient services. A consolidated Outpatient Pavilion would be constructed to bring ambulatory clinics, exam rooms, surgery facilities, and clinical lab spaces together into a more efficient patient-oriented setting. A Multi-Use Building would allow for consolidated research lab and instruction areas, medical office and administrative uses, and parking. This district would also include dining areas, cafés, pharmacies, support and infrastructure facilities, and a CUP. The CUP would include both Office of Statewide Health Planning and Development (OSHPD)–compliant and non-OSHPD-compliant components. Meandering paths would be provided throughout the campus to allow opportunities to view scenic vistas, as well as to walk, jog, and rest. Transportation-related facilities including parking structures, transit stops, passenger drop-off and pick-up areas, and an improved roadway circulation network would be structured in a way that is patient-centric.

As identified in Table 2-3, the Health Care District would allow up to 1.4 million gsf of total development, including 300 inpatient hospital beds. Maximum building height in the district would be limited to 200 feet above grade (same height as the existing hospital). One privately owned, undeveloped parcel would be acquired by UC San Diego to allow for the development of the Health Care District. Allowable land uses would include patient health services (inpatient hospital and outpatient), health research and instruction, campus retail, campus support, medical office, developed open space, circulation, and parking.

Residential District. This district would be primarily characterized by new multi-family development and the existing Bannister Family House located along the western edge of the mesa. New facilities

would increase the Hillcrest Campus's land use offerings by expanding housing for UC San Diego affiliates and neighborhood-serving retail prospects for campus employees, patients, visitors, and surrounding neighbors. Key structures within the Residential District would include approximately 950 multi-family units and recreational amenities for residents, including swimming pools and workout facilities. Retail spaces situated on the ground floor of these developments would provide daily amenities for residents and Hillcrest Campus users. The existing Bannister Family House (12 units) is located in this district and would remain as a facility for families of patients undergoing long-term care. Developed open space areas, including small parks and plazas, for residents would be provided in this district. Structured parking facilities with separate entrances would be integrated into the proposed residential development along with an improved roadway circulation network. Specifically, access to parking areas for the residential buildings would be provided through a new driveway off Bachman Place (north access driveway) that would dead-end at an underground parking structure and would not be a through street (i.e., there would be no connection from the north access driveway to Arbor Drive or greater neighborhood). Residents would also be able to access the underground parking from West Arbor Drive.

As identified in Table 2-3, the Residential District would allow up to 1.07 million gsf of total development, including approximately 950 multi-family residential units. Maximum building height in the district would be 200 feet above grade, which is approximately the same height as the existing hospital. Allowable land uses would include multi-family residential, campus retail, long-term patient family housing, campus support, developed open space, circulation, and parking.

Open Space. This district would be located within the center of the campus and consist primarily of a large, central open space area bounded by the Residential District to the west and the Health Care District to the north and east. The central open space area would serve as a shared publicly accessible space for visitors, staff, students, neighbors, and residents. This district would include minimal facility development with a diverse collection of landscape treatment types ranging from preserved storm water bioswales to shared-use pathways. Types of development in this district would include courtyards, planted areas with park benches, outdoor dining areas, areas to observe scenic vistas, and pedestrian and wheeled device paths. The limited development allowed in this district may include retail kiosks, such as coffee stands and small cafés, and other flexible spaces to serve the campus and greater community.

As identified in Table 2-3, the Open Space District would allow up to 4,000 gsf of total development. Maximum building height in the district would be 15 feet. Allowable land uses would include developed open space, campus retail, campus support, and circulation.

Mixed-Use District. This district would have a distinctive mixed-use character with recreation and meeting spaces in proximity to the residential development and a goal of playing a more integrative role in the health of the surrounding neighborhood. The types of services in this district would

incorporate community-oriented uses that promote healthy lifestyles, healthy food options, preventative care, and local business opportunities. Allowed uses such as indoor and outdoor fitness areas, a swimming pool, classrooms for health education purposes, outpatient clinics and medical offices, and cafés and restaurants would be developed as part of this district. In addition, approximately 50 multi-family residential units would be provided in this district to bridge the gap between the more intensive health care land uses and existing neighborhood residential uses south of Arbor Drive. Visitor and resident parking integrated with the development in the district would be provided along with pedestrian connections and streets that prioritize safe movement.

As identified in Table 2-3, the Mixed-Use District would allow approximately 213,000 gsf of total development, including approximately 50 multi-family residential units. Maximum building height in the district would be 60 feet above grade. One privately owned parcel, a 10,652-square-foot office building,[1] was recently acquired by UC San Diego to allow for development of the Mixed-Use District. A second parcel containing a 4,437-square-foot single-family residence[2] is yet to be acquired. Allowable land uses would include the Wellbeing Center, multi-family residential, campus retail, medical office, campus support, developed open space, circulation, and parking.

Canyon District. This district would be characterized by a largely natural landscape with limited development and infrastructure consisting of approximately 28 acres of the native canyon area. The focus of this land use district would be driven by continued natural open space preservation because of the canyon's native vegetation and steep slopes. This district would also include wildfire management considerations due to adjoining development on the mesa top where the steep slopes meet the mesa edge. The limited development and activities allowed in this district would include multimodal public ROWs with bidirectional traffic, bicycle and pedestrian infrastructure, storm water treatment facilities, limited-access private roadways for emergency service and residential uses, and clearly defined utility corridors co-located beneath the hardscape surfaces to the extent feasible.

As identified in Table 2-3, allowed land uses within the Canyon District would include preserved open space, limited campus support, and limited circulation. No buildings or parking areas would be allowed within the Canyon District.

2.5.1.2 Land Use Principles

The 2019 LRDP land use principles support the vision that the Hillcrest Campus would be a patient-centered environment that leverages UC San Diego Health's capabilities as an academic medical institution with a live-work-learn home for UC San Diego affiliates, offering wellness-driven programming and accessible open spaces. The principles outline a strategy for fulfilling the

[1] These buildings are not included in the Table 2-1 summary of gross square footage and are not included in the 2019 LRDP technical study calculations because these buildings would be demolished separately from the 2019 LRDP for safety reasons.
[2] See note 1 above.

different components of the campus land use districts in coordination with the general land use principles and overarching plan objectives within the 2019 LRDP. These principles can be found in Section 4 of the 2019 LRDP.

2.5.1.3 Building Space Program and Campus Population

As of 2017, the Hillcrest Campus's existing total development was approximately 1.1 million gsf not including parking. The majority of existing programs are dedicated to inpatient use (43 percent), followed by outpatient (19 percent), research and instruction (17 percent), office and support (15 percent), the CUP (4 percent), and housing (2 percent). To achieve the plan objectives stated previously, the 2019 LRDP would propose an increase of approximately 488,000 gsf of nonresidential development, bringing the total amount of nonresidential development to 1.6 million gsf. New nonresidential development would replace over 90 percent of the campus's existing building stock, offering modern labs, medical offices, research centers, and state-of-the-art hospital facilities. In addition, the 2019 LRDP would significantly increase on-campus residential uses up to 1,000 total multi-family units. Additional residential uses have been added as a part of the 2019 LRDP in response to the San Diego region's chronic housing crisis, lack of workforce housing affordability, and need to address university sustainability policies. The planned inclusion of various sized units, including micro units, and decoupled parking would deliver affordability for UC San Diego affiliates that is not available in the private market. The provision of increased on-campus housing has been enabled through the removal of a deed restriction placed by the County onto the Hillcrest Campus lands, which now allows for the provision of residences for UC San Diego affiliates and essential medical services to the community. In addition, the provision of residential uses provides a revenue source for UC San Diego as a part of the overall financial strategy to support campus infrastructure development.

Table 2-3. Allowable Future Development Intensities and Land Uses by District

Land Use District	Health Care District	Residential District	Open Space District	Mixed-Use District	Canyon District
Total Development	1,440,000 gsf 300 inpatient beds	1,070,000 gsf and 950 multi-family units	4,000 gsf	213,000 gsf and 50 multi-family units	NA
Maximum Building Height[2] (feet)	200[1]	200[1]	15	60[1]	NA
Land Uses	• Patient Health Services • Health Research and Instruction • Campus Retail • Campus Support • Medical Office • Developed Open Space • Circulation • Parking	• Multi-Family Residential • Campus Retail • Long-Term Patient Family Housing • Campus Support • Developed Open Space • Circulation • Parking	• Developed Open Space • Campus Retail • Circulation	• Wellbeing Center • Multi-Family Residential • Campus Retail • Medical Office • Campus Support • Developed Open Space • Circulation • Parking	• Preserved Open Space • Limited Campus Support • Limited Circulation

Notes: gsf = gross square feet; NA = not applicable

[1] Includes 10 feet added for rooftop equipment.

[2] Building heights would not exceed that of the existing 200-foot hospital.

Hillcrest Campus Population

The populations on the Hillcrest Campus can be discussed in two groups: the health employee group and the residential group. Generally speaking, the existing population, categorized as health employees and the residential group, would have the most growth in population. As shown in Table 2-4, Existing and Projected Nonresidential Campus Population, the existing baseline population headcount for the Hillcrest Campus in 2017 was 4,450 persons, which included health and health sciences faculty, staff, and medical students. A headcount is defined as an estimate of the peak population on campus at any one time, which provides a conservative approach for EIR analysis purposes because the headcount includes both full- and part-time populations. This does not include the small residential population that currently lives in the 19 residential rental units on campus, which are located at the end of Dickinson Street in the Dickinson housing cluster. Two additional residential units at 4194 First Avenue are vacant.

The total nonresidential campus population is projected to increase by 750 people, or approximately 18 percent of the existing equivalent headcount (Table 2-4), by 2035. This slight increase in overall nonresidential campus headcount reflects broader program changes at the Hillcrest Campus to focus more on outpatient uses and less on inpatient uses.

The 2019 LRDP would increase the residential population on the Hillcrest Campus. The 21 existing residential units on campus would be removed to allow for redevelopment, and up to 1,000 new residential units would be constructed in phases to be occupied by UC San Diego affiliates (faculty, staff, and students).

Unit size, which affects the total residential population, is unknown at this time and may range from micro-units/studios to one-, two-, or three-bedroom units, or a combination thereof. For analysis purposes, this 2019 LRDP EIR uses the American Community Survey data (ACS 2016) and discusses the 2010 Census data to estimate residential population. The net increase of 979 new housing units equates to approximately 1,650 additional residents (ACS 2016). Additional discussion of campus population increase can be found in Section 3.12, Population and Housing, of this 2019 LRDP EIR.

Table 2-4. Existing and Projected Nonresidential Campus Population

Category	2017 Existing Population	2035 Projected Population	Change (+)
Medical Faculty/Staff[1]	3,200	3,550	350
Research Faculty/Staff[2]	250	300	50
Administrative/Operations Staff[3]	1,000	1,350	350
Total	4,450	5,200	750

Source: UC San Diego Health Human Resources 2018.

Notes:

[1] Includes physicians, nurses, technicians, medical residents, and other staff related to direct patient care.

[2] Includes research faculty, staff, and related administration.

[3] Includes other health care administration, service staff, support staff, and future residential/mixed use operations staff.

2.5.2 Campus Open Space Element

2.5.2.1 General Description of Open Space Categories

The redeveloped Hillcrest Campus would feature a range of open space types, with varying levels of intended programming and public access. The goal of the 2019 LRDP land use components would be to create a sustainable, context-sensitive landscape character, which is reflected in the Campus Open Space Element (UCOP 2018a). New open space types would include publicly accessible open spaces for recreation and community events, more contained spaces for quiet meditation, and preserved habitat areas that offer visual/aesthetic benefits. Open space would also serve as an important transitional element tying the preserved canyon landscape to the more developed parts of the campus. As such, the 2019 LRDP would call for a diverse collection of landscape treatment types to be applied to each type of campus open space. These range from the preserved native landscape to more highly urbanized streetscape environments. Together, this cohesive network of context-driven open spaces and landscapes would enhance the campus arrival and mobility experiences and provide a visual contrast to the built environment of the campus's medical center and residential development.

2.5.2.2 Campus Open Space Principles

The 2019 LRDP campus open space principles support the vision that the future Hillcrest Campus would redefine how a medical campus integrates open space with development to create a unique landscape environment that both heals and inspires. The principles outline a strategy for fulfilling the open space needs of different campus users and surrounding communities in coordination with the general open space goals and overarching plan objectives that are included in the 2019 LRDP. These campus open space principles can be found in Section 4 of the 2019 LRDP.

2.5.2.3 Open Space Categories

The following types of open space categories would be provided on the Hillcrest Campus: public access, semi-public access, limited access, restricted access, and preserved landscape. These categories are discussed in the following text. Figure 2-5, Conceptual Future Campus Open Space Types, identifies the conceptual future campus open space types.

Public Access

Publicly accessible open space would make up the majority of the open space within the developed mesa portion of the campus and would consist primarily of a large central open space area bounded by the Residential District to the west, the Health Care District to the north and east, and the Mixed-Use District to the south. Future amenities provided within the central open space area could include the following: an amphitheater or paved plaza area for larger gathering and special events, berms or other unique landscape features for passive gathering or relaxation, food or beverage

kiosks with movable furniture, and multi-generational fitness stations that encourage people to spend time outdoors.

Sustained activation of the central open space area would be crucial for its long-term success and would enhance campus safety. A variety of ground floor retail uses along edges of the open space area would attract pedestrians throughout the week during business hours, while temporary activation events such as farmer's markets, outdoor fitness classes, and community health and wellness fairs would offer more intermittent bursts of activity. Future temporary events would be planned collaboratively between campus stakeholders to ensure long-term and local stewardship. Other examples of publicly accessible open space on the campus would include setbacks along the campus ROWs and other smaller parks and plazas. New pedestrian connections would weave throughout publicly accessible open spaces and along the edge of the mesa, allowing for physical and visual links to the surrounding canyon landscape.

Semi-Public Access

Courtyards, building entryways, and setbacks would make up a second tier of open space that would be semi-public in nature and more connected with the private uses it abuts, such as shaded benches outside an entrance to the Outpatient Pavilion and café seating outside a ground floor restaurant unit. These semi-publicly accessible open spaces would serve as transition zones between the publicly accessible open spaces and the private uses within campus buildings and would offer opportunities for smaller, more intimate gatherings.

Limited Access

Limited access open spaces would be dedicated for use by a specific campus user group and not open to the general public, though they may remain somewhat visible from publicly and semi-publicly accessible open spaces on campus. Moderately screened from public view by fencing or plantings, these open spaces would provide quiet, reflective areas for Health Care District users to immerse themselves in the natural landscape. Examples of this type of open space include meditation gardens and shaded seating areas for individuals and small groups to gather. Limited-access open spaces would also include neighborhood-serving amenities such as the Wellbeing Center, which could include a swimming pool and gym equipment that would be available to UC San Diego affiliates and the nearby neighborhood residents.

Restricted Access

Restricted access open spaces would be inaccessible to the greater public and also less visible. Typically, they would be located above grade and accessible only from interior building spaces. These types of open spaces are envisioned for some residential outdoor amenities, private dining areas, and courtyards for UC San Diego affiliates.

Preserved Landscape

Preserved landscape open space corresponds with the boundaries of the Canyon District and is envisioned to serve as a natural habitat area and scenic resource to be enjoyed from a distance. Unlike the developed forms of open space, which encourage more integrated human activity, the preserved landscape open space area would be a large and contiguous region with few opportunities for campus users to circulate within its boundaries. Landscape maintenance in this area would be limited to fuel modification in fuel management zones for fire protection purposes. Regarding the two campus roads that would be located within the preserved landscape open space (i.e., Bachman Place and the north access driveway) (Figure 2-5), all transit mode types, including pedestrians and bicyclists, would be limited to the facilities provided within these ROWs. If essential utility infrastructure cannot be co-located within roadway ROWs, the infrastructure may be implemented only with appropriate mitigation of potential biological resource impacts. Additionally, the existing dilapidated concrete staircase stretching north to south from the mesa top through the canyon is planned for removal. This would entail extracting the decaying concrete and restoring the area to its native state within the canyon.

2.5.3 Circulation Element

2.5.3.1 General Description of Circulation Categories

The 2019 LRDP would necessitate an efficient and user-oriented circulation system in and around the Hillcrest Campus capable of handling a diverse assortment of trip types while remaining considerate of the smaller neighborhood streets that bound the campus. Circulation envisioned under the proposed 2019 LRDP is illustrated on Figure 2-6, Conceptual Campus Circulation. As such, the 2019 LRDP would call for a robust combination of parking and transportation demand management (TDM) strategies to reduce the amount of vehicle travel to and from the campus. Improved multimodal ROWs with enhanced pedestrian and bicycle accessibility, along with more efficient parking strategies, would transform the circulation experience for campus users. Strategies include targeted improvements to the UC San Diego shuttle service and ridesharing partnerships that would seek to reduce overall vehicle circulation and emissions levels on campus. An example of the integrated multimodal circulation envisioned for the Hillcrest Campus is provided on Figure 2-7, Multimodal Cross-Section of First Avenue Extension, which shows a sample typical cross-section of the proposed First Avenue extension.

2.5.3.2 Circulation Principles

The 2019 LRDP circulation principles support the vision that the Hillcrest Campus would be an accessible, multimodal health care destination with a flexible outlook toward future transportation trends and travel behavior. The principles outline a strategy for fulfilling the transportation needs of different campus users in coordination with the general circulation goals and overarching plan objectives. These principles can be found in Section 4 of the 2019 LRDP.

2.5.3.3 Circulation Categories

Vehicles

The 2019 LRDP would propose the development of a more user-oriented circulation system to facilitate efficient vehicular access to and from the Hillcrest Campus. This would allow users to enter and exit the campus intuitively while limiting adverse traffic conditions for the surrounding neighborhood.

Primary vehicular circulation would occur along the perimeter of the mesa, prioritizing the campus core for pedestrians and other non-motorized travel modes (see Figure 2-6). Primary access to the campus for Health Care District users would continue to occur by way of First Avenue. An extension of First Avenue north of Arbor Drive would allow for two-way traffic along the edge of the mesa toward the future hospital entrance, significantly simplifying the arrival experience for the campus's medical patients, visitors, and staff (Figure 2-6). As a more formal boulevard-style street with a landscaped median, the First Avenue extension would serve as a clear transition from the surrounding residential neighborhood to a formal medical campus. A new shared street along the Dickinson Street ROWs would provide pedestrian and bicycle access to the core of the mesa and would limit vehicular access to emergency vehicles and patient-serving neighborhood electric vehicles only.

Grade improvements at the intersection of Bachman Place and Arbor Drive would improve the utility of Bachman Place as a true secondary point of access to the campus by allowing vehicles traveling southward from Hotel Circle South to turn directly onto Arbor Drive from Bachman Place. With First Avenue and Bachman Place serving as arrival routes to the campus, the eastern segment of Arbor Drive would transform into a main arrival node for campus users. Bachman Place would be widened to provide an additional travel lane and allow for new bicycle and pedestrian infrastructure.

A new driveway (north access driveway) would be constructed starting at the northern part of Bachman Place just inside the UC San Diego property boundary. The new road would follow the canyon slope to the northern edge of the mesa, providing an alternate vehicle route to access the campus. Converting this existing dirt and gravel access road in the canyon bottom into a functional two-way ROW would help ease the traffic burden on existing neighborhood streets and offer an access point to underground parking for the Residential District and service access to the future hospital/Health Care District (see Figure 2-4 for proposed new campus road alignments). Residential parking would be restricted to ensure only residents have access to these parking areas. Additionally, the overall parking strategy for the campus follows a "park once" model where consolidated subterranean and above-grade parking structures along the rim of the campus mesa offer dedicated, centralized parking for each of the campus's different user groups in proximity to campus entrances. By restricting parking points of access to the perimeter, overall campus vehicle

traffic would be limited to a small number of streets and ultimately reduce the need for continuous vehicle circulation across the campus.

Bicycles and Micromobility

An improved bicycle circulation concept that promotes the use of alternative transportation would improve overall traffic congestion in and around the Hillcrest Campus. New bicycle infrastructure envisioned for public and private campus ROWs would offer safe and well-marked routes for bicyclists and micromobility users traveling to and from and within the campus. New Class II bicycle lanes on the First Avenue extension would facilitate safer bicycle travel into the Health Care District by providing a dedicated and visible space for bicyclists that would connect with existing and proposed City bicycle facilities beyond the campus's boundaries. Along with providing an additional vehicular travel lane, the proposed Bachman Place widening would allow for new bicycle and pedestrian infrastructure separated from vehicular lanes with vegetated and/or painted buffers that would transform the street into a multimodal connection to the campus and the adjacent Medical Complex and Hillcrest neighborhoods. Additional bicycle supporting facilities, such as secure, enclosed, and covered bicycle parking and bicycle storage, would be provided on the future Hillcrest Campus as well.

Pedestrian

An integrated and inviting pedestrian and bicycle circulation concept is vital to UC San Diego's mission to reduce its single-occupancy vehicle (SOV) trips and integrate with adjacent neighborhood surroundings. High-quality, multimodal streetscape infrastructure that encourages campus users to take alternative forms of travel would help improve overall traffic conditions in and around the campus and create a livelier, more human-oriented campus experience.

While pedestrian improvements would be integrated throughout the campus, pedestrian-only promenades would serve as the main points of interest and activity, leveraging the indoor to outdoor transition of building facades when possible and establishing a wayfinding hierarchy. The 2019 LRDP would prioritize pedestrian access to the Open Space District by removing vehicular access (except emergency vehicles) from Dickinson Street and the northernmost section of Front Street. Within the Health Care District, wide pedestrian walkways, defined streetscapes, and pedestrian bridges would serve as key wayfinding elements and could be complemented by signage, public art, and special lighting installations. Special paving and landscape materials would serve as the physical linkages between the campus's different uses.

A new pedestrian connection is also envisioned for the proposed north access driveway from Bachman Place up to the central campus area. A 12-foot-wide multi-use path would facilitate pedestrian and bicycle travel on a grade-separated trail adjacent to bidirectional vehicle travel lanes.

Patients

Patient access, especially for first-time visitors, is critical because patients seeking care often drive or are driven to the campus. Circulation for patients would be provided primarily along the eastern side of the campus, with the intersection of Arbor Drive and First Avenue serving as the gateway to the Health Care District. Patients and visitors would access the gateway via Bachman Place or from First Avenue and then travel along First Avenue toward the proposed Multi-Use Building with subgrade parking. First Avenue would culminate at a turnaround, where nonemergency vehicles would be directed to either enter a parking structure or loop back around and head south on First Avenue toward the Medical Complex neighborhood. Upon reaching Arbor Drive, south-traveling vehicles would turn right on Arbor Drive, and then left on Front Street to continue exiting south toward Washington Street. Several passenger loading areas are being considered along the Arbor Drive extension that would also provide rideshare and/or ride hail vehicles with designated space to drop off and pick up passengers without impacting through traffic.

Parking areas in the Mixed-Use District between First Avenue and Front Street may include drop-off/pick-up areas along First Avenue and access to a parking facility below the mixed-use development via a new east–west driveway south of Arbor Drive.

Transit

Improvements to overall transit access for the site would be a critical consideration in the 2019 LRDP. As transportation trends shift, the Hillcrest Campus's ability to provide its patients, employees, and residents with alternatives to SOV transportation would be essential to its ongoing success.

The 2019 LRDP proposes to enhance the current bus stop located in front of the Medical Offices South building on southbound Front Street. This transit stop is currently served by the San Diego Metropolitan Transit System (MTS) Line 3 bus route, and future campus TDM measures would consider pursuing opportunities for additional MTS route service at this transit stop. While the campus currently operates a shuttle service between the La Jolla and Hillcrest Campuses, this service would be redundant with the UC San Diego Blue Line light-rail transit line once available in 2021, and therefore, the campus is considering discontinuing this service. To continue to provide transit connectivity between the two campuses, UC San Diego would instead facilitate improved access to nearby transit stations. These improvements may include a new shuttle service to and from the MTS Green Line transit station (light-rail transit) at Fashion Valley Transit Center in Mission Valley, approximately 1.5 miles north of the campus, and/or to the MTS Blue Line light-rail transit at Old Town station approximately 4 miles west of the campus. UC San Diego would continue to make adjustments to its commuter and mobility programs and services to respond to market trends and evolving and disruptive technology and industry changes.

Given the proximity of the campus to neighboring residential uses, the overall impact of SOV trips in and around the campus would be a key concern of the 2019 LRDP. TDM strategies would be addressed throughout the 2019 LRDP to ensure a cohesive and long-term campus-wide approach to SOV trip reduction. Continued support of existing UC San Diego TDM strategies, as well as the introduction of new alternative transportation incentives and multimodal streetscape improvements, would help instill a "car optional" culture on the campus.

Emergency Vehicles

Expedient and streamlined ambulatory access in and out of the campus would be a primary focus of the 2019 LRDP's circulation concept. Emergency vehicles would enter the campus at the First Avenue and Arbor Drive intersection, and then proceed north on First Avenue, past the Main Hospital turnaround, and into a restricted vehicle area at the northern point of the Health Care District.

Emergency Helicopters

Currently, the three-story Medical Offices North building located at the intersection of Front Street and Arbor Drive hosts the campus's helicopter landing zone on its roof, which is an essential facility for the hospital's trauma center. In 2017, the Hillcrest Campus had approximately 531 emergency helicopter landings. With implementation of the 2019 LRDP, an emergency helicopter landing pad would be relocated to the roof of the new Inpatient Tower once in operation.

2.5.4 Utilities and Infrastructure Element

2.5.4.1 General Description of Utilities and Infrastructure

The reconfiguration of the campus's existing land uses and circulation proposed under the 2019 LRDP would necessitate an overhaul of the campus's existing utilities and infrastructure system. This unique "reset" scenario would be the Hillcrest Campus's first opportunity in nearly 60 years to devise a new campus-wide structure that would provide redundancy across its systems, improve infrastructure reliability, and promote a more resilient and sustainable campus overall. The overarching concept for the future campus utilities and infrastructure system would include a combination of strategies related to building energy performance, central plant reconfiguration, and overall campus site design. Together, these strategies would seek to bring energy reliability and resiliency to the Hillcrest Campus (see Figure 2-8 for the reconfiguration of campus utilities that would be envisioned in the 2019 LRDP).

On-Site Utilities

On-site utilities for the Hillcrest Campus would include the redevelopment and upgrade of existing facilities to adequately serve the future campus. Overall site design strategies would include combining the entire campus under one electric and gas meter service and incorporating energy storage strategies, renewable energy sourcing, and overall site energy reductions. A new CUP

would serve as the base of operations with five campus-dedicated utility corridors and one public corridor along the realigned segment of Bachman Place extending from the CUP. These utility corridors would distribute water, sewer, storm water, electrical, and heating and cooling services throughout the campus. The overall future energy system for the campus envisions a combined central plant strategy that would use both a chilled water and steam central plant (OSHPD) and decentralized heating at each building (non-OSHPD). The new CUP would be built to house the nonresidential non-OSHPD and OSHPD loads and consist of a cogeneration plant that would turn the generator's otherwise "waste" heat into usable energy.

Parking structures and lighting along the new north access driveway would use electricity from the UC Regents Wholesale Power Program, which is 100 percent carbon-free energy. Once the hospital and CUP are constructed in Phase 3, new medical center buildings and parking facilities would be hooked into and powered by the CUP. Residential projects proposed in partnership with private residential developers, including Residential Sites A and B and the Mixed-Use Residential/Wellbeing Center, would be tied onto the grid and use 100 percent carbon-free energy from the UC Regents Wholesale Power Program via direct access and not operated via the CUP.

The overall approach to on-site storm water drainage is to upgrade the existing system to handle the flows of the proposed development under the 2019 LRDP and eliminate the current canyon outfalls that are causing erosion by constructing new storm water drainage pipelines in the northern area of the campus.

Off-Site Utilities

Off-site utilities improvements for the Hillcrest Campus would be accomplished in Phases 1A, 1B, 2A and 2B. Phase 1A utilities improvements would consist of the privatization, or transfer of ownership from the City to UC San Diego, of the City utilities within Front Street and Dickinson Street. The dual 12-inch water mains currently serving the Hillcrest Campus at various points along its alignment would be privatized to the public ROW located at the intersection of Front Street and Arbor Drive. A new metered connection, combining several existing connection points into one dedicated feed, would be located at this intersection. The 8-inch sewer main that runs within Dickinson Street and down Front Street would be privatized to the existing manhole located within the intersection of Front Street and Arbor Drive. This sewer main would not be used by the campus in future phases and would be abandoned over time as the existing buildings are decommissioned and taken offline. The existing storm drain system located at the intersection of Front Street and Dickinson Street would be privatized in its entire length and modified to reroute away from the existing canyon areas and south toward Arbor Drive, which would allow for the development of Phase 1A.

Phase 1B utilities improvements would consist of the construction of City infrastructure within Arbor Drive and Bachman Place in conjunction with the Arbor Drive-Bachman Place connection and realignment. A new City 12-inch water main connecting to the existing 12-inch main in Arbor

Drive to the 8-inch main within Third Avenue would allow for further redundancy of the City water system serving the campus and for the expansion of the water system on the eastern side of the Hillcrest Campus. To convey storm water flow from the public improvements on Arbor Drive, a new City 24-inch storm drain within Arbor Drive and Bachman Place would be constructed to ultimately discharge at a UC San Diego–owned and maintained storm water treatment device east of the existing Bachman Parking Structure.

Phase 2A utilities improvements would consist of the construction of needed utilities associated with construction of the new access driveway and Phase 2B improvements would consist of improvements associated with the widening of Bachman Place. To maintain capacity during the buildout of the hospital site during Phase 3, the existing City 8-inch sewer main north of the campus would be upsized to a 12-inch main for approximately 250 feet to the existing 12-inch main west of Bachman Place. An off-site City storm drain would be constructed during Phase 2B to adequately drain the widening and improvements to Bachman Place up to Hotel Circle South.

2.5.4.2 Utilities and Infrastructure Principles

As a general utilities and infrastructure goal, the Hillcrest Campus aims to achieve carbon neutrality by 2025 as outlined by the UC Sustainable Practices Policy. The utilities and infrastructure principles outline a strategy for fulfilling campus-wide energy and sustainability goals. These principles can be found in Section 4 of the 2019 LRDP.

2.5.4.3 Utilities and Infrastructure Categories

Water

The existing Hillcrest Campus water system is composed of pipes of various size and material and is directly served by the City at three connections. A fourth connection serves as an emergency supply for the main Inpatient Tower in the event of a shutoff or fire. Two 12-inch City water mains run through Front Street, with the campus main connection to the City located at the intersection of Front Street and Dickinson Street. The 12-inch water mains then run east–west through Dickinson Street, ultimately connecting at the western end of Dickinson Street to provide a looped system. Additional connections to the City water system are located at the Arbor Drive and Front Street intersection and at the western end of Dickinson Street.

The existing Hillcrest Campus water system infrastructure is not adequate to serve the existing campus and, therefore, is not adequate for the future campus development that would be envisioned in the 2019 LRDP. With future campus development anticipated to generate an average flowrate of 0.80 million gallons per day (mgd) (a 240 percent increase from the campus's existing average flowrate of 0.33 mgd), new water pipes and reconfigured fire hydrants would be necessary to meet daily demand. The future campus water distribution system would include the privatization of the existing municipal water pipeline that runs under Dickinson Street and then curves south

along the existing Front Street ROWs before connecting to another City pipeline located under Arbor Drive. In addition, new water pipelines would be constructed to connect newly developed parts of the campus to the City pipeline running under Arbor Drive. The realigned segment of Bachman Place would feature a new pipeline that connects to Arbor Drive at First Avenue, and a new pipeline running east–west that would connect the privatized Front Street pipeline and the new pipeline under Bachman Place. The resulting figure-eight shape would ensure adequate water flow across the entire campus for daily and emergency use while sharing corridors with other campus utilities and vehicle ROWs.

Sewer

The campus is currently served by a variety of UC San Diego–owned sewer mains located within nearly all of its vehicle ROWs. These mains ultimately converge at one of two municipal sewer basins at the edge of the campus, where discharges are sent either north to a trunk main running along I-8 or south to a University Avenue trunk main running through the Hillcrest neighborhood. The current average flow rate for the campus is 0.16 mgd, and its peak-flow rate is 0.36 mgd.

The future program and daily equivalent population that would be envisioned in the 2019 LRDP would require a complete reworking of the current campus-wide sewer system layout and capacity (see Figure 2-8). With an increased future average flow rate of 0.47 mgd and an increased peak-flow rate of 0.93 mgd, a reconfigured sewer system would be necessary to distribute these increased flows more evenly to the two existing municipal sewer basins. The future sewer system would be composed of four new UC San Diego sewer mains that would connect to the existing Bachman Place sewer main that runs north to Hotel Circle South. A new sewer main extending under the proposed north access driveway would provide service for the Residential District, and two new mains would connect flows from the Health Care District to a new main running along the realigned Bachman Place ROWs. Despite overall increases in flows from the campus, the new sewer system configuration would eliminate total flows to the existing Hillcrest neighborhood sewer basin south of campus.

Storm Water

Storm water treatment on the campus would be thoughtfully integrated with the natural landscape and built environment to create a system that is both functional and visually appealing (see Figure 2-8). Implementation of the 2019 LRDP would result in the construction of new buildings, landscaping, and other features on the Hillcrest Campus that are anticipated to result in minor alterations to the existing drainage patterns of the individual development sites within the campus, but drainage patterns of the campus and the community as a whole would not be altered. Upgrades to existing storm water drainage infrastructure would be completed to solve issues with the current configuration, eliminate and repair eroded slopes, address water quality, and generally bring the drainage system up to current standards. The improvements would include the construction of two

new underground storm water drainage facilities from the center of the Hillcrest Campus to the proposed new north access driveway and Bachman Place, respectively. The new pipelines would extend from the mesa top, underground through the canyon, and convene with the new storm drain facilities in the north access driveway and the upgraded storm drain facilities in Bachman Place. The existing outfalls that currently flow over the mesa top causing erosion of the canyon areas would be abandoned and restored, improving the current condition.

Low-Impact Development

In addition to the site design and source control BMPs discussed previously, campus development projects greater than 5,000 square feet of impervious surface are required to implement storm water pollutant control BMPs to reduce the quantity of pollutants in storm water discharges. Storm water pollutant control BMPs would include construction of engineered facilities designed to retain (i.e., intercept, store, infiltrate, evaporate, and evapotranspire) or biofilter storm water runoff generated on the Hillcrest Campus. Low-impact development requirements apply to both new development and redevelopment projects.

After implementation of site design measures, remaining impervious areas would be directed to structural BMPs that may include any combination of infiltration or biofiltration basins. Campus development would include implementation of BMPs designed to retain on site the pollutants produced from a 24-hour, 85th percentile storm (volumetric criteria) or runoff produced from a rain event equal to at least 0.2 inches per hour intensity (flow-based criteria).

Infiltration BMPs are structural measures that capture, store, and infiltrate storm water runoff. These BMPs are engineered to store a specified volume of water and have no design surface discharge (underdrain or outlet structure) until this volume is exceeded. These types of BMPs may support evapotranspiration processes but are characterized by having their most dominant volume losses due to infiltration.

In areas where retention BMPs for the full volume on site are not feasible, the project would use biofiltration BMPs for the remaining volume not reliably retained. Biofiltration BMPs are shallow basins filled with treatment media and drainage rock that treat storm water runoff by capturing and detaining inflows prior to controlled release through minimal incidental infiltration, evapotranspiration, or discharge through an underdrain or surface outlet structure. Treatment would be achieved through filtration, sedimentation, adsorption, biochemical processes, and/or vegetative uptake. Biofiltration BMPs can be designed with or without vegetation provided that biological treatment processes are present throughout the life of the BMP through maintenance of plants, media base flow, or other biota-supporting elements. Typical biofiltration components include a media layer with associated filtration rates, drainage layer with associated in situ soil infiltration rates, underdrain, inflow and outflow control structures, and vegetation, with an optional impermeable liner installed on an as-needed basis due to site constraints.

Energy, Heating, and Cooling

Currently, the Hillcrest Campus electrical system is fed from three different San Diego Gas & Electric (SDG&E) circuits, each from a different SDG&E substation. The electricity commodity is purchased primarily via direct access from the UC Regents, with a small portion purchased from SDG&E. Moving forward, the campus would continue to be served by SDG&E circuits, but the electricity commodity would be provided exclusively by on-site generation and the UC Regents. California's OSHPD regulates the design and construction of health care facilities to ensure that the facilities are safe and capable of providing services to the public. The 2019 LRDP would establish multiple SDG&E circuit connections to serve the OSHPD, non-OSHPD, and residential loads. The OSHPD loads would be fed by a secondary SDG&E circuit from a separate SDG&E substation to provide full redundancy and improved reliability for the campus's electrical system.

The new CUP is anticipated to consist of a cogeneration plant, which would include a turbine that generates electricity from natural gas (or biogas) combustion and heat that is put to productive use. Cogeneration is a more efficient use of fuel than conventional boilers are because heat from electricity generation would otherwise be wasted. The CUP would also provide a critical power source in the case of an emergency or disaster situation. The CUP would house a heat recovery steam generator that would recover the generator waste heat and provide steam for space heating, chilled water generation, and process needs. Gas-fired boilers may be needed for additional heat and point-of-use steam. Cooling would be provided by steam chillers and standard water-cooled electric chillers with heat rejected to a cooling tower plant powered by electricity produced by the generator. The plant would use thermal energy storage to reduce peak cooling loads. Thermal energy storage would charge during off-peak hours and discharge during peak hours per the campus utility rate schedule.

Parking structures and lighting along the new north access driveway would use electricity from the UC Regents via direct access, which is 100 percent carbon-free energy. Emergency generators would be installed within the future Outpatient Pavilion, the Multi-Use Building, the Replacement Hospital, and the various parking structures around campus. Once the hospital and CUP are constructed in Phase 3, all new medical center buildings and parking facilities would be hooked into and powered by the CUP, supplemented by UC Regents electricity via direct access. Prior to construction of the CUP, these buildings and facilities would be powered exclusively with electricity purchased from the UC Regents. Residential projects proposed in partnership with private residential developers, including Residential Sites A and B and the Mixed-Use Residential/Wellbeing Center, would be tied to the grid and use 100 percent carbon-free electricity from the UC Regents and would not be connected to the new CUP. Table 2-5, Proposed 2019 Long Range Development Plan Future Building Electricity Use, provides a breakdown of each future building's energy source. Diesel-fueled emergency generators would provide backup electrical power to nonresidential uses on the campus.

In addition to the CUP concept, overall building energy performance would play a critical role in the campus's energy use. The approach to building energy performance would be based on achieving various efficiency levels as defined by program-specific energy use intensities. These energy use intensities would be developed based on previous goals identified by UC San Diego and further elaborated on based on industry-related benchmarks and campus-specific assumptions. Overall, the energy use intensities approach would allow for flexibility in system selection by future design teams while achieving a 20 to 30 percent improvement over Title 24 business-as-usual energy performance thresholds. The energy use goals set by the UC Sustainable Practices Policy (UCOP 2018b) states that "acute care/hospital facilities and medical office buildings shall be designed, constructed, and commissioned to outperform ASHRAE 90.1 - 2010 (Advanced Energy Design Guidelines for Large Hospitals) by at least 30% or meet the whole-building energy performance targets listed in Table 2 in Section V.A.3." Further, large-scale battery systems would provide high levels of overall site energy storage and lower overall energy costs on the campus. While large battery storage systems are relatively new to the renewables market, they are currently eligible for large incentives, offsetting up to 50 percent of the total system cost.

Table 2-5. Proposed 2019 Long Range Development Plan Future Building Electricity Use

Categories	Buildings	Energy Source
Medical Campus	• Replacement Hospital • Outpatient Pavilion • Outpatient Pavilion Annex • Hospital Annex • Multi-Use Building + parking • Central Utilities Plant • Main Parking Structure • Canyon Parking Structure	Cogeneration with Supplemental Electricity from the UC Regents via direct access (carbon-free)
Residential	• Residential Site A • Residential Site B • Buildings R-3 and R-4 Residential + parking	UC Regents via direct access (carbon-free)
Stand Alone	• Bannister Family House • Mixed-Use Residential/Wellbeing Center + parking	UC Regents via direct access (carbon-free)

Source: TK1SC 2018.

2.6 Sustainable Development

2.6.1 University of California Sustainable Practices Policy

The UC system first issued its Sustainable Practices Policy in 2004, with the most recent update completed in August 2018 (UCOP 2018b). The UC Sustainable Practices Policy established goals in nine areas of sustainable practices: green building design, clean energy, transportation, climate protection, sustainable building operations, waste reduction and recycling, environmentally

preferable purchasing, sustainable foodservice, and sustainable water systems. The policy is directed to individual building projects and facilities operations throughout the UC system.

Regarding green building design, UC San Diego is committed to meeting UC system–wide goals of achieving Leadership in Energy and Environmental Design (LEED) Silver Certification or better for new buildings and major renovations. In addition to LEED certification, new buildings or major renovations of non-acute care facilities are required under the UC Sustainable Practices Policy to outperform California Energy Code, Title 24, requirements by at least 20 percent and are encouraged to strive for 30 percent or more. As mentioned previously, acute care/hospital facilities and medical office buildings are to be designed, constructed, and commissioned to outperform the ASHRAE 90.1- 2010 (Advanced Energy Design Guidelines for Large Hospitals) by at least 30 percent or meet the whole-building energy performance targets listed in Table 2 of the UC Sustainable Practices Policy (UCOP 2018b). Regarding clean energy, UC San Diego set standards to achieve at least 40 percent of natural gas combusted on site at each campus and health location by 2025. This would be fulfilled on the Hillcrest Campus through the use of directed biogas, meaning UC-owned biogas plants would provide pipeline-quality biogas to natural gas systems. Correspondingly, UC San Diego saves millions of gallons of potable water annually through implementation of a Comprehensive Water Action Plan, which was updated in 2017 to describe UC San Diego's methods for reducing dependence on potable water and to identify opportunities for water conservation. Additionally, the UC Sustainable Practices Policy has directed UC health locations, including the Hillcrest Campus, to use the definitions set forth in Practice Greenhealth to set medical center-specific goals for solid waste diversion and reduction. In accordance with the UC Sustainable Practices Policy, the Hillcrest Campus would incorporate design features, technological adaptations, and planning principles into future campus projects to conserve resources and minimize waste products.

2.6.2 Hillcrest Campus Greenhouse Gas Reduction Strategy

The Greenhouse Gas (GHG) Reduction Strategy for the Hillcrest Campus analyzes and mitigates significant GHG emissions as a plan for the reduction of GHG emissions following CEQA Guidelines, Section 15183.5(b). The GHG reduction strategy would be used to streamline environmental review of future projects under the 2019 LRDP. As discussed in the CEQA Guidelines, Section 15183.5(b), the GHG reduction strategy includes quantification, identification, and analysis of GHG emissions; establishment of GHG reduction targets; specification of GHG reduction measures; and establishment of a monitoring mechanism.

A GHG Reduction Strategy (LSA 2019) has been prepared for the Hillcrest Campus 2019 LRDP to ensure that the redevelopment of the Hillcrest Campus is implemented in alignment with the

State of California's GHG reduction goals and would fulfill the GHG reduction requirements of SB 32. The purpose of the GHG Reduction Strategy is to:

- Consolidate and document the GHG reduction efforts already underway and planned by UC San Diego over the life of the Hillcrest Campus 2019 LRDP.
- Reflect and reinforce UC San Diego's commitment to sustainability on the Hillcrest Campus.
- Quantify the impact of GHG emissions associated with land use redevelopment as represented in the Hillcrest Campus 2019 LRDP.
- Create a framework for ongoing monitoring and updates related to achievement of the GHG reduction targets within the GHG Reduction Strategy.

The goal of the GHG Reduction Strategy is to ensure that the GHG emissions associated with the Hillcrest Campus at full buildout of the 2019 LRDP do not exceed the existing baseline level in order to achieve zero net additional GHG emissions. Currently, UC San Diego has several programs and policies in place that contribute to significant GHG reductions. The GHG Reduction Strategy proposes additional reduction measures that could be combined with existing policies to maximize GHG emissions reductions. These measures are associated with energy, mobile, solid waste, water conservation, and area sources. However, because energy and mobile source GHG emissions represent over 75 percent of total emissions associated with implementation of the 2019 LRDP (the other 25 percent being waste, water, and area emissions), the reduction measures mainly focus on these sectors. These strategies are consistent with the UC Sustainable Practices Policy and Climate Action Plan and would contribute to emissions reductions over the life of the 2019 LRDP.

2.7 Conceptual Site Plan and Landscape Plan

2.7.1 Conceptual Site Plan

While exact building footprints and road configurations for the future Hillcrest Campus have not been designed yet, Figure 2-9, Conceptual Site Plan, provides a conceptual site plan to show how the future campus could incorporate the overall scale and urban design characteristics reflected in the general land use principles identified in Section 2.5.1.2. As described in Section 2.5.1.1, the overall site plan is composed of five distinct new districts on the Hillcrest Campus including the Health Care District, Mixed-Use District, Residential District, Open Space District, and Canyon District.

As seen on Figure 2-9, circulation improvements would include the realignment of the Bachman Place/Arbor Drive intersection to create a more direct route to the campus. In addition, Arbor Drive would be widened. Arbor Drive west of First Avenue would be a private street vacated during the development of the campus; however, Arbor Drive east of First Avenue would remain a public road because it serves multiple properties on the southern side of the street. First Avenue would also be vacated during development of the campus north of Arbor Drive. Access improvements would include the construction of a new north access driveway from Bachman Place, which would

dead-end at a below-grade parking structure under the proposed residential buildings in the Residential District and service access to the lower level of the hospital.

Street vacations would be pursued independent of the 2019 LRDP as soon as necessary acquisition parcels are secured, which is expected to be completed prior to the approval of the 2019 LRDP. These vacations would include the street vacation of Dickinson Street and the portion of Front Street between Arbor Drive and Dickinson Street. The street vacations would allow for the development of the Open Space District in the center of the campus and would assist in enhancing all modes of transportation throughout the site. More details regarding the conceptual site plan are provided in Section 2.9.

2.7.2 Conceptual Landscape Plan

Similar to the conceptual site plan, the conceptual landscape plan provided on Figure 2-10, Conceptual Landscape Plan, demonstrates how the future campus could incorporate the general Open Space Principles identified in Section 2.5.2.2. The conceptual landscape plan includes four landscape types: native, transitional, discrete, and urban. These landscape types are described below.

2.7.2.1 Native

Native landscape, located primarily within the Canyon District and along the edges of the mesa, would consist of existing coastal sage scrub species and other native species. In cases where the re-establishment of native habitat is required, new plantings would seamlessly blend with the existing canyon context.

ROWs that cross through the native landscape would also respect the surrounding natural context. They would be limited in width and would feature porous materials, such as decomposed granite, stone, cobble, rammed earth[3], or wood, where traffic volumes and mode types allow.

2.7.2.2 Transitional

The transitional landscape would serve as a visual and physical transition between the native landscape and some of the more developed regions of the campus. As such, it plays an important role as a visual linkage to the canyon landscape while also ensuring access and connections to nature for campus users. By threading a native-inspired landscape closer to the core of the campus, the transitional landscape provides a template for a new kind of healing and inspiration setting on the Hillcrest Campus. The transitional landscape plant palette would represent a broad sample of the southern coastal California landscape with a combination of native species such as California sycamore (*Platanus racemosa*) and coast live oak (*Quercus agrifolia*). Non-native/non-invasive, climate-adapted ornamental species such as Brisbane box (*Lophostemon confertus*), Aleppo pine (*Pinus halepensis*), Canary Island pine (*Pinus canariensis*), redbud (*Cercis* spp.), crepe myrtle

[3] Rammed earth is a technique for building walls and floors using natural raw materials.

(*Lagerstroemia* spp.), California native ornamental grasses, and other drought-tolerant plants would also be allowed. This diverse plant palette would serve a sustainability role by enabling the campus to reduce its baseline irrigation needs.

Pedestrian connections and vehicle ROWs near the hospital and within the transitional landscape would feature neutral-colored hardscape materials and, where feasible, permeable paving materials. Other key elements within the transitional landscape include rain gardens, bioswales, and other vegetated strategies for storm water treatment and irrigation. Such elements not only further the campus's sustainability goals but could also help educate campus users in storm water and hydrology best practices.

2.7.2.3 Discrete

Compared to native and transitional, the discrete landscape would feature more hardscape elements with clear edges and boundaries that would create identifiable "outdoor rooms" for specific types of activities. These courtyards, plazas, and internal gardens would provide a flexible framework in which the distinct program needs of each building could be reflected in the landscape that surrounds them. Examples of the discrete landscape on campus would include small gathering spaces that branch off of building entrances, outdoor sport court or swimming pool facilities for the multi-family residential buildings, and healing gardens where patients can maneuver through a controlled environment as part of their physical and psychological rehabilitation.

The planting palette should reflect the campus's unique role as a health care destination that both inspires and heals its users, while also considering the inherent maintenance and durability issues that coincide with a more heavily traversed landscape. Climate-appropriate plants, as well as plants that offer patients a degree of comfort with a pleasant fragrance, bright colors, and/or an ability to attract wildlife, are preferred. Additional design elements encouraged within the discrete landscape include on-structure green spaces for patients with limited mobility, strolling paths, and a variety of materials and textures that are both playful and safe for all mobility levels.

2.7.2.4 Urban

The urban landscape encompasses larger defined open spaces intended to serve the needs of the surrounding community and the full range of Hillcrest Campus users. It includes the proposed streetscapes along the urban edges of the campus and the large central open space and smaller pockets of publicly accessible open space that would immediately surround the proposed health care buildings. The campus would leverage the clear and distinctive character of the Hillcrest neighborhood's urban fabric with a formal streetscape design that would improve campus wayfinding, create a sense of arrival to the campus, and offer new opportunities for integrated storm water management and treatment. With a consistent tree canopy, neighborhood-scaled lighting, new sidewalk furnishings, and enhanced crosswalks, First Avenue and Arbor Drive would guide hospital visitors from the surrounding neighborhood to the campus core and set a pedestrian-

oriented landscape tone for the entire campus. Pedestrian connections and publicly accessible open spaces bounding the campus's health care buildings would also feature an urban hardscape palette with decorative pavers, well-spaced and distinctive shade trees, human-scaled lighting, and street furniture that works to promote pedestrian circulation on campus.

2.7.2.5 Fuel Management

Strategic fuel management occurs on the campus currently because of the risk for wildfires in and around San Diego's canyon landscape. Moving forward, the Hillcrest Campus's fuel management strategy would continue to include strategic ornamental landscaping on the mesa top and selective thinning on the canyon slopes. The fuel management strategy would be composed of two zones equaling a total width of 100 feet, measured from the building facade into the canyon area. Zone 1 would be a minimum of 35 feet wide from the building facade and could also be used as a fire access lane in many places. Zone 1 would have a relatively level surface and any combination of hardscape and irrigated landscaping with low-fuel species that would be actively maintained to minimize fuel load. Zone 2 would consist of any remaining area necessary to reach the 100-foot minimum width (e.g., 65 feet wide if Zone 1 is 35 feet wide) and contain canyon vegetation that would be managed with selective thinning and pruning to reduce fuel load. Fuel management would be generally consistent with City's Brush Management Requirements (SDMC Section 142.0412) while preserving natural habitat. The Hillcrest Campus Fire Marshal would continue to have the authority to adjust zone widths and requirements depending on site conditions.

2.8 Design Guidance

The 2019 LRDP would offer a vision for a true "campus" design as opposed to a collection of buildings. Besides describing a campus-wide design standard to achieve this broader cohesion, the design guidance described in the 2019 LRDP would also provide more tailored design recommendations for each of the five campus districts. This multi-scale approach sought to ensure that, while each zone would pursue its own unique design character based on its programmatic needs, the greater campus aesthetic would still retain a cohesive look and feel.

The 2019 LRDP would seek to formalize many of the unrealized connectivity and architectural character goals. These principles can be found in Section 2.5.2.2 of the 2019 LRDP.

2.9 Construction Phasing

The development of the conceptual site plan is divided into five phases, with construction estimated to begin in 2019 and be completed in 2033. Some phases of construction would overlap, while others would be dependent on the completion of prior phases of construction. Redevelopment phases would require demolition and export of demolition materials for recycling or disposal and/or grading activities, building construction, and implementation of various underground utilities. The following provides information regarding the existing buildings to be

demolished, proposed buildings to be constructed, and other components related to the construction of each phase. A conceptual grading plan that covers the phases of construction is shown on Figures 2-11A and 2-11B, Conceptual Grading Plan. Figures 2-11A and 2-11B also identify the proposed buildings to be constructed. The majority of existing buildings on campus would be demolished. Figure 2-12, Hillcrest Campus Anticipated Building Demolition, identifies the year that each building and parking lot would be demolished. Demolition would involve recycling of building materials in conformance with the UC Waste Reduction and Recycling Policy and export of these materials to a facility permitted to appropriately handle each type of waste. Grading activities would vary by phase and may require soils export or import. A comprehensive description of the entire project by phase is provided in Table 2-6, Demolition and Construction by Phase.

Nighttime construction could occur in order to eliminate daytime conflicts with patients and visitors, or other necessary reasons. Efforts would be made to minimize the occurrence of nighttime construction and reduce its potential effects to on- and off-campus inpatient medical facilities and residences. The Hillcrest Campus would generally follow the process that the City has established for nighttime construction operations, which allows nighttime construction to occur if it is deemed necessary and found to be in the general public interest. Nighttime construction noise impacts are addressed in Section 3.11, Noise.

2.9.1 Phase 1: 2019–2023

Phase 1 would consist of Phases 1A and 1B described as follows. Phase 1A would include demolition of a majority of the structures existing on the eastern side of campus and construction of new buildings, parking, and access improvements. Phase 1B would consist of the demolition of buildings that currently host inpatient, outpatient, research, and office programs that would be relocated to existing buildings temporarily or to new facilities constructed in Phase 1A. Permanent solutions for some of these programs would be dependent on the completion of Phase 1A facilities; therefore, demolition in Phase 1B may not begin until Phase 1A is complete, unless interim accommodations are feasible.

2.9.1.1 Phase 1A: (2019–2022) First Avenue Extension and Southeastern Campus Development

Phase 1A redevelopment, depicted on Figure 2-13, Site Phasing – 1A, would be located between Front Street and Bachman Place and north of Arbor Drive. Construction would be within the Health Care District and include an Outpatient Pavilion, an Outpatient Pavilion Annex, a new internal access road, and two parking structures. First Avenue would be extended northward with a new subgrade Canyon Parking Structure located under the street extension. The second parking structure, the Main Parking Structure, would be located southeast of the Canyon Parking Structure and future hospital.

As shown on Figure 2-7, the First Avenue extension would be an internal UC San Diego roadway with a typical cross-section with four vehicle travel lanes (two in each direction), one emergency-only vehicle lane (northbound), two Class II bicycle lanes (one in each direction), and two pedestrian walkways (one in each direction). The ROW would also include a center landscaped median with a pedestrian refuge and signalized crossing.

Demolition

Phase 1A would consist of demolition of approximately 15 structures and 5 parking lots. Facilities to be demolished in Phase 1A are described in Table 2-6. Figure 2-12 identifies the proposed demolition of structures by phase and location.

Construction

Phase 1A would consist of the construction of two buildings, two parking structures and one internal access road and extension of First Avenue north of Arbor Drive. Additionally, this phase would construct the widening of Arbor Drive between Front Street and First Avenue, a new connection between Arbor Drive and Bachman Place, and widen Bachman Place from the new Arbor Drive connection to the existing Bachman Parking Structure. The proposed Outpatient Pavilion to be constructed would serve as the replacement of outpatient facilities currently attached to the existing hospital building and would result in an incremental increase in the campus's outpatient space in response to the health care market. Because of the proposed Outpatient Pavilion's proximity to the nearby Replacement Hospital, the Outpatient Pavilion could have one or more floors below grade that would enable underground connections between the buildings. A second building, the proposed Outpatient Pavilion Annex, would be constructed south of the proposed Outpatient Pavilion building in the northwestern corner of Arbor Drive and First Avenue.

Phase 1A would also include the widening of Arbor Drive from Front Street and First Avenue and would change this portion of Arbor Drive to a two-way street. It would also include a new connection between Arbor Drive and Bachman Place and widen Bachman Place from the new Arbor Drive connection to the existing Bachman Parking Structure to provide two southbound lanes and one northbound lane. A permanent internal access road would also be constructed between Bachman Place to the Canyon Parking Structure below First Avenue.

Together, the Main and Canyon Parking Structures would provide approximately 2,000 parking spaces to meet proposed parking demand and to replace the 2 aging existing parking structures and surface parking lots. First Avenue would be extended northward with the new subgrade Canyon Parking Structure located under the street extension east of the proposed Outpatient Pavilion and would include 675 parking spaces. The Canyon Parking Structure would be open to the east to ventilate the garage and would function as a service entrance for the Outpatient Pavilion. To allow vehicles to reach the structure entrance, a short, new internal access road would be provided between Bachman Place and the First Avenue extension. The Main Parking Structure would be

located southeast of the Canyon Parking Structure and the future hospital and contain 1,325 parking spaces. Facilities to be constructed in Phase 1A are described in Table 2-6.

Phase 1A would construct the following geometric roadway improvements as part of the 2019 LRDP:

- Widen Arbor Drive between Front Street and First Avenue and change to a two-way street.
- Add a new connection between Arbor Drive and Bachman Place.
- Widen Bachman Place from the new Arbor Drive connection to the existing Bachman Parking Structure to provide two southbound lanes and one northbound lane.
- Signalize the intersection of Front Street/Arbor Drive and provide the following lane geometry:
  - North Leg – one shared left/through/right-turn lane.
  - East Leg – one shared left/through/right-turn lane and one dedicated left-turn lane. This leg of the intersection would be converted from a one-way, westbound segment to a two-way segment.
  - West Leg – one shared right-turn/through lane and one dedicated left-turn lane.
- Signalize the intersection of First Avenue/Arbor Drive and provide the following lane geometry:
  - North Leg – one dedicated left-turn lane and one shared left/right-turn lane.
  - East Leg – one dedicated right-turn lane and one dedicated through lane.
  - South Leg – one shared right-turn/through lane, one dedicated through lane, and one dedicated left-turn lane.
  - West Leg – one shared through/left-turn lane. This leg of the intersection would be converted from a one-way, westbound segment to a two-way segment.

Grading

Total earthwork in Phase 1A would generate approximately 285,000 cubic yards (cy) of cut and 35,000 cy of fill due to the proposed building locations and the Canyon Parking Structure, Main Parking Structure, and Outpatient Pavilion having basement levels. Approximately 12,000 cy of export from this phase would be stockpiled on site to be used as fill material in the construction of Phase 1B, with the remainder 238,000 cy of cut exported off site.

Due to existing grades surrounding the existing Bachman Parking Structure and the proposed elevation of the Main Parking Structure, temporary grading and shoring would be required to keep both buildings operational at the end of Phase 1A. For access to the lower levels of the Canyon Parking Structure, a new internal access road with a temporary alignment from Bachman Place to a lower floor of the Canyon Parking Structure would be constructed in this phase. First Avenue would be extended on top of the Canyon Parking Structure, to potentially connect with Dickinson Street and allow access to the Multi-Use Building.

The proposed Bachman Place to Arbor Drive connection would be constructed to have a maximum grade of 9 percent along its alignment to ensure that it meets grade at both ends of the connection. This phase would also adjust the grades of the proposed internal access road between Bachman Place and the Canyon Parking Structure as necessary to meet the grade of the Bachman Place to Arbor Drive connection.

Storm Water

Phase 1A storm water improvements would include a 24-inch underground storm drain construction and localized inlets with connector pipes to the Bachman Place storm drain within Arbor Drive and Bachman Place. Two retention basins satisfying water quality treatment requirements would be installed: one located just east of Bachman Drive and one located at the existing bus turnaround. Treated runoff would discharge to the existing concrete swale just north of Bachman Place. Phase 1A storm water improvements would also include the construction of a new 24-inch storm drain pipe along the frontage of the Outpatient Pavilion, ultimately tying into the new 24-inch storm drain within Arbor Drive.

2.9.1.2 Phase 1B: (2021–2023) Northwest Campus Demolition and Residential Site Preparation

Phase 1B redevelopment is depicted on Figure 2-14, Site Phasing – 1B. Phase 1B consists of the demolition of existing buildings and parking lots in preparation for the construction of Residential Site A within Phase 2A.

Demolition

Phase 1B consists of the demolition of approximately seven structures and four parking lots as described in Table 2-6. These buildings currently host inpatient, outpatient, research, and office programs that would be relocated to existing buildings temporarily or to new facilities constructed in Phase 1A. Permanent solutions for some of these programs are dependent on the completion of Phase 1A facilities; therefore, demolition may not begin until Phase 1A is complete, unless interim accommodations are feasible. Figure 2-12 identifies the proposed demolition of these structures by phase.

Construction

No new construction would occur in Phase 1B.

Grading

Total earthwork in Phase 1B would generate approximately 2,000 cy of cut and 14,000 cy of fill. Fill required for this phase would be obtained from stockpiled material stored on site during Phase 1A.

Storm Water

No new construction would occur in Phase 1B; therefore, only construction storm water management BMPs would be implemented during this phase. No permanent post-construction storm water improvements or BMPs would be required for Phase 1B.

2.9.2 Phase 2: 2022–2025

Phase 2 would consist of Phases 2A and 2B, which may be constructed simultaneously. While these phases may overlap in time, they would be located in different places; therefore, the phases have been separated.

2.9.2.1 Phase 2A: (2022–2025) Northwest Campus Residential Development and Access Driveway

Phase 2A would involve the development of Residential Site A, which would consist of proposed Buildings R-1 and R-2 in the Residential District located in the western portion of the campus along Arbor Drive. It would also involve construction of the Mixed-Use Residential/Wellbeing Center in the Mixed-Use District located at the southern end of the campus between Front Street and First Avenue and north of Montecito Way. It would also involve the construction of a new north access driveway off Bachman Place. A small road would be rerouted in this phase to provide access to Bannister Family House and approximately five parking spaces. Site phasing for Phase 2A is depicted on Figure 2-15, Site Phasing – 2A.

Development of Residential Site A and the Mixed-Use Residential/Wellbeing Center may be in partnership with private residential developers, which would involve a long-term agreement between a private developer and UC San Diego that would allow the developer to construct and operate campus housing.

Demolition

No demolition would occur in Phase 2A.

Construction

Three structures and a new north access driveway would be constructed as a part of Phase 2A. Residential Site A (Buildings R-1 and R-2) would construct up to 520 new multi-family residential units in towers and underground residential parking, while the Mixed-Use Residential/Wellbeing Center would construct approximately 50 residential units and community-oriented services above shared underground residential and campus parking.

The development of Residential Site A would offer underground parking with two access points: one from Arbor Drive and one from Bachman Place. The Bachman Place access point would be from the new north access driveway off Bachman Place that would follow an existing unpaved access road through the canyon to the top of the mesa. The proposed north access driveway would

dead-end at the entrance to a below-grade parking structure under proposed Residential Building 2 (R-2). The north access driveway would not connect to Dickinson Street and would be access-controlled for residents only. Once constructed, the new north access driveway would also provide service access to the future hospital. The north access driveway ROW would include vehicle lanes, pedestrian and bicycle amenities, and utilities/storm water facilities.

The new north access driveway at Bachman Place would be signalized and the following lane geometry would be provided:

- North Leg – one shared right-turn/through lane and one through lane
- South Leg – one dedicated through lane and one dedicated left-turn lane
- West Leg – one dedicated right-turn lane and one dedicated left-turn lane

The Mixed-use Residential/Wellbeing Center would be located within the Mixed-Use District, which aims to include residential units and a community-oriented wellness component. The Medical Complex and Hillcrest neighborhoods have few public meeting facilities, and with underground parking and transit access to the Hillcrest Campus, this location would be ideal for such an amenity. Facilities that would be constructed in Phase 2A are described in Table 2-6.

Grading

Phase 2A would generate approximately 165,000 cy of cut and 65,000 cy of fill due to the placement of buildings on the mesa level with basements and construction of the new north access driveway. A total export volume of 100,000 cy would be disposed of off site from Phase 2A.

Street grades for the new north access driveway would be limited to no more than 12 percent to allow for use by the future hospital delivery services. To meet this goal, retaining walls may be required along the eastern side of the proposed new access driveway ranging from 2 to 42 feet in height. To match the grade of the proposed Bachman Place widening that would occur in Phase 2B, the new north access driveway constructed in Phase 2A would be built to the proposed permanent grade of Bachman Place in Phase 2B. A temporary connection would be provided between the new north access driveway and existing alignment of Bachman Place until the widening occurs.

Storm Water

Phase 2A storm water improvements would include the abandonment of the existing northerly canyon drainage outlets during the construction of the new north access driveway and the construction of a new concrete swale. Curb inlets would be constructed along the proposed access road to treat runoff. On-site storm water detention and treatment basins would be constructed near proposed Residential Buildings 1 and 2 (R-1 and R-2) or provided through vaults placed within the road. In addition, curb inlets would be installed along Front Street to treat discharged flows.

2.9.2.2 Phase 2B: (2022–2025) Northern Boundary Development and Off-Site Improvements

Site phasing for Phase 2B is depicted on Figure 2-16, Site Phasing – 2B. This phase would involve construction of the Multi-Use Building, demolition of the Bachman and Arbor Parking Structures, and demolition of structures on the future hospital site. It would also involve the widening of Bachman Place from the Bachman Parking Structure to Hotel Circle South.

Demolition

Approximately four buildings, two parking structures, and four surface parking lots would be demolished during Phase 2B. Phase 2B would include demolition of both the Arbor and Bachman Parking Structures unless improvements are made to keep one or both of them temporarily in place for construction-related parking needs. Facilities that would be demolished in Phase 2B are described in Table 2-6. Figure 2-12 identifies the proposed demolition of these structures by year.

Construction

Construction in Phase 2B would include construction of the proposed Multi-Use Building, which would contain research and office space that supports the clinical use programs. This building would be located in the northeastern area of the campus and would take vehicle access from the First Avenue extension constructed in Phase 1A. This phase would also include the widening of Bachman Place from two lanes to three lanes to provide two southbound lanes and one northbound lane. This widening would begin at the end of the Bachman Place improvements from Phase 1A to the Hotel Circle South intersection. This would require off-site improvements from the Hillcrest Campus northern property boundary to Hotel Circle South. Facilities that would be constructed in Phase 2B are described in Table 2-6.

Grading

Phase 2B would generate approximately 88,000 cy of cut and 42,000 cy of fill. A total export volume of 46,000 cy would be disposed of off site.

With the demolition of the Bachman Parking Structure, temporary grading and shoring would be removed, and the full widening of Bachman Place to a three-lane street would occur. In addition, the removal of the existing Bachman Parking Structure would allow grading of the proposed CUP building pad to ready the site for construction of the CUP in Phase 3.

Storm Water

Storm water improvements associated with the widening of Bachman Place from the Bachman Parking Structure to Hotel Circle South would include upsizing existing roadway culverts and installing new inlets and using water quality control devices within Bachman Place to treat direct street runoff.

Off-Site Improvements

To mitigate traffic impacts, Bachman Place immediately north of the Hillcrest Campus Boundary up to the intersection of Bachman Place and Hotel Circle South would be widened to three lanes during Phase 2B. This off-site traffic mitigation area would be widened to include an additional southbound lane approximately 5 to 10 feet along both sides of the current alignment. The construction of the off-site Bachman Place widening would occur at the same time as the on-site Bachman Place widening.

2.9.3 Phase 3: (2025–2029) Central Campus Replacement Hospital Development

In Phase 3, the proposed Replacement Hospital and CUP would be constructed within the Health Care District. Site phasing for Phase 3 is depicted on Figure 2-17, Site Phasing – 3. Remaining circulation improvements surrounding the hospital parcel would also be completed. The new hospital would contain up to 300 beds. Though the new hospital would house 70 fewer beds, it would be an approximately 40 percent increase in gross square footage compared to the existing hospital. This increase in space would allow the new hospital to be designed in accordance with new development codes, take advantage of new technologies, and provide updated patient and staff amenities. The reduction in hospital beds would be a respond to an industry-wide shift toward outpatient care due to advances in health care technology.

Demolition

No demolition would occur in Phase 3.

Construction

Two structures, the Replacement Hospital (inpatient) and CUP, would be constructed as a part of Phase 3. The Replacement Hospital would be partially above and below grade and would provide public and emergency access from the First Avenue extension. Hospital parking would be provided from the Main Parking Structure. Delivery access would be provided to the basement of the Replacement Hospital from the new north access driveway. The CUP would be constructed to accommodate the OSHPD and non-OSHPD portions of the campus. Facilities that would be constructed in Phase 3 are described in Table 2-6.

Phases 3 would include the following traffic improvements:

- Close the north leg of the intersection of Front Street/Arbor Drive to vehicular traffic and provide the following lane geometry:
  - East Leg – one shared through/left-turn lane and one dedicated left-turn lane
  - West Leg – one dedicated right-turn lane and one dedicated through lane

Grading

Phase 3 would generate approximately 224,000 cy of cut and 68,000 cy of fill. This phase would use the existing Arbor Parking Structure site as a fill location, which would make the former Arbor Parking Structure site at grade with the mesa level, and lower the amount of export. The remainder export volume of 156,000 cy would be disposed of off site.

This phase would include ensuring continued operation of the existing hospital, CUP, and necessary utilities during construction of the Replacement Hospital and CUP. Due to the lower elevation of the Replacement Hospital compared to the existing site, temporary shoring may be required around the existing CUP to ensure continued use. Street improvements would include the extension of First Avenue to the new hospital site and the construction of a new service access road from the north access driveway constructed in Phase 2A.

Storm Water

To adequately convey runoff from the new hospital area, a new 24-inch storm drain system would be constructed along the portion of the First Avenue extension to convey drainage north. A new 24-inch storm drain would be constructed under the existing staircase along the northern hillside to ultimately tie into the drainage structures within the new north access driveway. A water quality treatment basin would be constructed near the new hospital.

2.9.4 Phase 4: (2029–2031) Existing Hospital and CUP Decommissioning

The existing hospital and associated CUP would be deconstructed and removed during Phase 4. This phase could not be initiated until the Replacement Hospital and CUP constructed in Phase 3 are in operation. No new construction would occur in Phase 4. Site phasing for Phase 4 is depicted on Figure 2-18, Site Phasing – 4.

Demolition

Phase 4 would include deconstruction and demolition of approximately eight structures, including the existing hospital and connected buildings and the existing CUP. It would also include demolition of two surface parking lots. Facilities to be demolished in Phase 4 are described in Table 2-6. Figure 2-12 identifies the proposed demolition of these structures by year.

Prior to deconstruction of the existing hospital, various abatement activities would take place to remove hazardous materials and associated risk from the building, including asbestos, lead, biohazardous waste, pharmaceutical waste, radioactive waste, and other types of material. All buildings under the control of the California Department of Public Health – Radiologic Health Branch (CDPH-RHB) would be decommissioned. CDPH-RHB may take up to 1 year to process the decommissioning report before releasing the property for deconstruction. Hazardous waste abatement and removal would be conducted in accordance with EH&S policies and applicable

local, state, and federal regulations. Deconstruction of the hospital and removal of demolition debris would occur in a sensitive manner to not disturb adjacent occupants and structures.

Construction

No new construction would occur in Phase 4.

Grading

Total earthwork in this phase would generate the need for approximately 106,000 cy of fill due to the need to fill the basement level of the existing hospital. To reduce the need for additional import to the site, the fill soil required for Phase 4 would be obtained from cut soils resulting from Phase 5.

Storm Water

No new construction would occur in Phase 4; therefore, only construction storm water management BMPs would be implemented during this phase. No permanent post-construction storm water improvements or BMPs would be required for Phase 4.

2.9.5 Phase 5: (2031–2033) Southwest Campus Residential and Open Space Development

Phase 5 would be concentrated in the Residential and Open Space Districts and would involve the construction of Residential Site B and the Central Green. Site phasing for Phase 5 is depicted on Figure 2-19, Site Phasing – 5. Completion of Phase 5 would mark the conclusion of the multi-phased project within the development envelope of the 2019 LRDP.

Demolition

No demolition would occur in Phase 5.

Construction

Residential housing, open space, and road improvements would be constructed as a part of Phase 5. This phase would involve construction of the remaining 430 multi-family residential units in 2 new buildings (R-3 and R-4) within the Residential District. These buildings would be up to 200 feet high and no taller than the existing hospital and would provide underground residential parking accessed from the north access driveway and/or an internal access road connecting to the western terminus of Arbor Drive. Development of Residential Site B may be in partnership with private residential developers, which would involve a long-term agreement between a private developer and UC San Diego that would allow the developer to construct and operate campus housing.

Phase 5 would also include development of the former hospital site with a new Central Green open space area. The Central Green would be a communal gathering place and would host a small, freestanding retail area at approximately 4,000 gsf.

Phase 5 would also include final circulation improvements including the transition of the internal campus portions of Dickinson Street and the northernmost section of Front Street into pedestrian-only access roads that would only allow emergency fire vehicles. No other vehicular traffic would be allowed within these internal roadways besides micromobility users and neighborhood electric vehicles for Americans with Disabilities Act/patient needs. Facilities that would be constructed in Phase 5 are described in Table 2-6.

Grading

Total earthwork in Phase 5 would generate approximately 248,000 cy of cut and 2,000 cy of fill. Cut from this phase would be used to provide the 106,000 cy fill needed in Phase 4, reducing the total export volume of Phase 5 to 140,000 cy.

Storm Water

Storm water runoff from Residential Buildings 3 and 4 (R-3 and R-4) would be conveyed by a new 18-inch storm drain to a new water quality treatment basin. The basin would be constructed on the site of the existing Arbor Parking Structure. Drainage from the water quality basin would ultimately discharge to the existing headwall located in the existing western canyon via a new 18-inch storm water drain.

Table 2-6. Demolition and Construction by Phase

Phasing Stage	Demolition[1]	Construction
Phase 1A 2019–2022	• 22; Mail Services, 138 Dickinson Street (2,100 gsf) • 23; 136 Dickinson Street (2,900 gsf) • 24; 134 Dickinson Street (1,800 gsf) • 25; 150 Dickinson Street (800 gsf) • 26; Camelot (1,700 gsf) • 27; 135 Dickinson Street (3,800 gsf)[2] • 28; 125 Dickinson Street (2,600 gsf)[2] • 29; Dickinson Housing Cluster (10,500 gsf) • 31; 4235 Front Street (3,500 gsf)[2] • 32; Crest Chateau (5,500 gsf)[2] • 33; Crest Trailer (900 gsf)[2] • 34; 112 Arbor Drive (7,700 gsf) • 36; 140 Arbor Drive (27,700 gsf) • 35; 114 Arbor Drive (6,400 gsf)[2] • 36; 140 Arbor Underground Parking Structure (80 parking spaces) • 37; 4194 First Avenue (3,800 gsf for both units)[2] • P959; Surface Parking Lot (23 parking spaces) • P960; Valet Parking Lot (50 parking spaces) • P962; Bachman East Surface Lot (118 parking spaces) • P965; First Avenue End Parking Lot (7 parking spaces)	• Outpatient Pavilion (272,000 gsf) • Outpatient Pavilion Annex (25,000 gsf) • Canyon Parking Structure (subgrade) (675 parking spaces) • Main Parking Structure (1,325 parking spaces) • First Avenue extension north of Arbor Drive • Internal campus access road from Bachman Place to the new Canyon Parking Structure entrance • Widening of Arbor Drive between Front Street and First Avenue and change to a two-way street • New connection between Arbor Drive and Bachman Place • Widening of Bachman Place from the new Arbor Drive connection to the existing Bachman Parking Structure
Total GSF Phase 1A:	**61,400**	**997,000**

Table 2-6. Demolition and Construction by Phase

Phasing Stage	Demolition[1]	Construction
Phase 1B 2021–2023	• 21; Surgery Research Laboratory (15,000 gsf) • P958; Surgery Research Laboratory Parking Lot (11 parking spaces) • 2; MRI Research Building/Bydder Lab (5,700 gsf) • 3; Magnetic Resonance Institute/410 Dickinson Street (6,900 gsf) • 4; Multipurpose Facility (67,700 gsf) • 5; Bunker/Telecom (3,900 gsf) • 6; West Wing (38,200 gsf) • 19; 326 Dickinson Street (15,800 gsf) • P953; Dickinson West End Parking Lot (17 parking spaces) • P954; Bannister Parking Lot (40 parking spaces) • P964: Montecito Parking Lot (105 parking spaces)	None
Total GSF Phase 1B:	**173,600**	**0**

Phase 2A
2022–2025
	None	• Residential Site A consisting of two buildings (R-1 and R-2) and parking:
		  ○ Residential R-1 (150 units; 165,000 gsf)
		  ○ Residential R-2 (370 units; 416,000 gsf)
		  ○ Parking: 650 spaces
		• Mixed-Use Residential/Wellbeing Center (160,000 gsf; 50 residential units; 275 parking spaces)
		• North Access Driveway: New driveway would extend from Bachman Place to the below-grade parking structure entrance under residential uses associated with Residential Site A
		• Rerouted road to Bannister Family House with 5 parking spaces

Total GSF Phase 2A:	**0**	**741,000**

Table 2-6. Demolition and Construction by Phase

Phasing Stage	Demolition[1]	Construction
Phase 2B 2022–2025	• 7; Arbor Parking Structure (553 parking spaces) • 15; North Annex Replacement Facility (38,000 gsf) • 16; Theodore Gildred Facility (37,800 gsf) • 17; Medical Library (11,100 gsf) • 20; Clinical Teaching Facility (131,000 gsf) • 30; Bachman Parking Structure (1,032 parking spaces) • P956; Clinical Teaching Facility Loading Dock Lot (8 parking spaces) • P957; Clinical Teaching Facility Surface Parking Lot (76 parking spaces) • P963; Bachman Hill Parallel Parking Lot (60 parking spaces)	• Multi-Use Building (296,000 gsf; 400 parking spaces) • Widening of Bachman Place from improvements in Phase 1A at Bachman Parking Structure to Hotel Circle South
Total GSF Phase 2B:	**777,000**	**296,000**
Phase 3 2025–2029	None	• Replacement Hospital (300 inpatient beds; 740,000 gsf) • CUP with OSHPD and non-OSHPD components (73,000 gsf) • Utility connections from the new CUP to the new hospital, • Circulation improvements to new hospital, north of Dickinson Street • Circulation improvements to new hospital service dock
Total GSF Phase 3:	**0**	**813,000**
Phase 4 2029–2031	• 13; Inpatient Tower (409,300 gsf) • 14; Tower Link (31,800 gsf) • 11; South Wing (62,500 gsf) • 12; Medical Offices North (68,600 gsf) • 10; 304 Arbor Drive (2,600 gsf) • 9; 305 Arbor Drive (400 gsf) • 8; 306 Arbor Drive (2,300 gsf) • 18; Existing CUP (20,000 gsf) • P952; Hospital Loading Dock Parking Lot (17 parking spaces) • P955; CUP Parking Lot (53 parking spaces)	None
Total GSF Phase 4:	**597,500**	**0**

Table 2-6. Demolition and Construction by Phase

Phasing Stage	Demolition[1]	Construction

Phase 5
2031–2033
	None	• Residential Site B consisting of two buildings (R-3 and R-4) and parking
		  ○ Residential R-3 (280 units; 322,000 gsf)
		  ○ Residential R-4 (150 units; 156,500 gsf)
		  ○ Parking: 540 spaces
		• Pedestrian circulation improvements to internal campus areas of Dickinson Street and Front Street; close these streets to general vehicular traffic except for emergency access
		• Central Green/Open Space with 4,000 gsf retail
		• Hospital annex (34,000 gsf)
		• Perimeter access improvements along west side of new hospital

Total GSF Phase 5:	**0**	**516,500**
TOTAL GSF ALL PHASES:	**1.05 million[3]**	**2.7 million**

Notes: CUP = central utilities plant; gsf = gross square feet; OSHPD = Office of Statewide Health Planning and Development

1 Numbers associated with demolition refer to location of structures on Figure 2-12.

2 These buildings were demolished in 2018 due to safety concerns with the dilapidated facilities, and would not be considered part of the 2019 LRDP. CEQA categorical exemptions were prepared for each demolition project. The buildings are included in this description because they were in place in the 2017 baseline year used in this 2019 LRDP EIR.

3 Two buildings would remain on site: Bannister Family House and Medical Offices South.

2.10 2019 Long Range Development Plan Implementation

The 2019 LRDP would be a land use plan to guide future physical development of the Hillcrest Campus; however, it would not be an implementation plan. Adoption of the proposed 2019 LRDP would not constitute a commitment to any specific campus population or development project. Each development proposal must be approved by the UC Regents, the UC Office of the President, and/or by the UC Chancellor, as appropriate. At the campus level, review of campus development proposals is informed by a review process that involves input from staff, faculty, and students (and the local community as necessary). The following provides a brief description of the general process for implementing projects proposed in accordance with the 2019 LRDP.

2.10.1 Campus Development Review

The design and construction of future projects on the Hillcrest Campus would be subject to the campus development review process regardless of what construction delivery method is chosen to implement such improvements (e.g., design-bid-build, public-private partnership). In addition to compliance with CEQA, the development review process requires review by campus committees and administrative staff, evaluation of the proposed design and construction documents, and construction inspection and site monitoring during construction. Committees and administrative offices involved in project implementation can include the Campus/Community Planning Committee; the Design Review Board; the Open Space Committee; Building Advisory Groups; Campus Planning; Real Estate; Capital Programs Management; Design and Development Services; Environment, Health, and Safety; Facilities Management; and the Hillcrest Campus Fire Marshal.

Although the 2019 LRDP would be the only approved and official land use planning document for the Hillcrest Campus, there are several other campus planning studies and reports that would be used to inform development. The UC San Diego Design Guidelines (UC San Diego 2018) would provide an additional level of guidance for new facilities on the campus. In general, facilities on the Hillcrest Campus should comply with the design guidelines set forth in these documents. The UC San Diego physical planning process, campus planning documents, and facilities design guidelines are presented in greater detail on the UC San Diego Planning, Design, and Construction website (UC San Diego 2019). Applicable elements of these requirements are cited in the regulatory framework described in Chapter 3, Environmental Setting, Impacts, and Mitigation, of this 2019 LRDP EIR.

2.10.2 California Environmental Quality Act Documentation

As discussed in Section 2.1, Project Background and Purpose, UC San Diego prepared this 2019 LRDP EIR in accordance with CEQA (PRC Section 21080.09) to address the environmental impacts associated with the 2019 LRDP. The UC will serve as the CEQA lead agency. This 2019 LRDP EIR will be relied on for the development of the uses proposed in the 2019 LRDP as permitted under

Section 15161 of the CEQA Guidelines. Typically, a program EIR is prepared for an LRDP pursuant to Section 15168 of the CEQA Guidelines. However, as discussed in Section 2.1, UC San Diego is required to comply with a state mandate (SB 1953) to retrofit or replace its inpatient acute care facilities by 2030 or otherwise cease operation. The time constraints associated with SB 1953 combined with the site constraints of the Hillcrest Campus have motivated UC San Diego to prepare a conceptual site plan and five-phase construction plan (discussed in Section 2.9; see Figure 2-20, Hillcrest 2019 LRDP Phasing Timeline) for the campus to allow for timely construction of the Replacement Hospital. Because the level of project information available at this stage is more detailed than a typical LRDP, a project-level analysis is possible. The advantage of preparing a program EIR with a project-level analysis as opposed to a program-level analysis EIR is a reduction in additional environmental review documentation required for future project phases. Therefore, this 2019 LRDP EIR was prepared with adequate project-level detail to analyze and disclose the potential environmental impacts of each redevelopment phase. This strategy would be employed for the 2019 LRDP to maximize the time available to achieve the goals of SB 1953.

The UC is governed by the UC Regents, which under Article IX, Section 9, of the California Constitution have "full powers of organization and governance" subject only to very specific areas of legislative control. The UC Regents promulgate policy for the UC overall, but certain policy-making duties are conferred on the UC President. In the Standing Orders of The Regents, Section 100.4, new presidential policy may result from the UC Regents' action, changes in law, or new administrative issues within the UC itself. Presidential policies are revised or rescinded based on changes to the UC Regents' policy, legal or societal changes, or administrative changes. For the most part, UC policies, which apply to future developments on the Hillcrest Campus, are contained within the UC Facilities Manual and the Campus Policies and Design Guidelines. Although there are numerous policies that apply to campus development, relevant UC San Diego policies are identified and discussed within the appropriate resource sections in Chapter 3 of this 2019 LRDP EIR.

2.10.3 Non-University of California Policies, Laws, and Regulations

As a state entity, UC San Diego is not subject to local land use jurisdiction or related policies, as described in Chapter 3 of this 2019 LRDP EIR. Federal and state laws or policies may apply and are described in Chapter 3 within the various applicable resource sections. In some cases, local land use regulations may also warrant consideration; therefore, these are also presented in Chapter 3 where appropriate. UC San Diego is responsible for project conformance with applicable policies, laws, and regulations.

2.11 Discretionary Actions

The UC Regents must take action in a public meeting on the following items when considering the 2019 LRDP and 2019 LRDP EIR:

- Certify this 2019 LRDP EIR
- Adopt the mitigation monitoring and reporting program
- Adopt the CEQA findings and statement of overriding considerations
- Approve the 2019 LRDP

2.12 Other Agency Approvals

Under CEQA, state and local agencies other than the lead agency that have discretionary authority over a project or aspects of a project are considered responsible agencies. The following is a list of some federal, state, regional, and local agencies that may have discretionary authority for the 2019 LRDP; federal agencies are not responsible agencies under CEQA:

- California Department of Fish and Wildlife (CDFW)
- California Department of Transportation (Caltrans) Division of Aeronautics
- City of San Diego (City)
- San Diego Metropolitan Transit System (MTS)
- San Diego Air Pollution Control District (SDAPCD)
- San Diego Regional Water Quality Control Board (SDRWQCB)
- State Historic Preservation Office (SHPO)
- U.S. Fish and Wildlife Service (USFWS)
- U.S. Army Corps of Engineers (ACOE)

Potential permits and authorizations that could be required for projects developed under the 2019 LRDP are presented below.

California Department of Fish and Wildlife Section 1602 Permit. The CDFW requires notification for any project or activity that will take place within, or in the vicinity of, a river, stream, lake, or its tributaries. Section 1602 of the California Fish and Game Code requires that any entity, including any state or local governmental agency, provide written notification to the CDFW before they begin any construction project that will: (1) substantially divert or obstruct the natural flow of, or change the natural flow or the bed, channel, or bank of any river, stream, or lake; (2) substantially change or use any material from a streambed, bank, or channel; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can be transported into any river, stream, or lake.

California Department of Transportation, Division of Aeronautics, Heliport Site Approval Permit. Implementation of the 2019 LRDP would require the relocation of the Hillcrest Campus's

helicopter landing zone currently situated on the roof of Medical Offices North. The helipad would be moved to the roof of the new hospital Inpatient Tower once in operation. A permit from the Caltrans Division of Aeronautics would be required to allow the relocation.

City Right of Entry and Other Permits. Where UC San Diego would need to make improvements within the public ROWs surrounding the campus, including the improvements to Arbor Drive and Bachman Place, approval of a right of entry permit would have to be secured from the City. A permit may also be required to impact a small portion of the City's Multiple Habitat Planning Area from the off-campus widening of Bachman Place. UC San Diego would also require approval from the City for street vacations of public streets in the interior of the Hillcrest Campus, including Dickinson Street and the portion of Front Street between Arbor Drive and Dickinson Street. Additional City permits may also be required.

San Diego Air Pollution Control District Authority to Construct and Permit to Operate. Pursuant to Section 40002 of the California Health and Safety Code, jurisdiction for air quality and regulation of air pollutant emissions from stationary sources (that is, other than motor vehicles) within the County has been delegated to the SDAPCD. The SDAPCD has adopted rules and regulations to implement this delegated authority and to regulate the emission of air pollutants and achieve and maintain good air quality within the County.

San Diego Regional Water Quality Control Board Section 401 Water Quality Certification. The State Water Resources Control Board and the Regional Water Quality Control Boards promulgate and enforce narrative and numeric water quality standards to protect water quality and adopt and approve water quality control plans. The State Water Resources Control Board and the Regional Water Quality Control Boards also regulate discharges of harmful substances to surface waters, including wetlands, under the federal Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act. If issuance of a Section 404 permit is required, it will be subject to water quality certification by the SDRWQCB under the CWA Section 401.

San Diego Regional Water Quality Control Board National Pollution Discharge Elimination System (NPDES) Permits. The CWA requires an NPDES permit for any discharge of pollutants from a point source to waters of the United States. This law and its regulations also apply to storm water in certain circumstances. In 1987, Congress amended the CWA to require implementation, in two phases, of a comprehensive national program for addressing storm water discharges. Phase I requires NPDES permits for storm water discharge from a large number of priority sources, including medium and large municipal separate storm sewer systems (MS4s), and several categories of industrial activity, including construction activity that disturbs 1 or more acres of land. Only the industrial and construction activity components of the Phase I program are applicable to UC San Diego; the municipal regulations are not. Phase II of the storm water program requires permits for storm water discharges from certain MS4s serving a population of less than 100,000. UC San Diego and other UC campuses are included in the Phase II permit as

nontraditional MS4 permittees. Storm water at UC San Diego is managed in accordance with the following NPDES permits: (1) the Phase II Small MS4 General Permit (non-traditional), (2) the Industrial User Discharge Permit, and (3) the General Permit for Stormwater Discharges Associated with Construction Activity. These permits have been developed and adopted by the State Water Resources Control Board and are regulated by the SDRWQCB.

State Historic Preservation Office Section 106 Compliance. For projects with federal funding or requiring federal approvals, Section 106 of the National Historic Preservation Act of 1966, as amended by U.S. Code, Title 16, Section 470 et seq., and the Code of Federal Regulations, Title 36, Section 800, includes provisions for protection of significant archaeological and historical resources. Procedures for dealing with previously unsuspected cultural resources discovered during construction are identified in the Code of Federal Regulations, Title 36, Section 800 (for implementing Section 106 processes). The administering agency is the SHPO and the federal lead agency. Section 106 compliance is required to obtain a Section 404 Permit from the ACOE.

U.S. Fish and Wildlife Service Sections 7 and 10(a) of the Federal Endangered Species Act (FESA). Sections 7 and 10(a) of the FESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. In this case, take can be authorized via a letter of biological opinion issued by the USFWS for non-marine related listed species issues. A Section 7 consultation (formal or informal) is required when there is a nexus between endangered species' use of a site and impacts to ACOE jurisdictional areas, or to other areas for which a federal action is required. Section 7 consultations with the USFWS are initiated by the federal agency that will be taking a federal action on the project (e.g., ACOE initiates the consultation if they are reviewing a 404 application that results in impacts to occupied listed species habitat). Section 10(a) allows issuance of permits for incidental take of endangered or threatened species with preparation of a habitat conservation plan (HCP) when there is no federal nexus. The term "incidental" applies if the taking of a listed species is incidental to, and not the purpose of, an otherwise lawful activity. An HCP demonstrating how the taking would be minimized and how steps taken would ensure the species' survival must be submitted for issuance of Section 10(a) permits.

U.S. Army Corps of Engineers Section 404 Permit. The ACOE regulates the nation's waterways and wetlands and is responsible for implementing and enforcing Section 404 of the CWA. The ACOE regulations require that any activity that discharges fill material or requires excavation in waters of the United States, including wetlands, must obtain a Section 404 permit.

2.13 References

14 CCR 15126.2. Consideration and Discussion of Environmental Impacts.

ACS (American Community Survey). 2016. "5-Year Estimates 2012–2016." American Fact Finder. Accessed August 2018. https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml.

American Burn Association. 2019. Find a Burn Center. Accessed February 2019. https://ameriburn.site-ym.com/search/newsearch.asp.

California Public Resources Code, Section 21080.09. Division 13, Environmental Quality; Chapter 2.6, General.

City of San Diego. 2016. Uptown Community Plan. November 2016. Accessed December 2018. https://www.sandiego.gov/sites/default/files/uptown_community_plan_full_version.pdf.

County of San Diego. 2016. San Diego County Trauma System Report.

LSA (LSA Associates, Inc.). 2019. Greenhouse Gas Emissions Reduction Strategy – University Of California, San Diego Hillcrest Campus Long Range Development Plan EIR. June 2019.

TK1SC. 2018. "UCSD Hillcrest – Campus Energy Consumption Table." October 24, 2018.

UC San Diego (University of California, San Diego). 2005. Request for Delay in Compliance/SB 1953 Compliance Plan (Amended). June 2005.

UC San Diego. 2018. UC San Diego Design Guidelines. October 5, 2018.

UC San Diego. 2019. "Planning, Design, and Construction." Accessed January 2019. http://plandesignbuild.ucsd.edu/planning/index.html.

UC San Diego Facilities Planning and Management. 2018. Infrastructure Review. March 2018.

UC San Diego Health. 2019. Regional Burn Center. Accessed February 2019. https://health.ucsd.edu/specialties/burn-center/Pages/default.aspx.

UC San Diego Health Human Resources. 2018. Existing and Projected Nonresidential Campus Population Data. July 2018.

SANDAG (San Diego Association of Governments). 2013. "Series 13 Regional Growth Forecast." Data Surfer. Accessed November 2018. http://datasurfer.sandag.org/.

UCOP (University of California Office of the President). 2018a. UC Facilities Manual. Last revision published September 4, 2018. Accessed December 20, 2018. https://www.ucop.edu/construction-services/facilities-manual/.

UCOP (University of California Office of the President). 2018b. Sustainable Practices Policy. Issued July 1, 2004. Update effective August 10, 2018. Accessed January 2019. https://policy.ucop.edu/doc/3100155/SustainablePractices.

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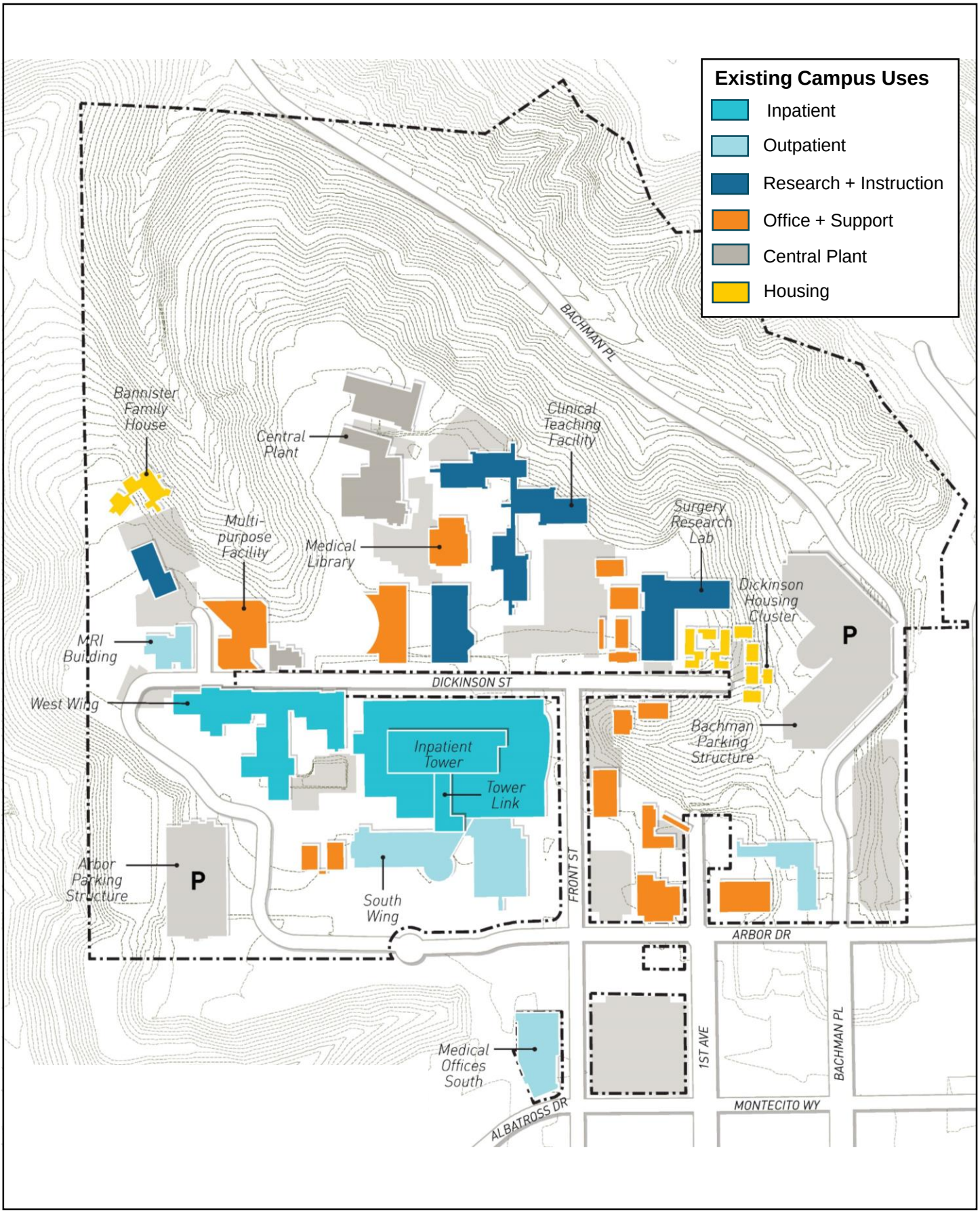

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Figure 2-1
Existing Building Use for the Hillcrest Campus

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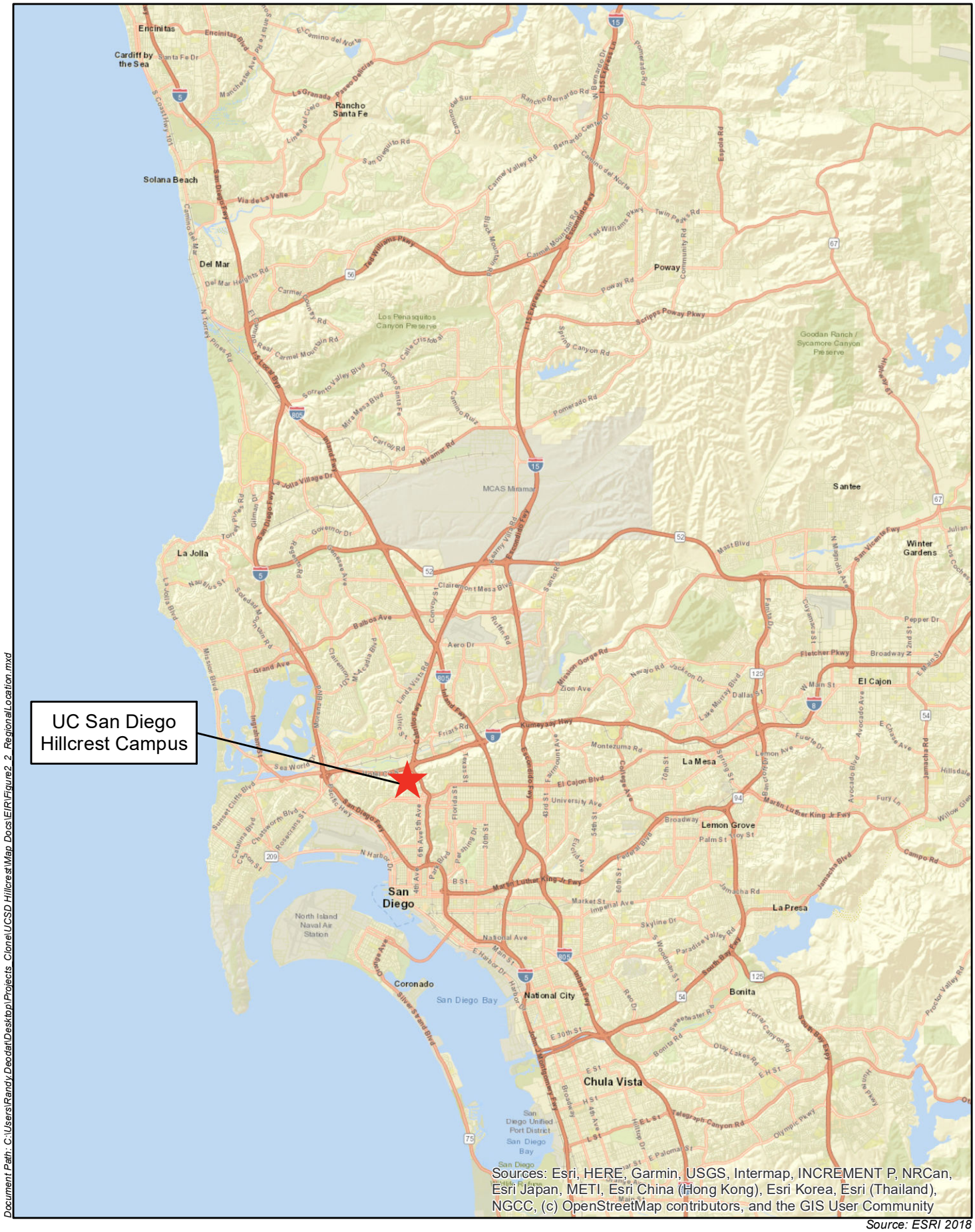

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Figure 2-2
Regional Location Map

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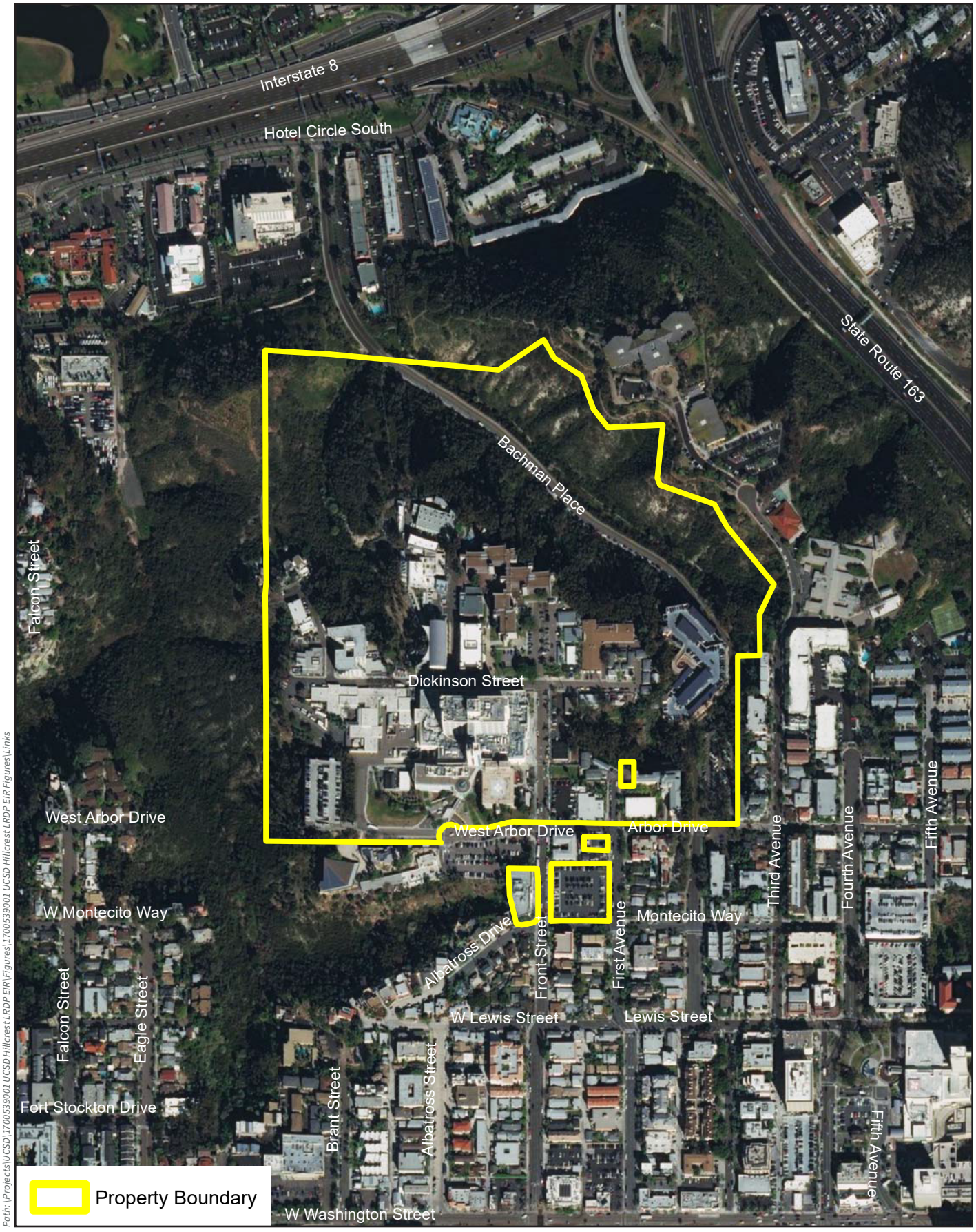

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Figure 2-3
Project Location Map

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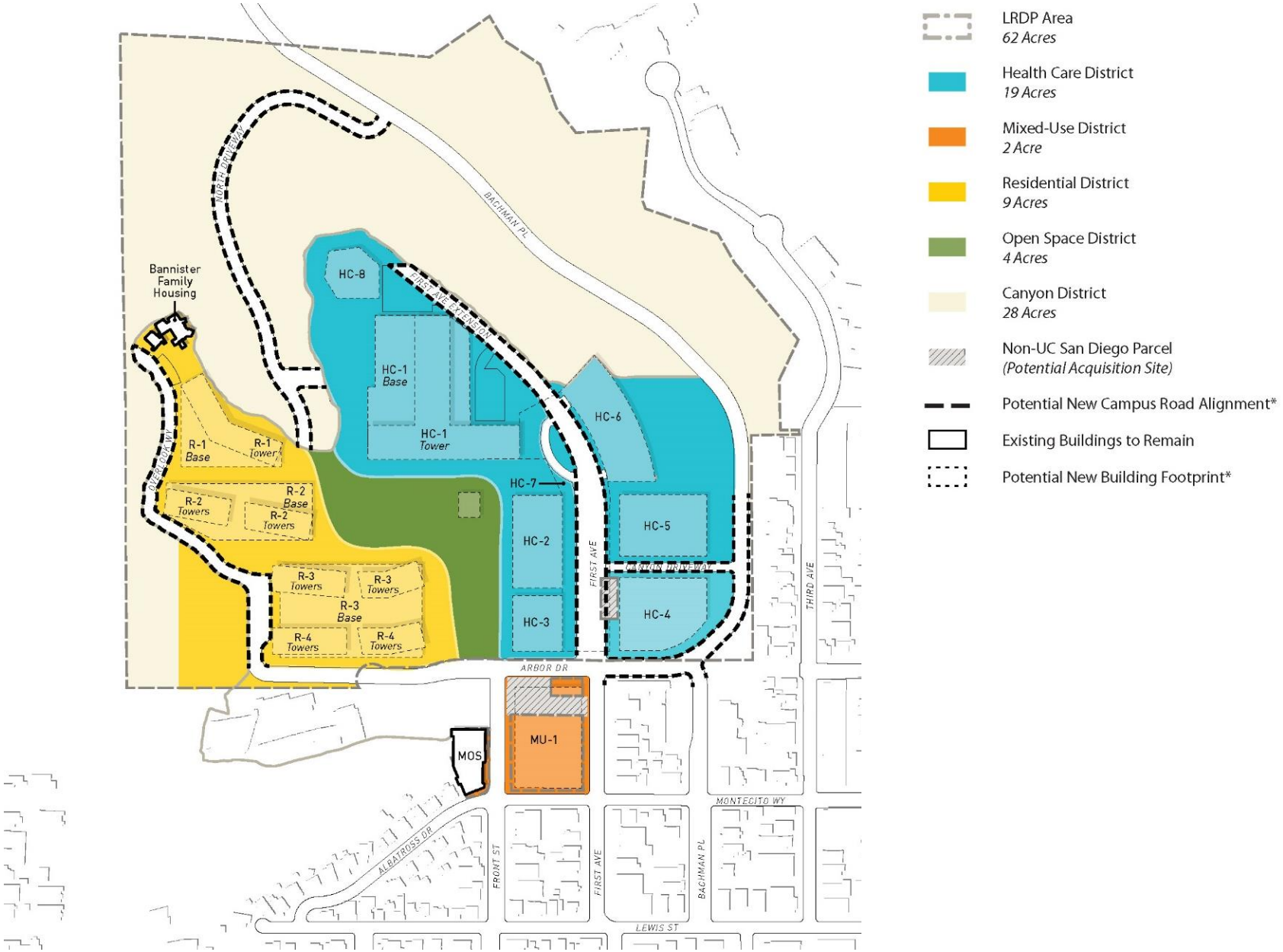

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Figure 2-4
Future Campus Land Use Districts

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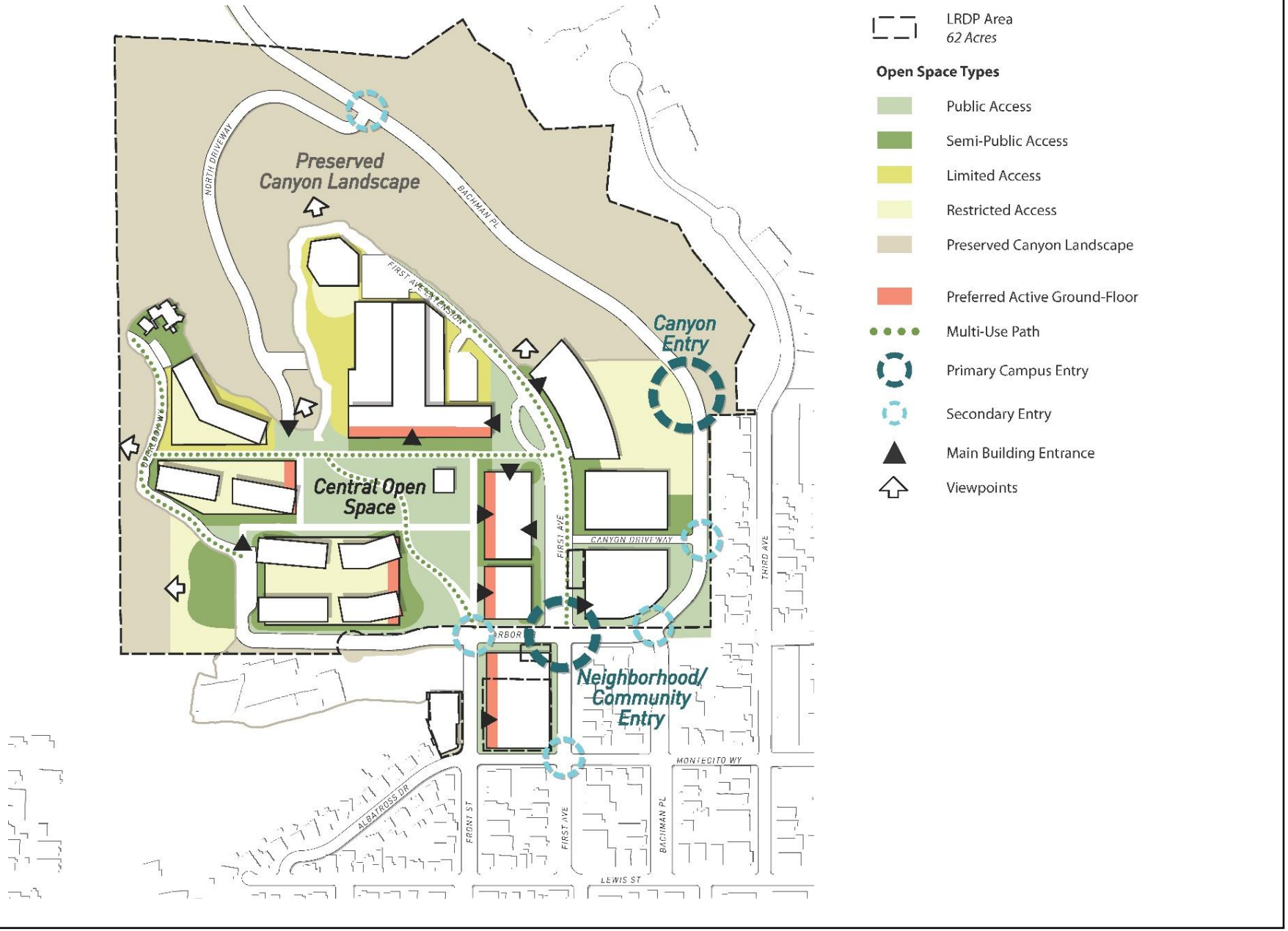

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Figure 2-5
Conceptual Future Campus Open Space Types

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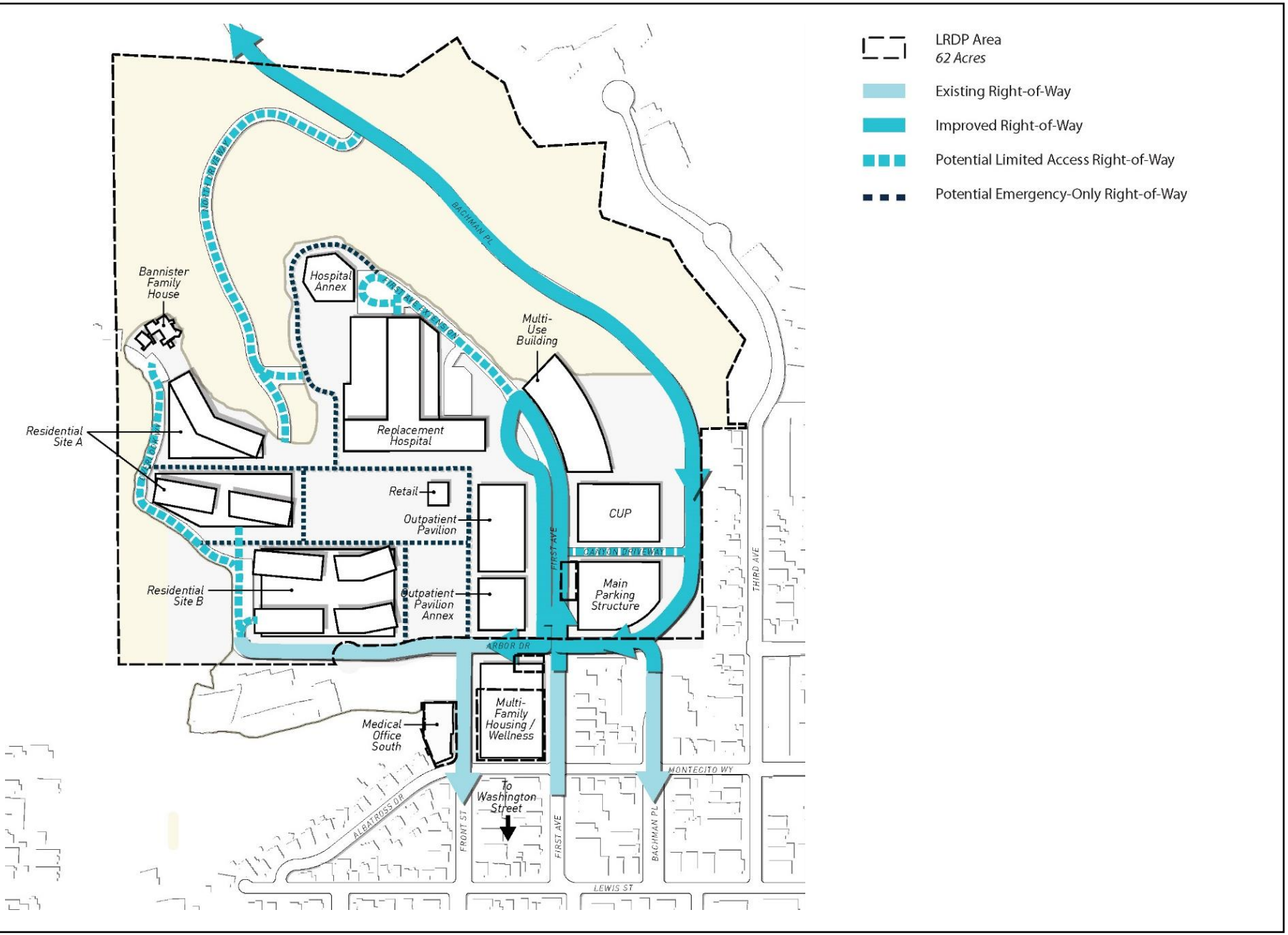

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Figure 2-6
Conceptual Campus Circulation

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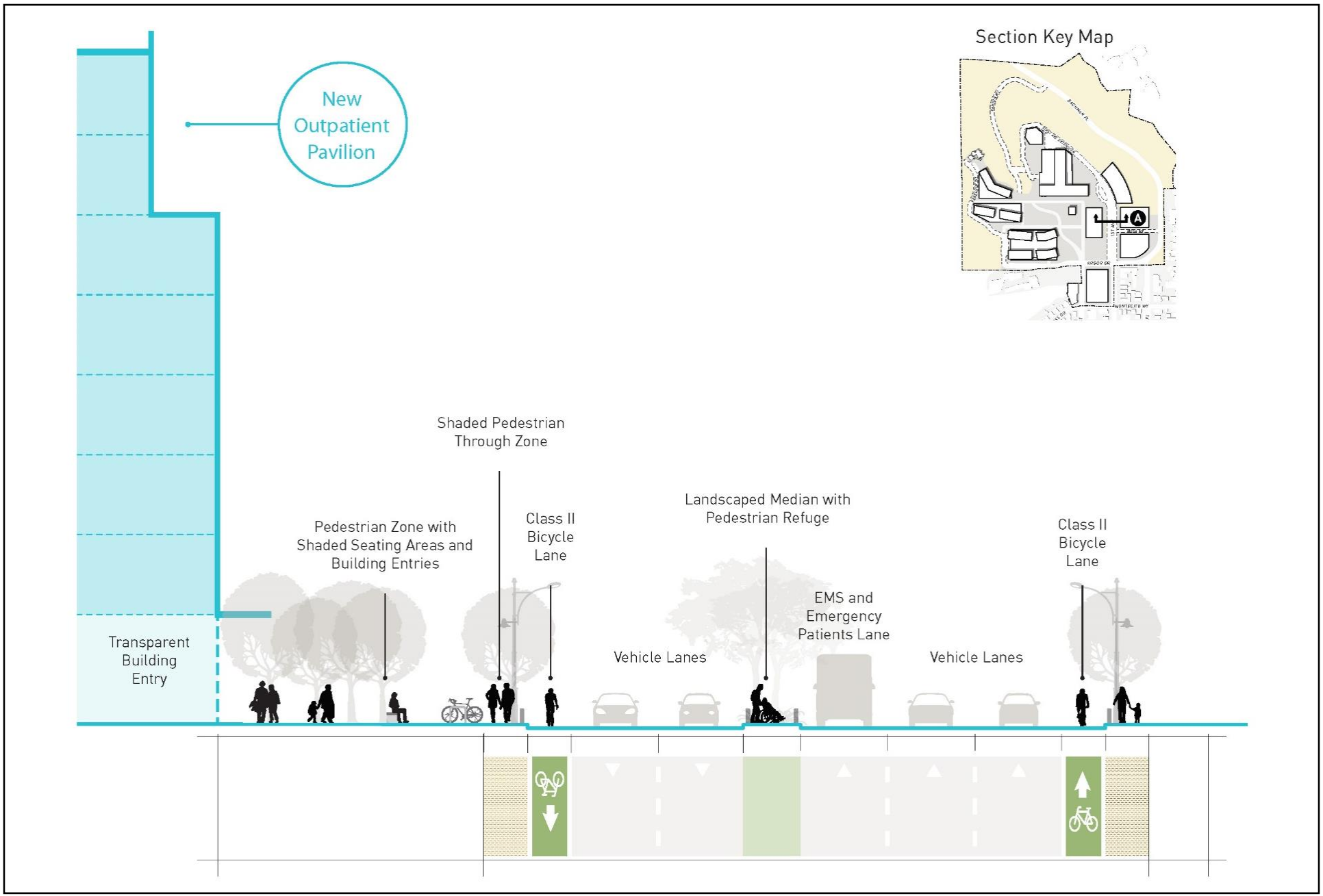

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Figure 2-7
Multimodal Cross-Section of First Avenue Extension

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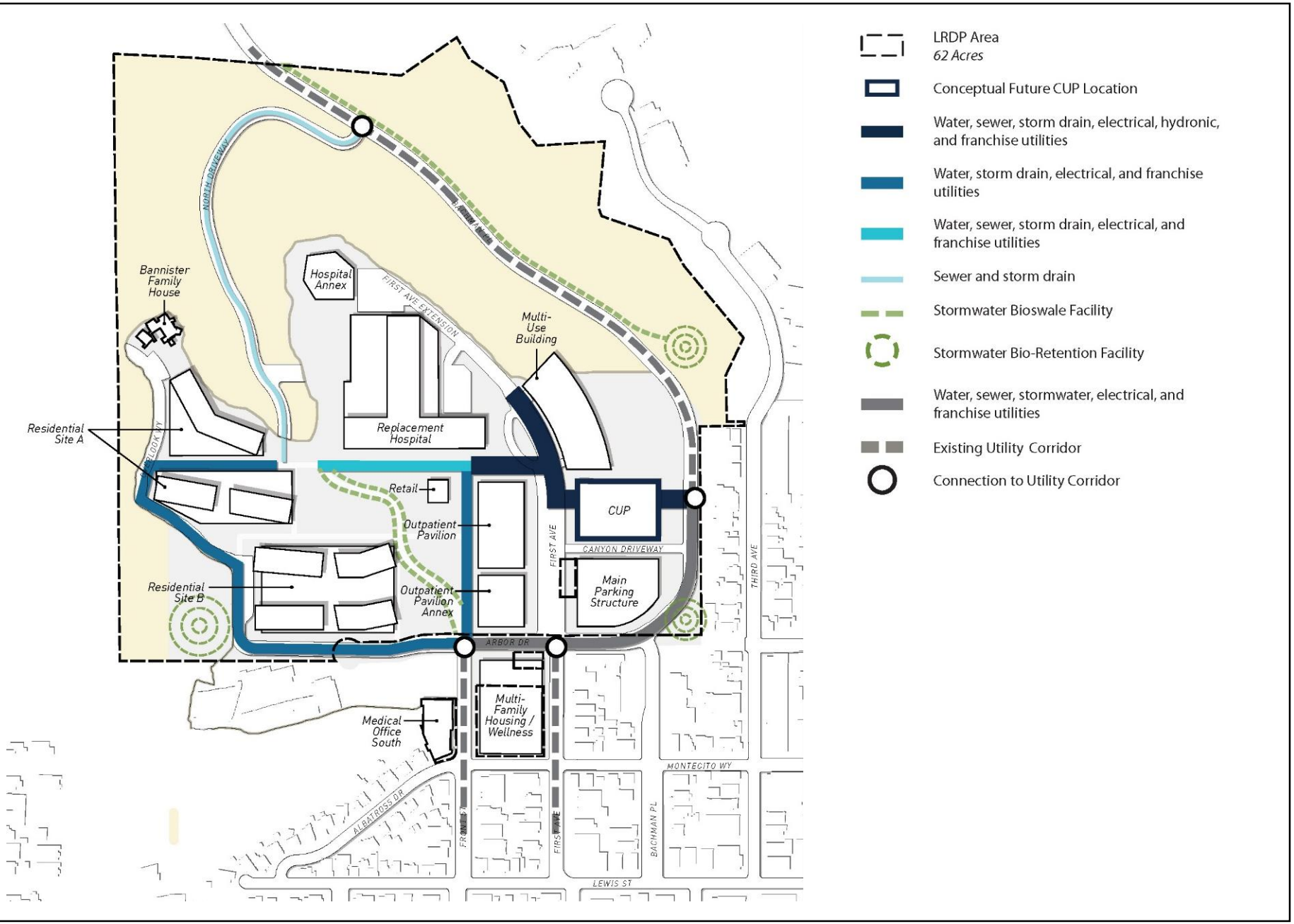

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Figure 2-8
Conceptual Future Campus Utility Location

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Figure 2-9
Conceptual Site Plan

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Figure 2-10
Conceptual Landscape Plan

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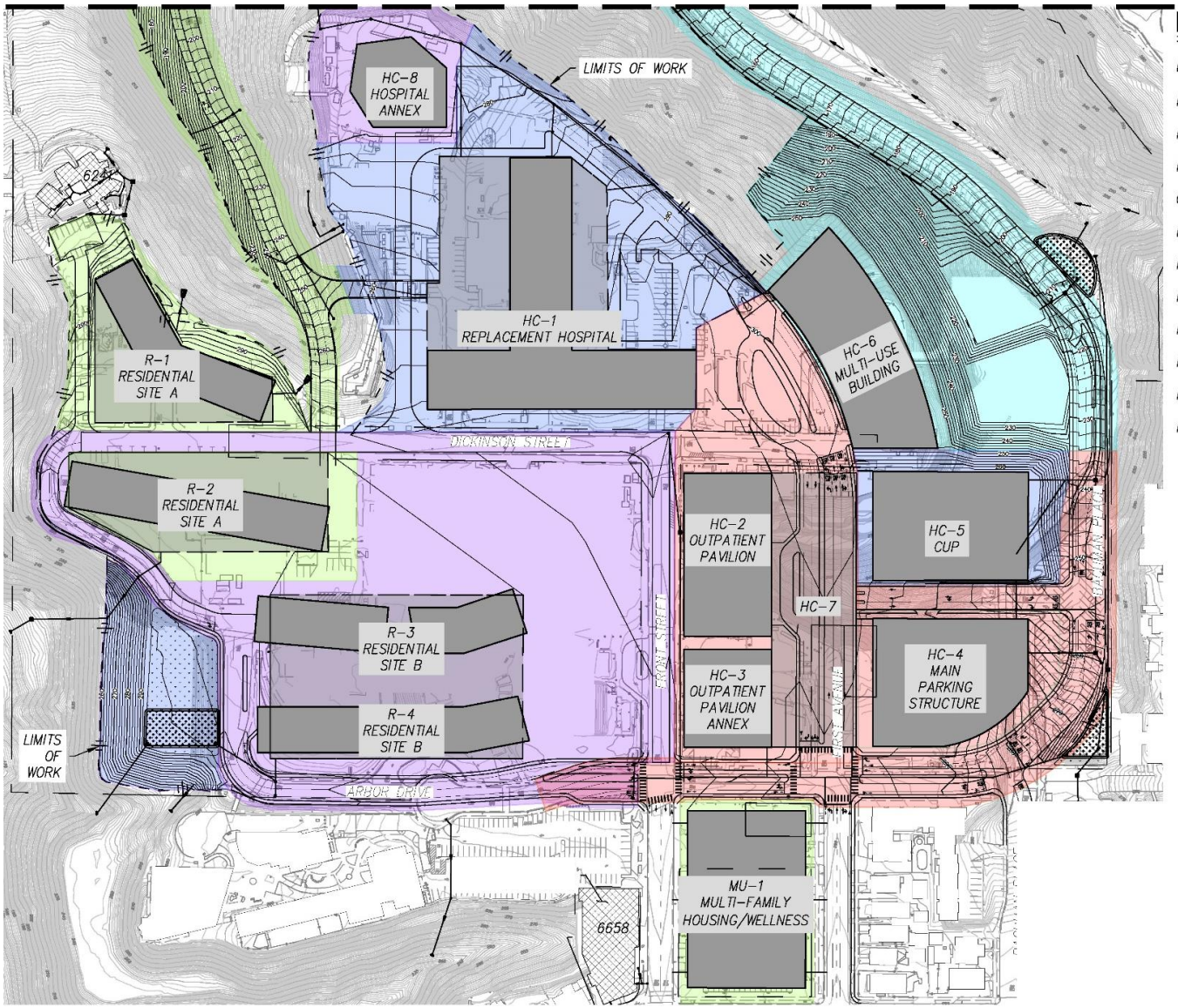

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Figure 2-11a

Conceptual Grading Plan

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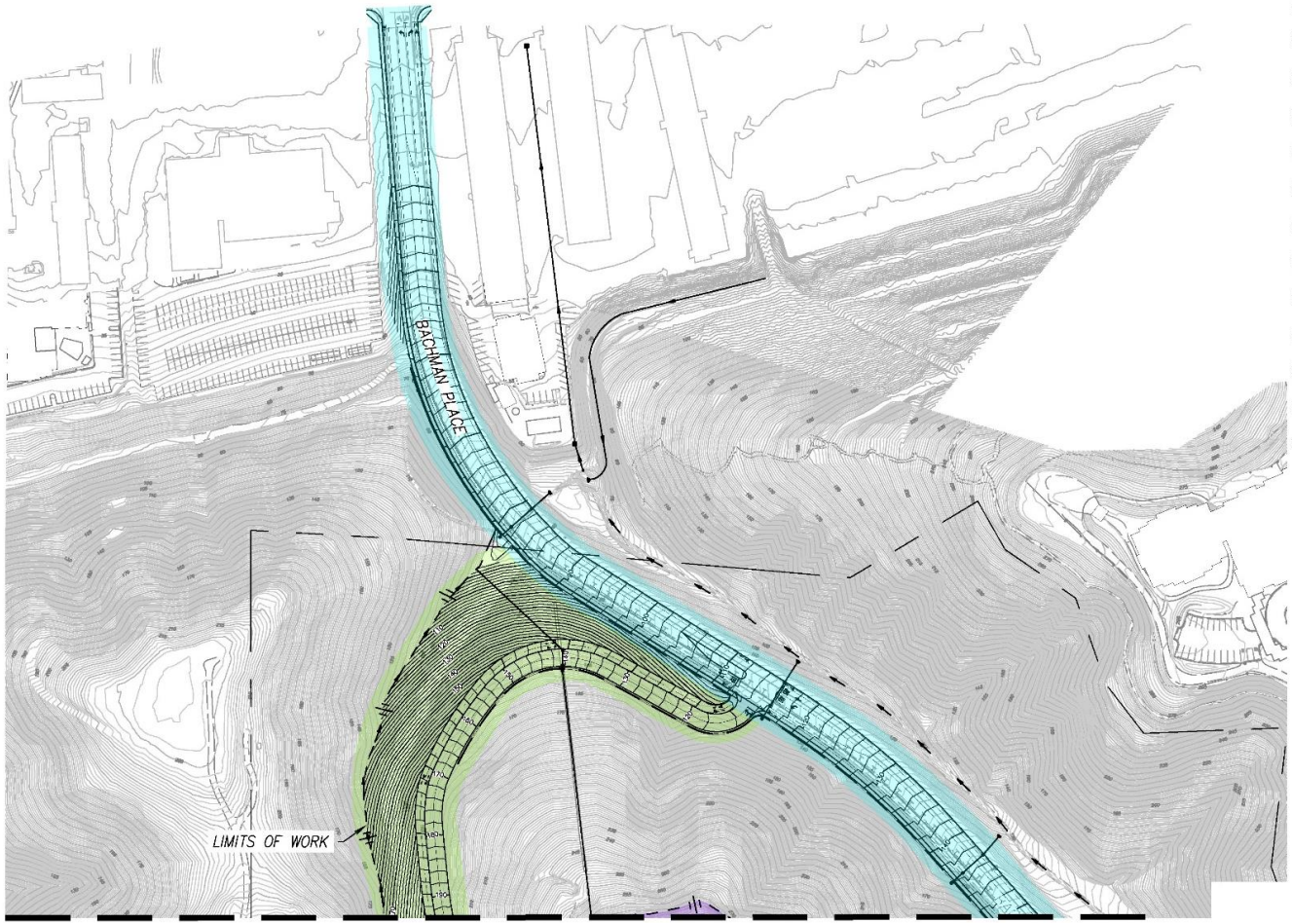

LEGEND

- EXISTING BUILDING W/ CAAN NUMBER — 1234
- PROPOSED BUILDING W/ PARCEL NUMBER — AB–1
- PROPOSED UNDERGROUND STRUCTURE — AB–1
- PROPOSED BIOFILTRATION BASIN
- CAMPUS BOUNDARY
- DAYLIGHT LINE
- PHASE 1A
- PHASE 1B
- PHASE 2A
- PHASE 2B
- PHASE 3
- PHASE 5

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Figure 2-11b
Conceptual Grading Plan

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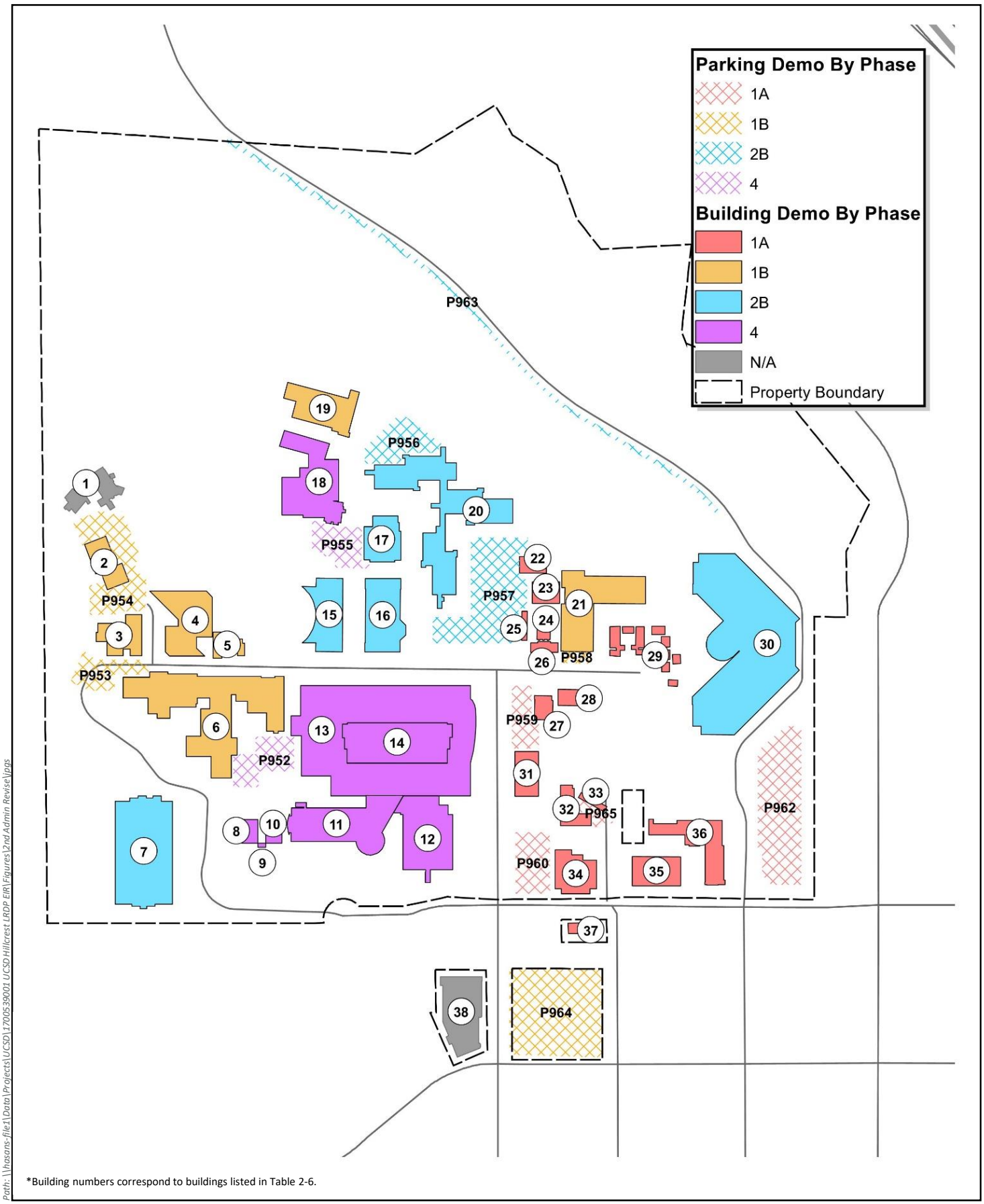

*Building numbers correspond to buildings listed in Table 2-6.

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Figure 2-12
Hillcrest Campus Anticipated Building Demolition

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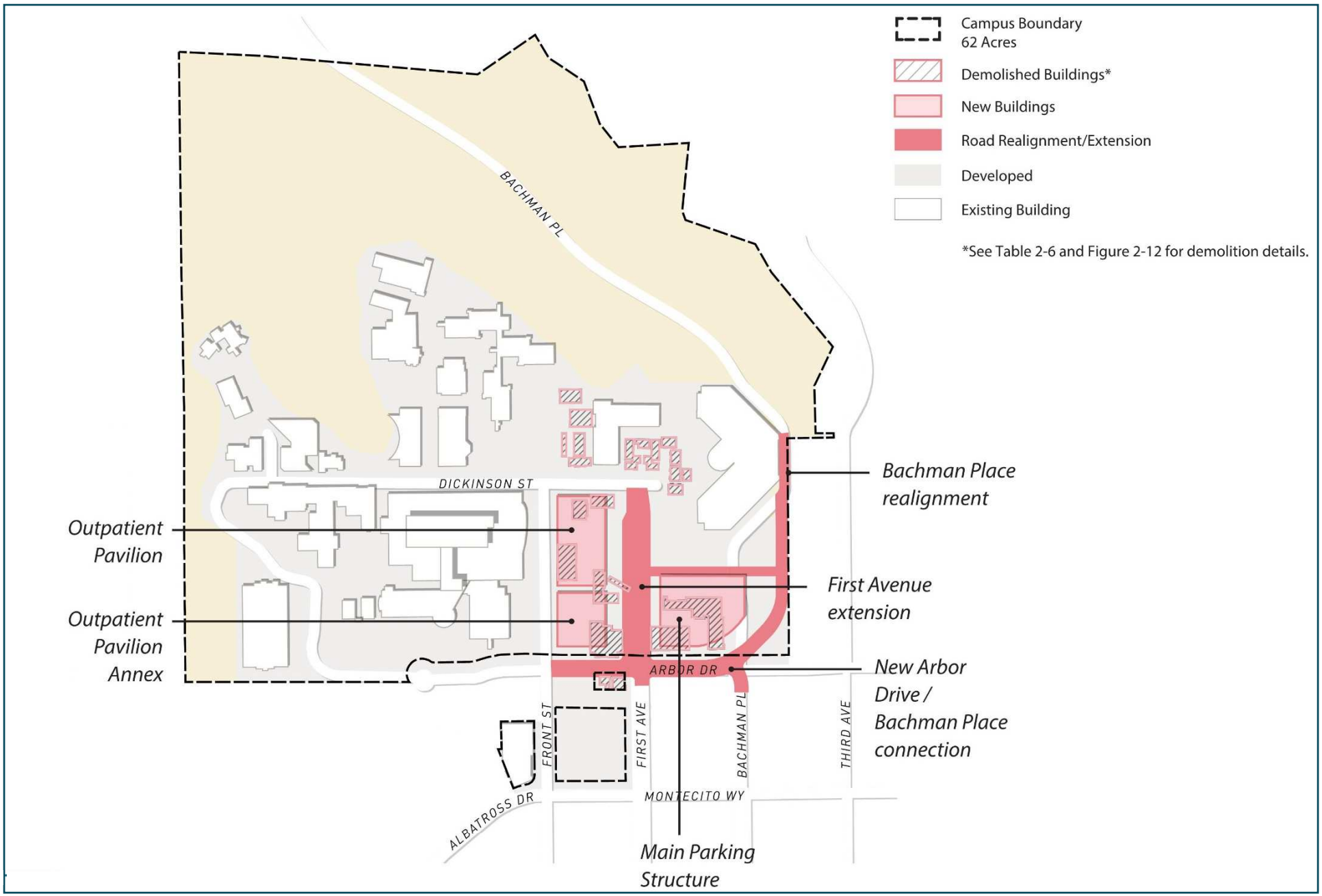

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Figure 2-13
Site Phasing – 1A

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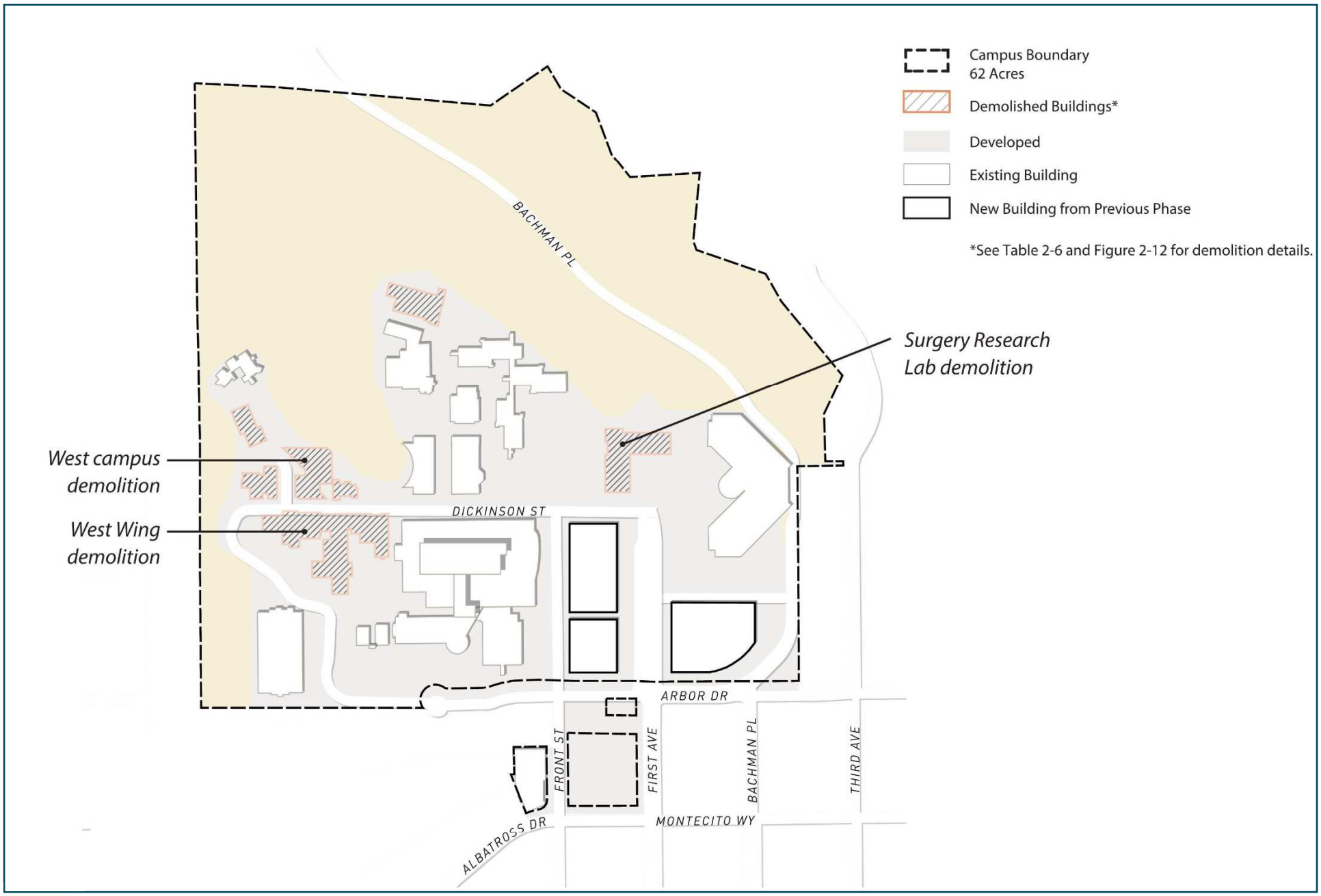

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Figure 2-14
Site Phasing – 1B

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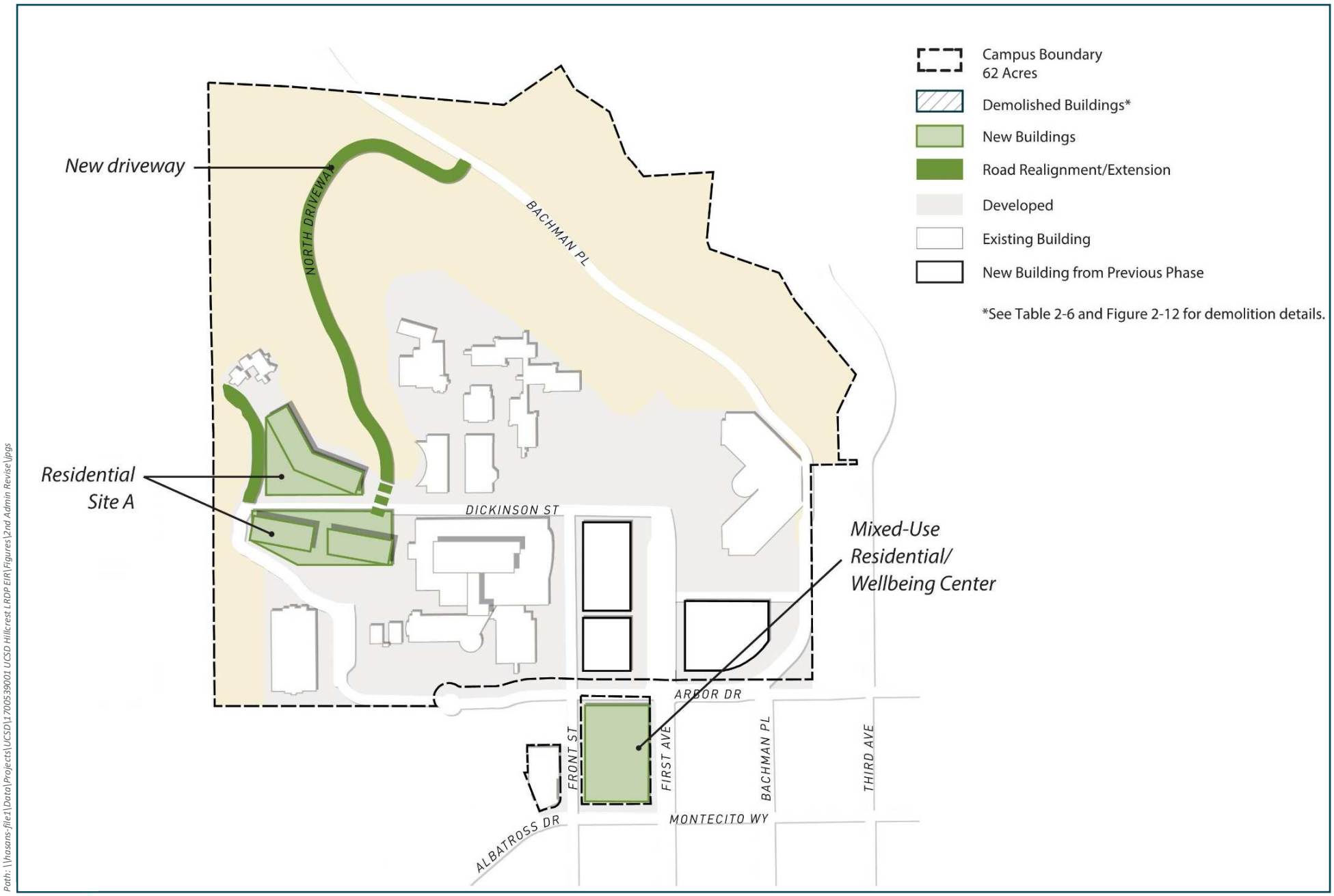

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Figure 2-15
Site Phasing – 2A

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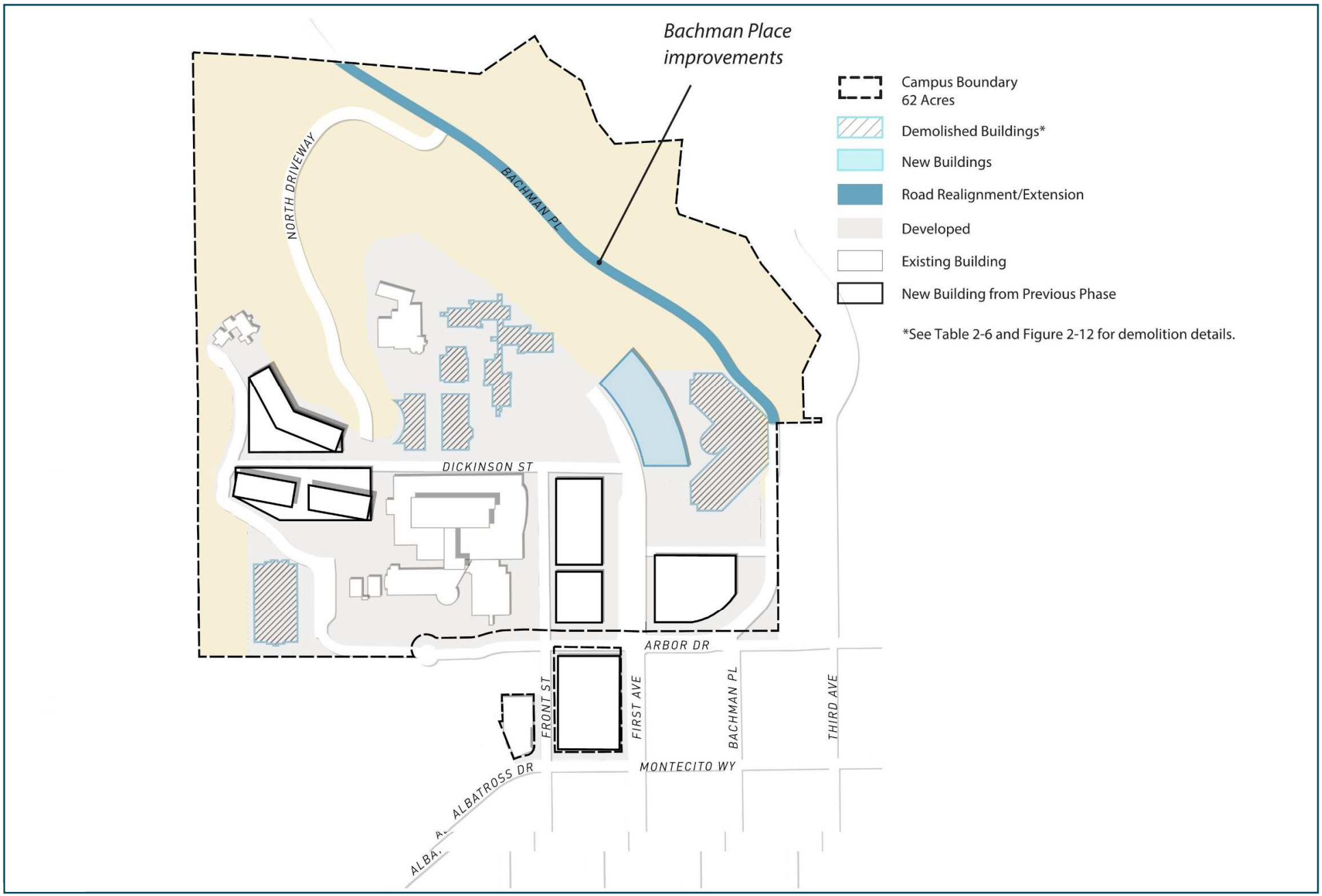

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Figure 2-16
Site Phasing – 2B

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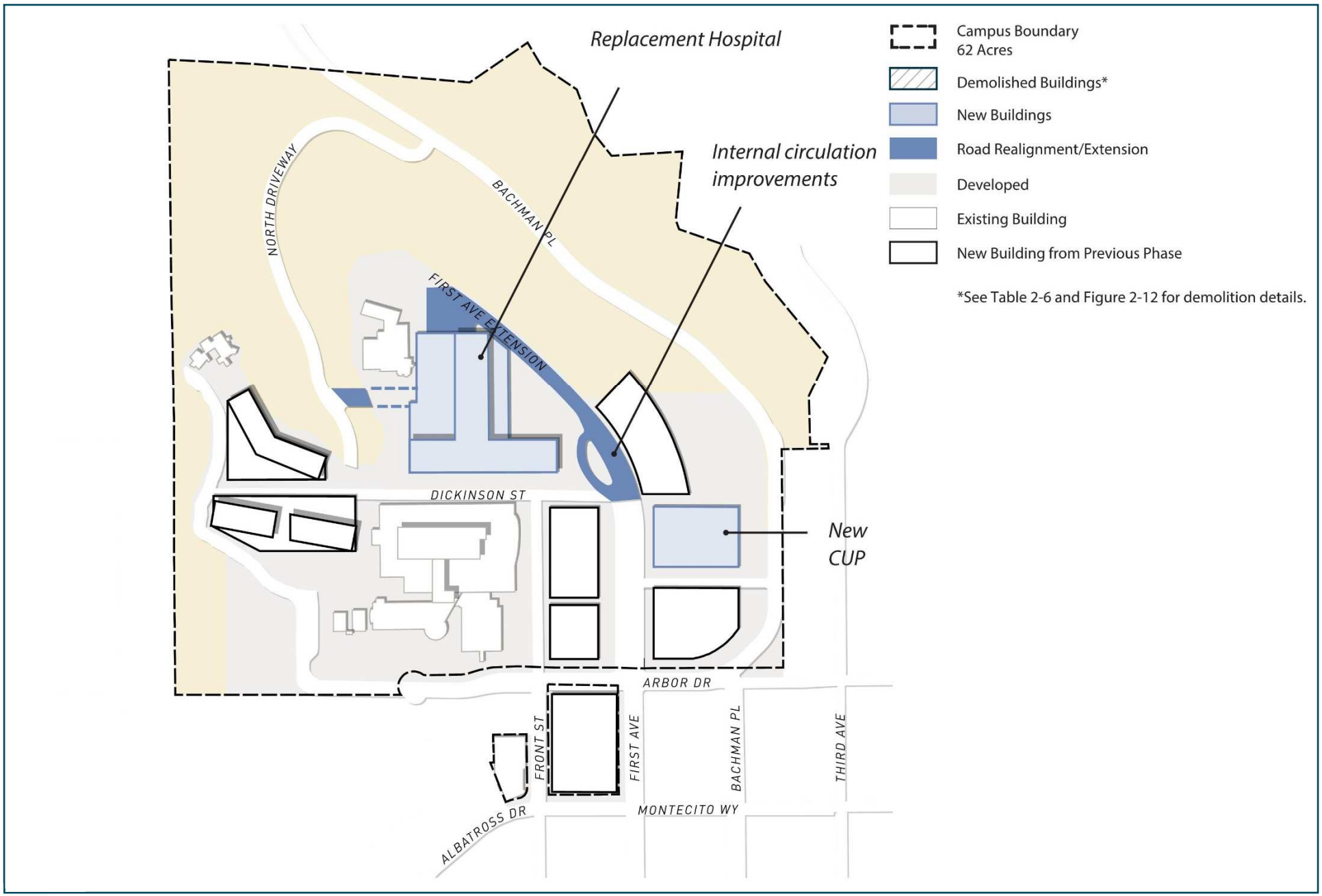

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Figure 2-17
Site Phasing – 3

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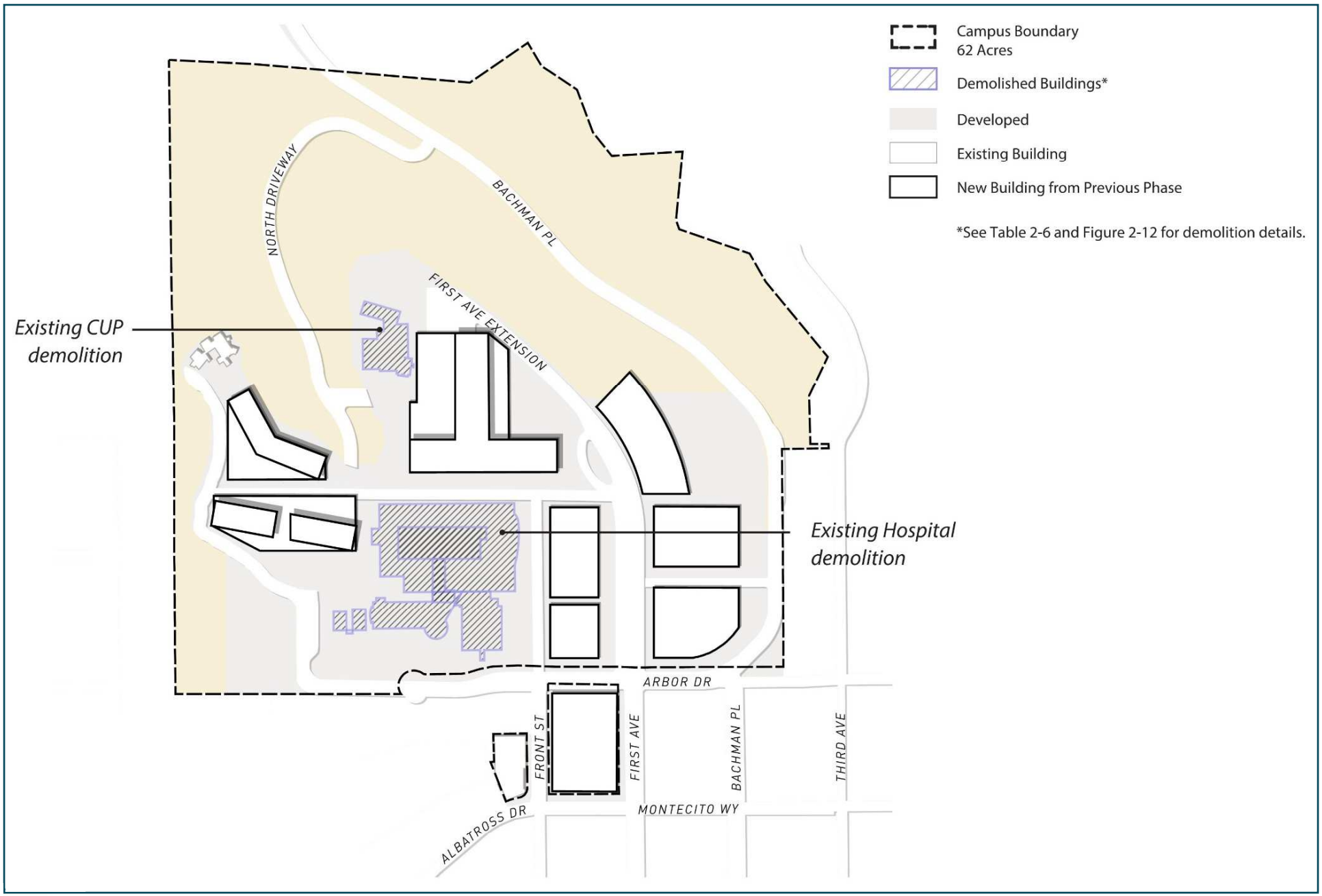

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Figure 2-18
Site Phasing – 4

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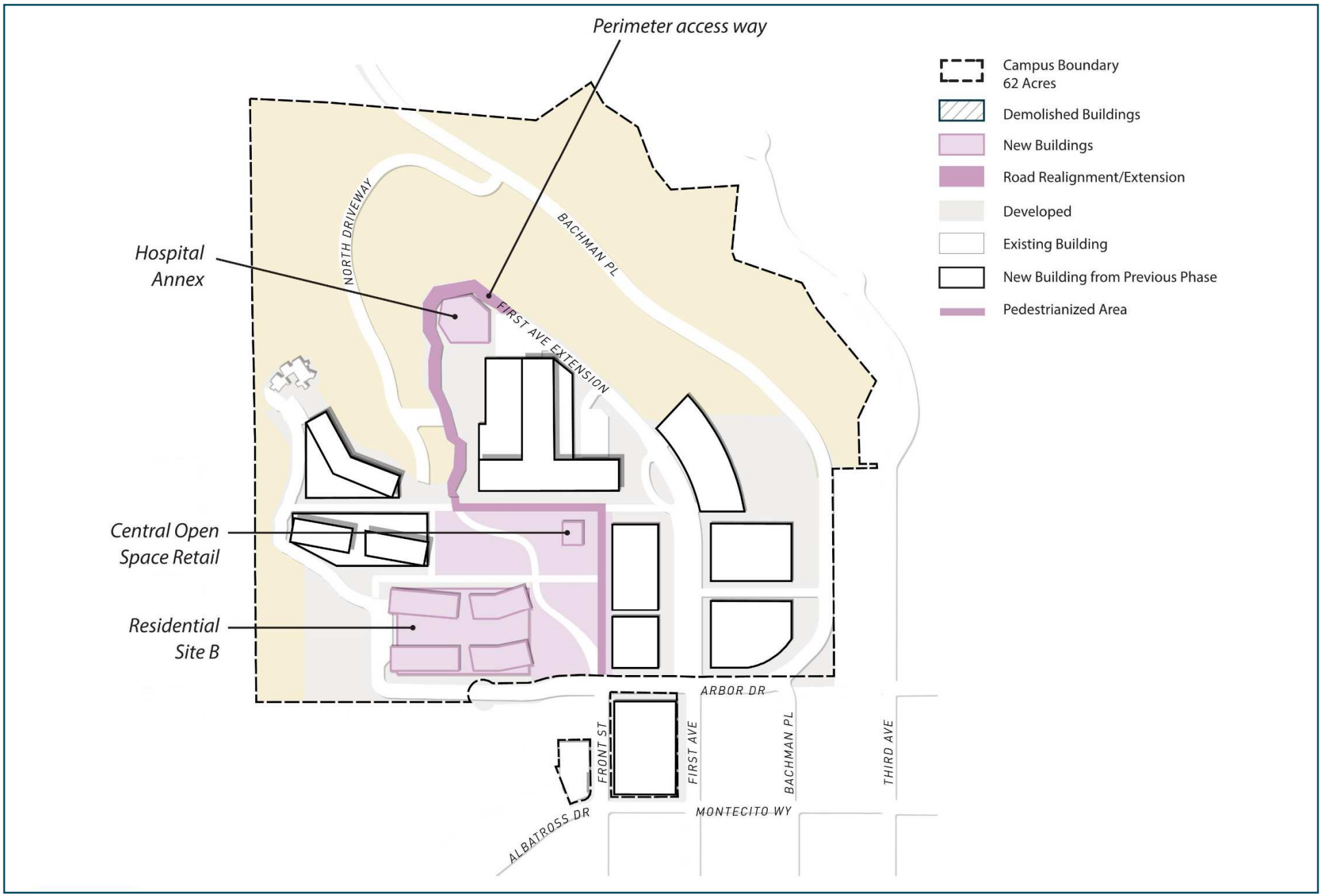

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Figure 2-19
Site Phasing – 5

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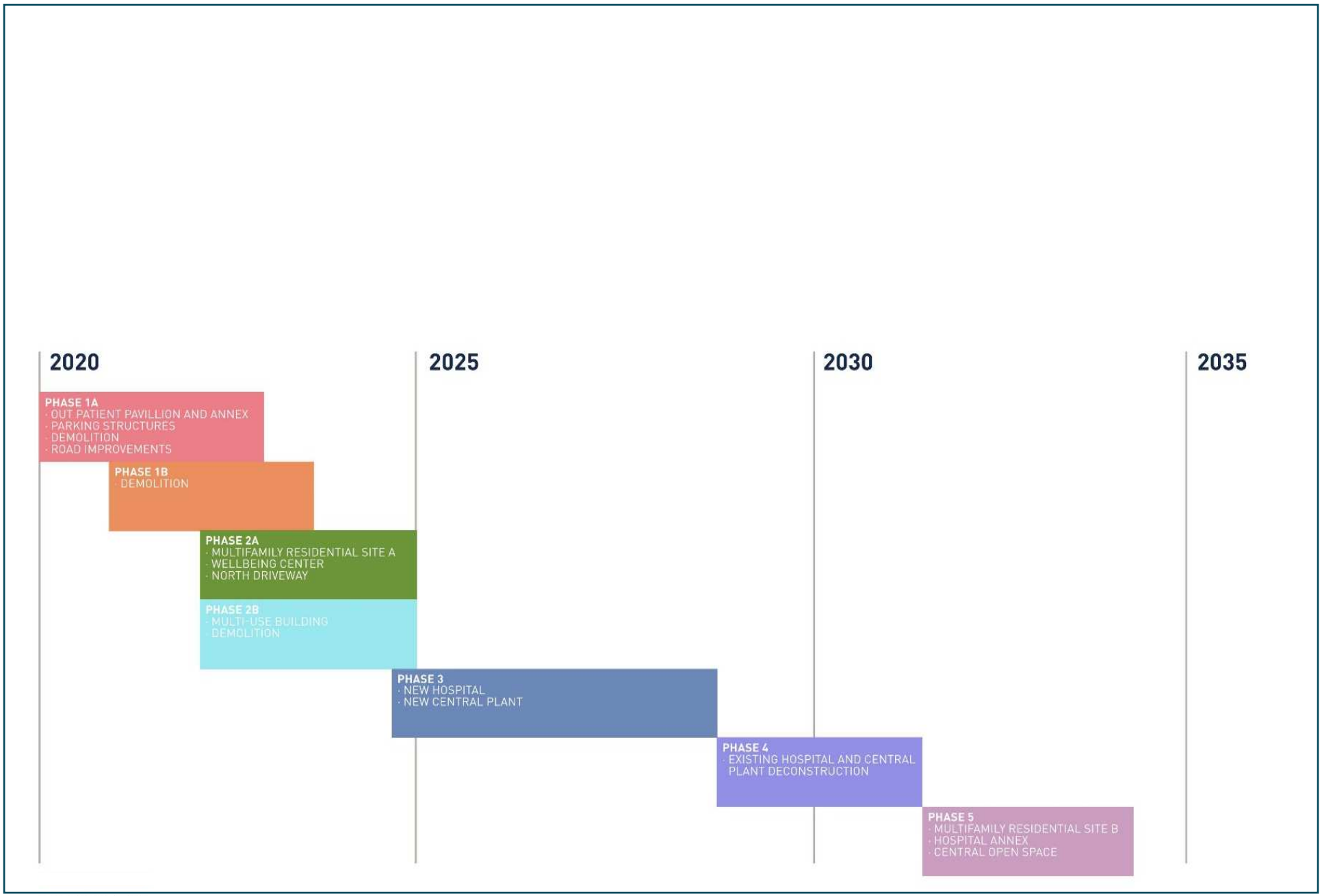

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Figure 2-20
Hillcrest 2019 LRDP Phasing Timeline

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Chapter 3 Environmental Setting, Impacts, and Mitigation

Sections 3.1 through 3.17 of this 2019 LRDP EIR contain a discussion of the potential environmental effects from implementation of the proposed 2019 LRDP, including information related to existing site conditions, analyses of the type and magnitude of individual and cumulative environmental impacts, and framework mitigation measures that could reduce or avoid environmental impacts.

Scope of the Environmental Impact Analysis

The proposed 2019 LRDP is a general land use plan that would guide the physical development of the campus. Typically, a Program EIR is prepared for an LRDP, pursuant to Section 15168 of CEQA Guidelines. However, UC San Diego is required to comply with SB 1953 to retrofit or replace its existing hospital by 2030. The time constraints associated with SB 1953 combined with the site constraints of the Hillcrest Campus have motivated UC San Diego to prepare a conceptual site plan and five-phase construction plan to comply with SB 1953. Because the level of project information available at this stage is more detailed than a typical LRDP, a project-level analysis is possible and this 2019 LRDP EIR includes a detailed analysis of environmental impacts by construction phase. This 2019 LRDP EIR includes sufficient project-specific detail and analysis of proposed subsequent project phases to streamline or minimize CEQA review of the future project phases. This strategy has been employed for the 2019 LRDP to maximize the time available to achieve the goals of SB 1953 by 2030.

In accordance with Appendix G of the CEQA Guidelines, the potential environmental effects of the proposed 2019 LRDP are analyzed for the following environmental topical areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural and Tribal 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
- Utilities
- Wildfire

Please note two environmental topical areas, Agriculture and Forestry Resources and Mineral Resources, from Appendix G of the CEQA Guidelines are not expected to incur adverse impacts resulting from implementation of the 2019 LRDP or are not applicable. These two environmental

topical areas are not included in this chapter, but rather are included in Section 4.1, Other Effects Found Not to Be Significant, in Chapter 4, Other CEQA Considerations, of this 2019 LRDP EIR.

Format of the Environmental Analysis

Environmental Setting

According to Section 15125 of the CEQA Guidelines, an EIR must include a description of the existing physical environmental conditions in the vicinity of the project to provide the "baseline condition" against which project-related impacts are compared. Normally, the baseline condition is the physical condition that exists when the NOP is published. The NOP for the 2019 LRDP EIR was published on February 28, 2018, and the baseline conditions contained in this 2019 LRDP EIR are generally taken from this time period. However, the CEQA Guidelines and applicable case law recognize that the date for establishing an environmental baseline cannot always be rigid. Physical environmental conditions may vary over a range of time periods; thus the use of environmental baselines that differ from the date of the NOP is reasonable and appropriate when conducting the environmental analyses. Some sections rely on a variety of data to establish an applicable baseline. For example, in sections such as Sections 3.2, Air Quality; 3.3, Biological Resources; 3.4, Cultural and Tribal Cultural Resources; 3.12, Population and Housing; and 3.15, Transportation, available data were months and sometimes several years old, and therefore, projections as to how those conditions might have changed were incorporated in the following sections and corresponding technical reports.

Regulatory Framework

The "Regulatory Framework" subsection provides a summary of regulations, plans, policies, and laws that are relevant to each issue area at the federal, state, and local levels.

Project Impacts and Mitigation

The "Project Impacts and Mitigation" subsection describes the potential environmental impacts of the proposed 2019 LRDP and, based upon the standards of significance, concludes whether the environmental impacts would be considered significant, potentially significant, or less than significant. Each environmental topical area that is analyzed is divided into issues, based on potential impacts. Each issue is addressed in its own subsection and is separately numbered (e.g., Issue 1, Issue 2). This format is designed to assist the reader in quickly identifying the subject of the impact analyses and for use in Table ES-1, Environmental Impacts and Mitigation Measures, which forms the basis of the Mitigation Framework and Monitoring Program. For each issue, applicable standards of significance are identified and potential impacts are discussed in the impact analysis section. Mitigation measures are also included and discussed when applicable, as discussed below.

Standards of Significance. Standards of significance are criteria used to determine whether potential environmental effects are significant. The standards of significance used in this analysis were primarily based upon Appendix G of the CEQA Guidelines. However, in some cases, standards were developed specifically for this analysis or were adopted from standards adapted from other agencies or entities. This subsection defines the type, amount, and/or extent of impact that would be considered a significant adverse change in the environment. Some standards of significance, such as those used in Sections 3.2, Air Quality; 3.11, Noise; and 3.15, Transportation, are quantitative, while others, such those used in Section 3.1, Aesthetics, are qualitative. The standards of significance are intended to assist the reader in understanding how and why the 2019 LRDP EIR reaches a conclusion that an impact is significant or less than significant.

Impact Analysis. The analysis of environmental impacts considers both the construction and operational phases associated with implementation of the proposed 2019 LRDP. As required by Section 15126.2(a) of the CEQA Guidelines, direct, indirect, short-term, on-campus, and/or off-campus impacts are addressed for each project-specific development phase, as appropriate, for the environmental issue area being analyzed. This 2019 LRDP EIR utilizes the following terms to describe the level of significance of impacts identified during the course of the environmental analysis:

- **Less than Significant:** "Less than significant" is used for referring to two conditions:
  1. This term is used to refer to impacts resulting from implementation of the proposed 2019 LRDP that are not likely to exceed the defined standards of significance; and
  2. This term is also used in considering potentially significant impacts after implementation of mitigation measures. If implementation of the specified mitigation measures will reduce the potentially significant impact to a level that does not exceed the defined standards of significance, the impact is considered less than significant.
- **Potentially Significant:** Impacts resulting from implementation of the 2019 LRDP that may exceed defined standards of significance before mitigation is considered are referred to as potentially significant.
- **Significant and Unavoidable:** Significant impacts resulting from implementation of the 2019 LRDP that cannot be eliminated or reduced to below standards of significance and a less than significant level through implementation of feasible mitigation measures are referred to as significant and unavoidable.

A "significant effect" is defined by Section 15382 of the CEQA Guidelines as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment . . . [but] may be considered in determining whether the physical change is significant."

Mitigation Measures. Section 15126.4 of the CEQA Guidelines requires an EIR to "describe feasible measures which could minimize significant adverse impacts." The CEQA guidelines define feasibility as capable of being accomplished in a successful manner within a reasonable period of time taking into account economic, legal, social, technological, or other considerations. The "Mitigation Measures" subsection discusses mitigation measures that could reduce the severity of impacts identified in the "Impact Analysis" subsection.

Cumulative Impacts and Mitigation

CEQA requires that EIRs discuss cumulative impacts, in addition to project impacts. In accordance with CEQA, the discussion of cumulative impacts must reflect the severity of the impacts and the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. Further, the discussion is guided by the standards of practicality and reasonableness. According to Section 15355 of the CEQA Guidelines, "cumulative impacts" are defined as:

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

Section 15130(a) of the CEQA Guidelines further states that a "cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts."

In addition, Section 15130(a) of the CEQA Guidelines requires that EIRs discuss the cumulative impacts of a project when the project's incremental effect is cumulatively considerable. Therefore, the discussion of cumulative impacts in an EIR evaluates whether the impacts of the project will be significant when considered in combination with past, present, and future reasonably foreseeable projects, and whether the project would make a cumulatively considerable contribution to those impacts. CEQA recognizes that the analysis of cumulative impacts need not be as detailed as the analysis of project-related impacts, but instead should "be guided by the standards of practicality and reasonableness." CEQA Guidelines indicate that where a lead agency is examining a project with an incremental effect that is not cumulatively considerable, it need not consider the effect significant but shall briefly describe the basis for its conclusion. As further clarified by

Section 15065 of the CEQA Guidelines, "cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. The CEQA Guidelines allow for a project's contribution to be rendered less than cumulatively considerable with implementation of mitigation.

The geographic scope of the cumulative impact analysis varies depending upon the specific environmental issue area being analyzed. The geographic scope defines the geographic area within which projects may contribute to a specific cumulative impact. Therefore, past, present, and future reasonably foreseeable projects within the defined geographic area for a given cumulative issue must be considered.

CEQA Guidelines, Section 15130(b), presents two possible approaches for considering past, present, and future reasonably foreseeable projects. It indicates that either of the following could be used:

1. A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or
2. A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.

This 2019 LRDP EIR uses the first approach. Existing development is included as part of the existing environmental baseline when evaluating project impacts, and are not included in Table 3-1. Active projects within approximately 1 mile of the Hillcrest Campus are listed in Table 3-1. Collectively, those cumulative projects are in various stages of development, including in the planning phase, design stage, or construction phase.

Table 3-1. Cumulative Projects

No.	Address	Description	Approx. Distance to Site	Project Status
1	875 Hotel Circle South	Legacy International Center. Permits and Vesting Tentative Map (Process 5) to demolish the Mission Valley Resort Hotel and construct a mix of uses (religious, lodging, administrative, recreational and commercial) on an 18-acre lot.	1,000 feet	Permits Approved, Under Construction
2	4285 1/3 Goldfinch Street	Neighborhood Development Permit for the construction of a new 2,288-square-foot single family residence and 1,690-square-foot companion unit. Site Development Permit for a driveway in the right-of-way where the applicant is not the underlying fee owner on a vacant lot.	1,000 feet	Early in process, no development permits

Table 3-1. Cumulative Projects

No.	Address	Description	Approx. Distance to Site	Project Status
3	215 West Washington Street	Mission Hills–Hillcrest Branch Library. This project provides for a 15,000-square-foot library at a site adjacent to the Florence Elementary School, on a block bounded by Front Street, Washington Street, Albatross Street, and University Avenue. This project would serve the Mission Hills and Hillcrest neighborhoods and is part of the 21st Century Library System/Library Department Facility Improvements Program.	1,500 feet	Under construction
4	3745 Third Avenue	Site Development Permit to demolish an existing residence and construct 6 attached multi-family residential units with deviations totaling 12,408 square feet.	2,500 feet	Early in process, no development permits
5	635 Robinson Avenue	Neighborhood Development Permit for the development of 111 multi-family residential units, 9 very low income units, 4,800 square feet of commercial retail space within a seven-story mixed use building with 3 levels of underground parking and a detached parking structure.	2,800 feet	Permits issued
6	West side of Fifth Avenue at 3500–3534 Fifth Avenue, between Walnut Avenue and Brookes Avenue	141 multi-family residential units in a seven-story, 261,936-square foot structure with three levels of subterranean parking. The existing office structure would remain with no modifications or enlargements.	4,000 feet	Approved
7	3974 Goldfinch Street	City Fire Station No. 8. Building, Electrical, Mechanical and Plumbing permits for a minor addition and remodel to existing City-owned Fire Station No. 8. Work includes enlarging the kitchen, upgrades to the bathroom and laundry area, and an addition to the office/bullpen.	3,700 feet	Permits issued. Underwent first inspection on 10/18/18
8	4077 Fifth Avenue	Scripps Mercy Hospital, San Diego Campus, Medical Office Building Replacement Substantial Conformance Review. The project would include the demolition of one medical office building and replacement with a new cancer center in a building of approximately the same size.	1,500 feet	Substantial conformance review underway

Table 3-1. Cumulative Projects

No.	Address	Description	Approx. Distance to Site	Project Status
9	500 Hotel Circle North	Town and Country Hotel. Redevelopment of property would demolish 27 existing structures. New development would reduce hotel rooms from 954 to 700 rooms, reduce conference space from 213,000 square feet to 177,000 square feet, construct 11,400 square foot new hotel lobby with restaurant, café, and new 467 space parking structure. In addition, 840 residential units would be constructed with 1,287 parking spaces.	4,500 feet	Under construction

Sources: LLG 2019; City of San Diego 2019.

CEQA Issues Where There Is No Potential for a Significant Effect

There are certain issues within the environmental topical areas from Appendix G of the CEQA Guidelines that are not expected to incur significant adverse impacts resulting from implementation of the 2019 LRDP. In accordance with Section 15128 of the CEQA Guidelines, this subsection summarizes those issues and impacts that were determined to be below a level of significance.

References

This section identifies sources relied upon for each environmental topic area analyzed in this document (Sections 3.1 through 3.17).

References

City of San Diego. 2019. Open DSD Database. Development Services Department. Accessed May 2019. https://opendsd.sandiego.gov/Web/Approvals/Search.

LLG (Linscott, Law & Greenspan, Engineers). 2019. UC San Diego Hillcrest Campus 2019 Long Range Development Plan – Transportation Impact Analysis. June 2019.

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3.1 Aesthetics

This section of this 2019 LRDP EIR describes the existing visual character and quality of the Hillcrest Campus and surrounding area, along with a description of existing visual resources, scenic vistas, and light and glare. This section then evaluates potential impacts as a result of implementing the proposed 2019 LRDP in terms of visual character and quality degradation, adverse effects to scenic vistas, damage to visual resources within a state scenic highway, and creation of new sources of light and glare affecting day-time and night-time views. Potential impacts of lighting on biological resources are discussed in Section 3.3, Biological Resources, of this 2019 LRDP EIR.

3.1.1 Environmental Setting

The existing visual character of the Hillcrest Campus and surrounding area is described in the following section as it pertains to existing landform and land use development, along with the visibility of key areas from on- and off-campus viewers. The landform discussion includes major topographic features of the area, and both natural and ornamental vegetation, while development includes general land use types, such as residential, commercial, academic, and open space) Visual characteristics also includes the visibility and character of the view from various locations both off-and on-campus, with viewers defined as the public who use the area most frequently.

3.1.1.1 Campus Visual Character

The Hillcrest Campus is composed of two major geographical areas: the mesa top and steep slope canyons. The visual character of each is described below with regard to their landform, vegetation and development characteristics along with campus viewers.

Landform

The developable area of the Hillcrest Campus is approximately 34 acres in size and is generally located in the southern/middle part of the campus. Its topographic elevation ranges from approximately 300 above mean sea level (amsl) to approximately 280 amsl. The steep slope canyon areas are approximately 28 acres in size and are generally located in the northern part of the campus. The canyons contain drainages that generally flow northward to Mission Valley and the San Diego River. There are two major and two minor canyon drainages. The first of the two major canyons is located both on and off site and parallel to the western campus boundary. Its elevations range from 285 amsl to 60 amsl. The second major canyon is generally located in a northwesterly direction and is mostly on campus with its drainage situated parallel to Bachman Place. It ranges in elevation from approximately 75 amsl to 290 amsl. One minor canyon is located entirely on campus east of Bachman Place and south/southwest of the Bachman parking garage. Its drainage flows west to east and into the major drainage located adjacent to Bachman Place. The

other minor canyon is located in a north–south direction between the two major drainages and ranges in elevation from approximately 80 to 290 amsl (see Figures 2-3, 2-11A, and 2-11B in Chapter 2, Project Description). All four canyons have very steep slopes.

Vegetation

The vegetation on the mesa top is located in the developed area of the campus and is generally characterized by non-native ornamental plants. In addition, along the northern, western, and eastern mesa rims are a line of mature eucalyptus trees. Mature eucalyptus trees are also located in the minor west/east canyon east of Bachman Place southwest of the Bachman parking garage. In the canyon areas there are a variety of native habitats, including coastal sage scrub and riparian, vegetation along the Bachman Place drainage along with non-native grassland located in the northern area adjacent to Bachman Place.

Development

Nearly all campus development is located on the approximately 34-acre mesa top. In this area the existing development consists of the 11-story hospital and supporting buildings, along with research and administrative structures, parking structures and a CUP. Development in the canyon areas is limited to infrastructure such as roads (i.e., Bachman Place, a sewer line, and access road), storm drains, and a dilapidated staircase.

Campus Viewers

The on-campus viewers' visual experience varies with the location on campus. Within the mesa top area most views are limited to the immediate foreground of streetscape and buildings. However, where views are not blocked by foreground obstacles, most views include the 11-story hospital given its height and corresponding visibility. In addition, views from the mesa rim northward towards the canyon area are limited due to eucalyptus trees and other vegetation blocking these foreground on-campus views, as well as midground and background off-campus views. Views of the campus from Bachman Place vary with the location on this road. At the northern end the views are of natural vegetation and steep slopes associated with the canyon, however along the southern part of the road, the view becomes dominated by development such as the Bachman Parking Structure, a parking lot, off-site residential buildings and campus development. Off campus, the views to the developed mesa top are limited to within a city block or two due to intervening buildings and streetscape vegetation. However, the hospital is generally visible from most locations from midground and background locations in the community. From Interstate 8, and other roadways and locations in Mission Valley, the campus's steep slope vegetated canyons are visible and in some midground and background locations the hospital is visible as well, while other parts of the campus are not visible.

3.1.1.2 Visual Character of Areas Surrounding the Campus

The Hillcrest Campus is surrounded by mostly urban development with small canyons and natural vegetation located along the edges of the mesa top. The visual character of the areas surrounding the campus is described in terms of landform, vegetation and development along with the visibility of the existing campus and is organized by the neighborhoods identified in the City's Uptown Community Plan and the Mission Valley Community Plan.

Medical Complex Neighborhood

The Hillcrest Campus is situated within the Medical Complex neighborhood which is bounded by Washington Street on the south, State Route (SR-) 163 on the east, Dove Street on the west and near the base of the Mission Valley hillside on the north (Figure 3.1-1, Uptown Community Plan Public Viewsheds). The campus sits atop a flat mesa north of Washington Street in the northern part of the neighborhood with canyons and their watercourses generally flowing northward to Mission Valley. The mesa rim provides dramatic northerly views of Mission Valley and neighborhoods beyond where it is not obstructed by buildings and vegetation. Washington Street forms the boundary between the Medical Complex and Hillcrest neighborhood to the immediate south.

The Medical Complex neighborhood is dominated by Scripps Mercy Hospital and Medical Center (approximately 12-story high hospital), and the UC San Diego Medical Center – Hillcrest (11-story high hospital), which occupy approximately 40 percent of the neighborhood. The remaining portion of the Medical Complex neighborhood is primarily residential with the majority being multi-family. Buildings are noticeably taller in the Medical Complex neighborhood than in the Hillcrest core just to the south with the two medical centers (the Hillcrest Campus and Scripps Mercy Hospital) containing the tallest structures in the neighborhood. The western portion of the Medical Complex has more single-family housing and residential structures. Development intensities, both residential and institutional, are generally higher in the Medical Complex neighborhood than in the majority of Uptown due to the hospitals and medical office buildings having a higher intensity of building floor area.

Commercial development, which is mostly auto-oriented, is located on the northern side of Washington Street, and sporadically surrounds the medical centers. The multi-family buildings are generally more contemporary, reflecting a combination of mid-century, late Modern and Post-Modern styles. The medical buildings have an institutional character that distinguishes them from other development in neighborhood, and there is a much higher occurrence of free-standing parking garages, many of which have been sited in canyons. The character of the pedestrian focus varies according to the surrounding use. The residential areas generally have a pedestrian focus with street trees, while the hospital areas have a more vehicular access focus. The Medical Complex includes northward draining canyons found on the campus property described above, as well as one located along the western side of SR-163 adjacent to Mission Valley.

Mission Hills Neighborhood

The Mission Hills neighborhood is located west and adjacent to the Medical Complex neighborhood (see Figure 3.1-1). Mission Hills is a residentially focused neighborhood consisting of predominantly single-family homes. Topographically, the neighborhood is perched on the upper elevations of the mesa amid a series of steep canyons that extend out from the neighborhood to the north and south, providing views of Mission Valley, San Diego Bay, and downtown San Diego. The heavily vegetated canyons divide the neighborhood into a series of secluded sub-neighborhoods buffered by these open space areas. Many residences located in the eastern part of this neighborhood along the mesa edge have midground views across a canyon to the campus. Other areas, typically from surface streets, only have background views of the Hillcrest Campus hospital.

Hillcrest Neighborhood

The Hillcrest neighborhood is located adjacent and south of the Medical Complex neighborhood (see Figure 3.1-2, Representative Photographs KVP-1 and KVP-2). The Hillcrest neighborhood contains retail, office, and mixed-use development, as well as a variety of residential densities and character. The neighborhood includes the primary commercial core of the Uptown Community, which is concentrated around the intersection of Fifth and University Avenues, and extends several blocks east, west, and south. University Avenue is the primary spine of the Hillcrest Community, with commercial development extending along University Avenue east of SR-163, and west until it converges with Mission Hills. The only views of the campus from this neighborhood are background views of the Hillcrest Campus hospital.

University Heights Neighborhood

The University Heights neighborhood is located adjacent and east of the Hillcrest Campus and Medical Complex neighborhood. The University Heights neighborhood is part of both North Park and Uptown Communities. The portion of University Heights within Uptown is west of Park Boulevard, south of Mission Valley, north of Washington Street, and east of SR-163. University Heights occupies the flat top of a mesa that is ringed on three sides by canyons that create a sense of enclosure and privacy within the neighborhood. Views of Mission Valley and Mission Bay are prominent from the canyon rims. University Heights is a predominantly single-family, low-rise residential neighborhood, with multi-family residential located along and nearby the major north–south streets west of Park Boulevard. The only views of the campus are background views of the Hillcrest Campus hospital from some surface streets in the neighborhood.

Mission Valley Community

The Mission Valley Community is located to the north of and adjacent to the Hillcrest Campus and Medical Complex neighborhood. The Hillcrest Campus is connected to the Mission Valley Community by Bachman Place in addition to the natural vegetated slopes on the northern part of

the campus, which are located in the Mission Valley Community. The Mission Valley Community with I-8 running in an east–west direction in the valley is dominated by office, automobile, and hotel uses and some open space areas along the valley side slopes and along San Diego River. The primary views of the campus from Mission Valley are limited and primarily include the steep vegetated slopes associated with the northern part of the campus.

3.1.1.3 Campus and Off-Campus Visual Resources

Campus visual resources include visual connections with nearby canyons surrounding the campus on the west, north, and the east. The natural features of the surrounding canyons are largely obstructed from public view within the campus because of intervening vegetation and buildings. However, along the mesa rim there are several locations where the canyons and Mission Valley can be seen. In addition, there are off-campus locations which offer views of the campus. The discussion of both on and off-campus view locations are described below based on representative locations called key vantage points (KVPs) with accompanying photographs.

Public Viewsheds

A public viewshed is defined as the area visible from an observer's viewpoint, including the screening effects of intermediate vegetation and structures. The most comprehensive viewsheds generally are from scenic viewpoints, which are singular vantage points that offer an unobstructed view of expansive visible landscape components. Viewshed components include the underlying landform/topography (e.g., foothills, mountains, flatlands) and the overlaying land cover (e.g., water features, vegetation, cultural sites, and buildings). While views within the Uptown Community Plan are common from vantage points under private ownership, such as single-family neighborhoods, public views refer to those that are accessible from public vantage points such as public rights-of-way, parks, and landmarks. Public views in the community consist of viewsheds which are generally unobstructed panoramic views from a public vantage point, and view corridors are views along public street rights-of-way framed by permitted development. According to the Uptown Community Plan, a public viewshed of the canyons exists when driving north on Bachman Place (see Figure 3.1-2). Though the UC is not required to comply with local regulations, including the public viewsheds established in the Uptown Community Plan, UC San Diego has decided to incorporate certain public views into the 2019 LRDP. A variety of KVP views, and a public viewshed that may change due to implementation of the 2019 LRDP are described below.

Key Vantage Points

KVP-1 is located at the eastern end of West Arbor Drive in Mission Hills, which is east of the intersection of Falcon Street and West Arbor Drive (Figure 3.1-2). This view looks eastward across a canyon towards the campus and shows vegetation in the foreground that blocks most of the campus view. However, the top three stories of the Hillcrest Campus hospital and the top two stories of the four-story Multi-Purpose Facility building are visible in the background view. The

Arbor Parking Structure is barely visible because of intervening foreground vegetation, as well as eucalyptus trees located along the western side of the structure. In other areas west of the campus across the approximately 800-foot wide canyon there are partial eastward midground/background views across the canyon to the campus, however most are blocked by intervening vegetation located along the mesa rim. Because most views of the campus from this location are blocked by intervening vegetation and because they are midground/background views, this area is not considered sensitive to changes in visual character of the campus.

KVP-2 shows a northerly view along First Avenue from the intersection of First Avenue and Arbor Drive taken along the southern campus boundary (Figure 3.1-2). This picture shows a foreground view of the First Avenue streetscape which terminates with a grove of eucalyptus trees located in the approximately 40-foot deep small canyon. Views of the campus north of the eucalyptus trees are blocked by these trees. Because most views of the campus from this location and others in this neighborhood are blocked by intervening vegetation, this area is not considered sensitive to changes in visual character of the campus.

KVP-3 shows a westerly view along Arbor Drive just west of the intersection of Arbor Drive and Third Avenue (Figure 3.1-3, Representative Photographs KVP-3 and KVP-4). The photo is taken along Arbor Drive where it dead-ends at Bachman Place which is coincident with the campus boundary in this location. It also shows a retaining wall and large eucalyptus trees blocking views of the campus. Because most views of the campus from this location and others in this neighborhood are blocked by intervening vegetation and residences, this area is not considered sensitive to changes in visual character of the campus.

KVP-4 shows a southwesterly view from the private access road just north of the Third Avenue cul-de-sac (Figure 3.1-3). The Bachman Parking Structure is on the left side of the picture in the midground, while the hospital is in the background and is mostly screened by eucalyptus trees located along the mesa rim. Bachman Place is visible in the lower portion of the photo and the natural vegetated slopes on the eastern and western sides of Bachman Place are in the foreground and midground. Because of the visual prominence of the development in this view of the campus from this location, this area is not considered sensitive to changes in visual character of the campus.

KVP-5 shows a northern view from Bachman Place south of the Hillcrest Campus Boundary coincident with the public viewshed identified in the Uptown Community Plan (Figure 3.1-4, Representative Photographs KVP-5 and KVP-6). Bachman Place is prominently visible in the foreground and midground, while the naturally vegetated slopes are on both sides of Bachman Place along with a vegetated drainage adjacent to the left side of the roadway. In the background in the center of the view is a hotel with Mission Valley developing the background. This location is coincident with the public viewshed identified in the Uptown Community Plan and is therefore considered a scenic vista. Because of the quality of this view including the natural elements of

steep naturally vegetated slopes, adjacent drainage with background views of Mission Valley, as well as it's designation as a public viewshed in the Uptown Community Plan, this viewshed is considered scenic.

KVP-6 shows a northern view taken from the Hillcrest Campus mesa rim adjacent to the building located at 326 Dickinson Street (Figure 3.1-4). In the foreground and midground the photo shows the naturally vegetated slopes on the northern part of the campus, with the slopes in the middle part of the photo off site and adjacent to the campus. In the midground view is Interstate 8 traversing left to right in the photo along with various commercial buildings. On the left side of the photo in the midground view is Bachman Place as it approaches its intersection with Hotel Circle South. This is an expansive view with naturally vegetated steep slopes in the foreground and Mission Valley development in the midground and background and is therefore considered a scenic vista. In addition, this KVP typifies the type of views that are potentially available along the on-campus mesa rim.

KVP-7 shows a northeasterly view taken from the Hillcrest Campus adjacent to the east side of Bannister Family House (Figure 3.1-5, Representative Photographs KVP-7 and KVP-8). In the foreground are natural vegetated steep slopes along a drainage on campus. On the right side of the foreground view are ancillary facilities associated with campus maintenance activities. In the midground is Interstate 8 traversing the photo from the left and curving northward in the center of the photo. In the midground is Mission Valley and associated commercial and residential buildings and in the background is the northern edge of Mission Valley. This is an expansive view with naturally vegetated steep slopes in the foreground and Mission Valley development in the midground and background and is therefore considered a scenic vista. In addition, this KVP typifies the type of views that are potentially available along the on-campus mesa rim.

KVP-8 shows a southeasterly view taken from eastbound Interstate 8 in the vicinity of the Hotel Circle South exit (Figure 3.1-5). From this location in the foreground views is Interstate 8, Hotel Circle South along with commercial buildings and construction activities associated with the Legacy International Center project. In the midground and background view are the naturally vegetated steep slopes that are both on- and off-campus. In the background view the top three stories of the existing Hillcrest Medical Center hospital is visible as well as part of Banister Family House. In addition, motorists on this freeway travel at speeds of approximately 65 miles per hour (mph) and pass by the Hillcrest Campus in a matter of seconds. Because of the limited midground/background campus views, short duration of viewing time, and considerable foreground development, this area is not considered a scenic vista.

3.1.1.4 Light and Glare

The Hillcrest Campus is located in a highly urbanized area with a substantial number of existing light and glare sources. Current sources of light on campus include buildings, street lamps, parking

structures, and headlights from vehicles. Major campus roadways and walkways are well lit for the safety of students, faculty, staff, and visitors that may be driving or walking through the campus after dark. Residential, commercial, and industrial areas surrounding the campus to the east, west, south, and north also contribute to the existing ambient light in the campus vicinity. Glare can occur from reflective building materials and vehicle windshields. Sensitive viewers include UC San Diego students, faculty, staff, and visitors as well as wildlife within the canyons. For further discussion on potential impacts to wildlife from light and glare, see Section 3.3 of this 2019 LRDP EIR.

3.1.2 Regulatory Framework

3.1.2.1 UC San Diego Policies and Programs

Design Review Board

The UC San Diego Design Review Board (DRB) advises the Chancellor on the design of new facilities and major landscape projects to ensure that they are architecturally appropriate and generally consistent with the LRDP and UC San Diego planning principles as specified in the UC San Diego Design Guidelines. Projects are examined by the DRB to ensure that the project's design is architecturally appropriate, and consistent with the visual landscape and/or the character of the surrounding development. The design review evaluates and incorporates factors such as building mass and form, building proportion, roof profile, architectural detail and fenestration, texture, color, type and quality of building materials, and landscaping pallet and placement. Prior to approval by the DRB, projects are often required to incorporate additional design measures that result in a more pedestrian-oriented development; -improve the visual character and compatibility of design; and/or maintain or enhance the quality of the site and surroundings. The process helps to ensure projects remain consistent with the urban design framework set forth in planning studies.

Design Guidelines

The UC San Diego Design Guidelines (2018) are advisory in nature and provide design criteria for consideration by the Design Review Board and campus staff for UC San Diego projects for planning, design, and construction. These guidelines would provide an additional level of guidance for new facilities on the Hillcrest Campus. The UC San Diego Design Guidelines (2018) are organized into four divisions to coincide with the basic progression of facilities development. Division I, General Guidelines, contains overarching guidance on topics such as Leadership in Energy and Environmental Design (LEED), Health and Safety, and structural engineering. Division II, Site Requirements, contains guidance for pre-, during, and post-construction requirements for civil engineering, landscape, and recycled water aspects of facility construction. Division III, Building Guidelines, contains building-specific guidance for architecture, plumbing, electrical power, and lighting, among others. Division IV, Specialized Building Type Guidelines, contains specific guidance for classrooms, laboratories, and building security. The 2018 update to

the UC San Diego Design Guidelines implements the UC San Diego Outdoor Lighting Policy (2009), described below.

Outdoor Lighting Policy

The UC San Diego Outdoor Lighting Policy (2009) applies to all UC San Diego projects that would occur under the purview of the proposed 2019 LRDP. The policy applies to all exterior lighting, whether free-standing or attached to buildings or other structures. The primary goal of the UC San Diego Outdoor Lighting Policy (2009) is to reduce nighttime light pollution radiating from campus facilities to minimally acceptable levels so that local astronomical research is supported and advanced, while ensuring adequate lighting levels for safety and security. Another important goal of the UC San Diego Outdoor Lighting Policy (2009) is to limit nuisance light and glare impacts to adjacent properties. This limitation of luminosity aims to minimize adverse visual impacts to the surrounding community as UC San Diego properties are developed. The guidelines that implement this policy have been embedded into the 2018 UC San Diego Design Guidelines.

Community Involvement

As part of the development of the proposed 2019 LRDP, UC San Diego held a variety of community meetings, working groups, and presentations on the 2019 LRDP, in addition to a public scoping meeting for this 2019 LRDP EIR. Periodic updates on the process were shared via email, campus publications, the 2019 LRDP website, and social media, and community feedback was also solicited through an online survey. Through this process for LRDP, UC San Diego has strived to be sensitive to the surrounding neighborhood context, taking into account compatibility of use, scale, aesthetics, and density, particularly related to development along the campus edges. A public hearing for the Draft 2019 LRDP EIR will also be held during its public review period.

3.1.2.2 Local (Non-Regulatory)

As discussed in other sections of this 2019 LRDP EIR, UC San Diego is part of the UC, a constitutionally created entity of the State of California, with "full powers of organization and government" (Cal. Const. Art. IX, Section 9). As a constitutionally created state entity, the UC is not subject to municipal regulations of surrounding local governments, such as the City's General Plan or land use ordinances, for uses on property owned or controlled by the UC that are in furtherance of the UC's education purposes. However, UC San Diego may consider, for coordination or other purposes, aspects of local plans and policies for the communities surrounding the campus when it is appropriate and feasible, but it is not bound by those plans and policies in its planning efforts. Thus, UC San Diego has voluntarily reviewed municipal plans for general consistency with the proposed 2019 LRDP; however, none of the following plans have jurisdiction over UC San Diego.

Uptown Community Plan

The update to the 1988 Uptown Community Plan was adopted by City Council on November 14, 2016 (City of San Diego 2016). The Uptown Community Plan and associated zoning went into effect on February 6, 2017 and was amended by City Council on June 12, 2018. The plan provides detailed policy direction to implement the City's General Plan with respect to the distribution and arrangement of land uses, the local street and transit network, the prioritization of public facilities, community and site specific urban design guidelines, and recommendations to preserve and enhance natural open space and historical and cultural resources with the Uptown Community. The following provides a description of planning principles in the community plan that pertain to aesthetics and visual resources.

The following principles identified in the Uptown Community Plan pertain to visual resources:

- Encourage development diversity by maintaining the demographic, architectural, and economic diversity that have contributed to Uptown's vitality and aesthetic vibrancy.
- Recognize the environmental, visual, and recreational value of Uptown's natural canyon landscape

Mission Valley Community Plan (1984)

The Mission Valley Community Plan was adopted by the City Council in 1984; and last amended in 2013 (City of San Diego 2013). The purpose of the plan is to provide recommendations to guide development in Mission Valley through the horizon year. The horizon year is defined as attaining the plan's maximum occupancy capacity, which is based upon land use, development intensity, circulation and public facilities. While it sets forth proposals for implementation, the Plan does not establish new regulations or legislation, nor does it rezone property. The plan includes a series of goals and objectives established by the community and consistent with citywide policies.

Goals and Objectives

The following goals and objectives identified in the Mission Valley Community Plan are relevant to visual resources:

- Encourage new commercial development which relates (physically and visually) to existing adjacent development.
- Preserve as open space those hillsides characterized by steep slopes or geological instability in order to control urban form, insure public safety, provide aesthetic enjoyment and protect biological resources.

Final Draft Mission Valley Community Plan Update (2019)

In 2015, the City in coordination with local community members began updating the Mission Valley Community Plan, which serves as a blueprint for the future development of the

neighborhood. After completing extensive research on existing conditions; gathering input from the Mission Valley Community Plan Update Subcommittee, community members, and stakeholders, on topics such as land use, mobility, and parks; and analyzing future conditions, the Final Draft of the Mission Valley Community Plan Update is currently available for public review, and the public hearing process will begin in summer 2019. The Final Draft of the Mission Valley Community Plan Update contains Community Plan Implementation Overlay Zones (CPIOZ), which are a tool to provide supplemental development regulations tailored to specific sites within community plan areas of the City. The Final Draft of the Mission Valley Community Plan Update has not been adopted, and therefore, the goals and polices described below are currently not in effect. Nonetheless the following is provided for information purposes (City of San Diego 2019).

Mission Valley Hillside Subdistrict

The Mission Valley Hillside Subdistrict is a CPIOZ in the Final Draft of the Mission Valley Community Plan Update (2019), which applies to portions of the community north of Friars Road and south of I-8. The CPIOZ includes development regulations and guidelines for discretionary review relevant to visual resources.

Development Regulations

For buildings and structures located south of I-8 on southern slopes, the height shall be limited to 40 feet above preexisting or finished grade, whichever is lower. Exceptions to the 40-foot height limitation may be approved up to 65 feet in height provided that all of the following standards are met:

- All natural existing hillside vegetation and topography shall be preserved;
- Any previously graded hillsides shall be recontoured into a naturalistic form and revegetated with indigenous plants; and buildings and structures shall be designed and sited so that a minimum 30-foot-wide open public view corridor is created to the hillside from adjacent public streets and freeways.
- Structures over the 65-foot building height level may be permitted to allow construction of unique architectural features, such as a steeple, and which do not contain occupied floor area, mechanical equipment, or signage.

Guidelines for Discretionary Review

- Preserve existing natural slopes, use the natural slopes as a backdrop and guide to building form.
- Cluster, contour and terrace structures into sites to preserve the form of the slopes.
- Cluster development in disturbed or sparsely vegetated portions of the slope.
- Design automobile access to minimize hillside disruption. To avoid excessive grading, locate automobile access adjacent to street access and separated from habitable building sections. Linkages from the street to the building should be made through pedestrian ways or bikeways.

3.1.3 Project Impacts and Mitigation

3.1.3.1 Issue 1: Scenic Vistas

Aesthetics Issue 1 Summary

Would implementation of the 2019 LRDP have a substantial adverse effect on a scenic vista?

Impact: Implementation of the 2019 LRDP would not have a substantial adverse effect on a scenic vista.

Mitigation: No mitigation is required.

Significance Before Mitigation: Less than significant

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would result in a substantial adverse effect on a scenic vista. For the purposes of this analysis, adverse effects on scenic vistas are identified when there is a potential to block and/or degrade views of scenic resources. Note this does not include analysis of private views.

Impact Analysis

Implementation of the 2019 LRDP would result in redevelopment of the Hillcrest Campus, which may have an adverse effect on scenic vista(s) on and around campus. As described previously, there are eight KVP on- and off-campus view locations. However, only three of these locations have the potential to impact a scenic vista and are discussed below. Three KVPs (KVP-5, KVP-6, and KVP-7, shown on Figures 3.1-4 and 3.1-5) that are identified on campus are considered scenic vistas because the views are from publicly accessible areas. An analysis of future development impacts to these scenic vistas is provided below.

A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. In addition, some scenic vistas are officially designated by public agencies, or informally designated by tourist guides. A substantial adverse effect to a scenic vista would be to degrade the view from such a designated viewshed. As previously stated, while views within the Uptown Community Plan are common from vantage points under private ownership, such as single-family neighborhoods, public views refer to those that are accessible from public vantage points such as public rights-of-ways, parks, and landmarks. Public views in the community consist of viewsheds which are generally unobstructed panoramic views from a public vantage point, and view corridors which are views along public rights-of-way framed by permitted development. According to the Uptown Community Plan, there are no public viewsheds containing views of the Hillcrest Campus (see Figure 3.1-1). However, the Uptown Community Plan identifies a public

viewshed located along the northern part of Bachman Place on the Hillcrest Campus, identified here as KVP-5. Although the UC is not subject to the policies of local plans, UC San Diego agrees that this viewshed is a scenic vista for the purposes of the proposed 2019 LRDP. In addition, KVP-6 and KVP-7, located on campus along the mesa rim, are also considered scenic vistas and represent potential northward views from various locations on-campus from the mesa rim. Each of these scenic vistas is discussed further below.

KVP-5: The only development that has the potential to impact this viewshed is the proposed north access driveway, which is a new access road entering Bachman Place on its western side and a new 14-foot retaining wall located on the western side of Bachman Place to accommodate road widening. The new north access driveway occurs out of sight from this KVP because it would enter the western side of Bachman Place behind the slope on the western side of roadway. The southern side of the proposed north access driveway would also require a retaining wall reaching approximately 42 feet at its peak height. The top edge of this wall would potentially be seen by motorists traveling north on Bachman Place, but the wall would be more prevalent to motorists traveling south on Bachman Place. The proposed 14-foot retaining wall required for the Bachman Place road widening would be visible to motorists traveling northward in this location, and could impact the natural vegetation component of the viewshed through the introduction of this structure. However, the introduction of the retaining walls to this viewshed is not considered significant because it would be a relatively small element in the foreground view and the midground and background components of the view would remain unchanged.

KVP-6: This location provides a representative view of potential views along the on-campus mesa rim. In this location, the only future development that may be visible is the new north access driveway intersection with Bachman Place and the top of an approximately 42-foot-high (at its peak) retaining wall located on the southern side of the new north access driveway. Because only a short portion of the new north access driveway and the top of the Bachman Place retaining wall would be visible, a slight intrusion into the existing viewshed would occur but would not alter it significantly. In addition, the new north access driveway might be visible from this location however, the very steep down slope topography between the KVP and the proposed north access driveway would obscure the new road. However, it is likely that the fill slopes along the northwest and westerly side of the north access driveway would be visible from the mesa rim in this area. Although visible from the mesa rim in some locations, these slopes would be revegetated as part of erosion control measures; therefore, the vegetation and the steep fill slopes would visually blend into the existing vegetation and topography. Also, the 2019 LRDP includes the removal of some eucalyptus trees on the mesa rim as part of complying with wildland fire buffers and the inclusion of an emergency access road along the district perimeter in the Health Care District. This northerly view would be visible from publicly accessible areas within the future hospital site. A significant impact to this scenic vista would not occur.

KVP-7: Development of the new north access driveway and related westerly fill slopes would be visible in the foreground part of the view approximately 50 feet below this KVP. The fill slopes associated with the new north access driveway would be planted with native species to control erosion. Therefore, the steep fill slopes and vegetation would blend with the surrounding existing naturally vegetated steep slopes. Nonetheless, the approximately 40-foot wide roadway would be a new element in this viewshed. The view from this KVP also includes one existing two-story building (326 Dickinson Street) that is partially visible to the east in the midground view on the mesa top at the northern part of the developed mesa. These buildings would be replaced by an approximately 35-foot-tall hospital annex. This part of the view would also change with the introduction of a new hospital that would be up to 200 feet tall (i.e., the height of the existing hospital), which would add a more prominent feature in the eastern part of the midground view from this KVP. Although the new north access driveway and up to 35-foot-tall hospital annex would create a new component in the view from this KVP, most of the existing foreground and midground view elements would remain the same. In addition, the 2019 LRDP may require the removal of some eucalyptus trees on the mesa rim as part of complying with wildland fire buffers and the inclusion of a new fire lane along the western edge of the district that would provide the northerly views from publicly accessible areas with in the Residential District where this KVP is located. This new pathway along the mesa rim would provide considerably more views of the scenic vistas afforded from the mesa rim than exist now. As a result, a significant impact to this scenic vista would not occur.

Mitigation Measures

Impacts related to scenic vistas are considered less than significant; therefore, no mitigation is required.

3.1.3.2 Issue 2: Degradation of Existing Community Character or Conflict with Zoning and Other Regulations for Scenic Quality

Aesthetics Issue 2 Summary

In non-urbanized areas, would implementation of the 2019 LRDP 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 a publicly accessible vantage point.) If the 2019 LRDP is in an urbanized area, would the 2019 LRDP substantially degrade existing community character or conflict with applicable zoning and other regulations governing scenic quality?

Impact: Implementation of the 2019 LRDP could substantially degrade the existing community character of areas adjacent to the southern and eastern Hillcrest Campus Boundaries.	**Mitigation:** Design Review (AES-2A); Building Design (AES-2B)
Significance Before Mitigation: Potentially significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, a project may have a significant impact if, in non-urbanized areas, it would 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 a publicly accessible vantage point. If a project is located in an urbanized area, a project would result in a significant effect if it would conflict with applicable zoning and other regulations governing scenic quality. The Hillcrest Campus is in an urbanized area; therefore, a significant impact would occur if the 2019 LRDP would substantially degrade existing community character or conflict with applicable zoning and other regulations governing scenic quality.

Impact Analysis

Implementation of the 2019 LRDP would result in redevelopment of the Hillcrest Campus, which would change the existing visual character or quality of the campus and urbanized areas surrounding the campus. No zoning regulations apply to the Hillcrest Campus as it is owned by the UC Regents and is therefore not subject to municipal regulations of surrounding local governments. However, in development of the 2019 LRDP, UC San Diego considered the Urban Design Guidelines set forth in the Uptown Community Plan (City of San Diego 2016).

The applicable regulations governing scenic quality on the Hillcrest Campus are the UC San Diego Design Guidelines (2018) and the UC San Diego Outdoor Lighting Policy (2009). It is the DRB's responsibility to ensure that project design is consistent with the visual landscape and/or the character of the surrounding development. Design elements such as architecture, bulk and massing, building materials, color, and landscaping can substantially alter visual character or quality of an area. Because visual character is subjective, the following analysis identifies significant impacts to visual character if the 2019 LRDP would:

- Exceed the height or bulk of existing development patterns on site or in the vicinity by a significant margin without regard for pedestrian scale, street level features, or improvements; or
- Be located in a highly visible area and strongly contrast with the surrounding development or natural topography through excessive bulk, scale, and/or architectural styling.

Significant visual character or quality impacts could potentially occur at any location on or around the campus, depending on the design of a proposed building or structure. The following analysis is divided into visual character on the Hillcrest Campus and the area surrounding the campus.

Visual Character On-Campus

Prior to project design approval, major projects proposed on the Hillcrest Campus would undergo design review by the UC San Diego Design Review Board and other campus committees to ensure that the design is consistent with the visual landscape and/or the character of the campus. The

design review process typically evaluates project features including, but not necessarily limited to, building mass and form, building height and proportion, roof profile, architectural detail and fenestration, texture, color, type and quality of building materials, and landscaping. The potential to substantially degrade visual quality and character varies depending where on campus the future development would occur. Potential character changes as a result of the proposed 2019 LRDP are described below.

Visual Character of Areas Surrounding the Campus

Because of the relatively small size (approximately 34 acres) of the developable part of the campus, projects along the eastern, western, and southern campus boundaries have the most potential for changing the community character due to their proximity to existing residential land uses. However, projects along these perimeter boundaries would be given special consideration and review to reduce potential impacts. UC San Diego staff and committees would evaluate the land use compatibility of each project on the eastern, western, and southern campus boundaries during the planning process for consistency with the underlying land use plans, and compatibility with adjacent land uses. UC San Diego would also continue to periodically coordinate with the community to discuss upcoming projects and issues of potential neighborhood concern. Because the Hillcrest Campus redevelopment may result in a more urban or commercial character, it could result in a visual character that is incompatible where the surrounding area is less urban, such as some single family and medium-density residential areas.

There are eight KVP views that have been chosen as public viewsheds for the Hillcrest Campus. However, only five of these views have the potential to impact scenic quality or character and are described below. As shown on Figures 3.1-2, 3.1-3, 3.1-4, and 3.1-5, KVP-1, KVP-2, KVP-3, KVP-4, and KVP-8 were selected to represent key changes in the visual character or quality of the site to the surrounding community from implementation of the 2019 LRDP. Each of these KVPs is analyzed below as to whether they would potentially substantially degrade the existing visual character or quality of its surroundings. The Uptown and Mission Valley Community Plans do not officially designate vantage points, or viewsheds, although they do contain policies to protect visual resources, as discussed above. However, UC San Diego property is part of the UC, a constitutionally created entity of the State of California. As a state entity, UC is not subject to municipal plans, policies, and regulations, such as the City's General Plan or the surrounding community plans. Therefore, while these plans provide guidance for the analysis of impacts to visual resources, they are intended to be used for advisory purposes only.

West of Campus

KVP-1 is located at the eastern end of West Arbor Drive, which is east of the intersection of Falcon Street and West Arbor Drive (Figure 3.1-2). This view looks eastward across a canyon towards the campus and shows vegetation in the foreground that blocks most of the campus view. However,

the top three stories of the Hillcrest Campus hospital and the top two stories of the four-story Multi-Purpose Facility are visible in the background view. The Arbor Parking Structure is barely visible because of intervening foreground vegetation, as well as eucalyptus trees located along the western side of the structure.

Implementation of the 2019 LRDP would demolish the existing Arbor Parking Structure, 11-story hospital, and Multi-Purpose Facility. Some of the existing eucalyptus trees would need to be removed as a part of the parking structure demolition. The screening effect from these trees may not be present for future development; however, new vegetation would be planted, although it would take time to fully mature. Views of the parking structure would be eliminated because it would be removed, and this area would receive fill dirt to create a pad approximately 4 feet below the mesa top with a biofiltration basin on top to treat campus storm runoff. The fill slope would be planted with the appropriate low-growing, fire-resistive species in conformance with wildland buffer requirements identified in the 2019 LRDP.

The proposed Replacement Hospital center point would be located approximately 450 feet north of the existing hospital and would be no taller than the existing 200-foot-tall hospital. The new hospital location would still be visible from this vantage point; however, because the height would be no taller than the existing hospital, only the very top of the new hospital may be visible from KVP-1. The proposed Residential Site A Buildings 1 and 2 (R-1 and R-2) would be up to 200 feet in height, no taller than the existing hospital. These buildings would replace existing one- and two-story buildings currently not visible from KVP-1. The new residential buildings would be in the midground view and would appear, in part, in front of the new hospital. Residential Site B consisting of Buildings 3 and 4 (R-3 and R-4) would, generally, replace the existing view of the lower three-story portion of the existing hospital. Maximum building height in the Residential District could be as tall as the existing hospital (approximately 200 feet). Therefore, from residences west of the campus, the proposed residential buildings would not necessarily result in a noticeable visual change in the building height and mass in the western part of the campus because the proposed residential development would be similar in height as the existing hospital on campus. However, when viewing the four proposed residential buildings from a side angle, they could be observed as a solid mass. The proposed residential buildings would be approximately 850 feet from the nearest residences to the west across the naturally vegetated canyon in the midground view. Existing residences located away from the canyon edge may have midground and background views of these buildings from select locations. However, the proposed residential buildings on campus would not impact the view from the residential neighborhood to the west due to distance and intervening homes, facilities, and vegetation. The primary view from these residences is of the Mission Valley Community to the north, not the Hillcrest Campus to the east. Therefore, the 2019 LRDP would have less than significant impacts to KVP-1 and the neighborhood west of the campus.

South of Campus

KVP-2 shows a northerly view along First Avenue from the intersection of First Avenue and Arbor Drive taken along the southern campus boundary (Figure 3.1-2). This picture shows a foreground view of the First Avenue streetscape which terminates with a grove of eucalyptus trees located in the approximately 40-foot deep small canyon on campus. Views of the campus north of the eucalyptus trees are blocked by these trees. Implementation of the 2019 LRDP would extend First Avenue northward past Dickinson Street, curving gently westward around the new hospital. The view down First Avenue would terminate at the proposed Multi-Use Building located on campus along the First Avenue extension. Therefore, once the First Avenue extension is completed, views of proposed campus development areas that are currently blocked by eucalyptus trees would be visible from KVP-2.

The Outpatient Pavilion and outpatient annex buildings are also proposed on the western side of the road, and the Main Parking Structure and a CUP are proposed on the eastern side between Dickinson Street and Arbor Drive. As a result, existing one- and two-story buildings would be removed to make way for these new Health Care District buildings. These proposed buildings would be higher than the existing structures and result in a more noticeable transition from the adjacent single- and multi-family residential neighborhood south and adjacent to the campus. Therefore, views of the campus from this neighborhood would noticeably change where the sight lines are in a north–south direction down Front Street and First Avenue toward the campus. Additionally, though the buildings would be no taller than the existing hospital, a noticeable change would occur due to the height of the proposed residential buildings from midground and background view locations. The proposed hospital would be located approximately 450 feet north of the existing hospital location. As a result, proposed development would cause a potentially significant change in the existing height, bulk, and visual character of this area due to its proximity to surrounding lower density residential development. Therefore, the 2019 LRDP would have a potentially significant impact to KVP-2 and the neighborhood south of the campus due to a change in community character along the southern campus perimeter.

East of the Campus

Two KVPs are provided from the neighborhood east of the campus – KVPs -3 and -4 (Figure 3.1-3). KVP-3 is located on Arbor Drive looking west towards Bachman Place. Implementation of the 2019 LRDP would connect Arbor Drive with Bachman Place through a relocation of Bachman Place to the east into an existing campus parking lot and a curved road segment that turns westerly and connects with Arbor Drive west of Bachman Place. As part of these improvements, the existing trees and utility poles south of Arbor Drive and adjacent to the campus would be undergrounded with the connection of Arbor Drive and Bachman Place. The existing utility pole in the foreground view of KVP-3 would not be removed. As a result, the western view on this street would be more open and include the proposed Mixed-Use Building on the southern side of Arbor Drive and the

proposed Main Parking Structure on the northern side of Arbor Drive. Because these proposed buildings would be taller in height and bulk than the existing surrounding community, a conflict in community character would have the potential to occur. Therefore, the 2019 LRDP would have a potentially significant impact on KVP-3.

KVP-4 is located just north of the northern Third Avenue cul-de-sac on a private road. From this location toward the top of Third Avenue overlooking the Hillcrest Campus, the existing midground and background views of the Bachman Parking Structure and main hospital, respectively, would change because both of these structures would be demolished (see Figure 3.1-3). In place of the parking structure a vegetated flat graded pad with steep slopes would be visible. A new Multi-Use Building is proposed at the northeastern corner of Dickinson Street and the end of the First Avenue extension. This structure would be immediately uphill of the existing Bachman Parking Structure and would be prominent in the midground view and slightly different in look and style compared to the existing Bachman Parking Structure. The proposed Replacement Hospital would be located approximately 450 feet north of its existing location and would be up to 200 feet in height, no taller than the existing hospital. The new hospital would also be in the background view and would result in a similar visibility as the existing hospital, even though some of the eucalyptus trees along the mesa rim may be removed. The new up to 200-foot-high residential buildings would be further west and southwest from this KVP and would likely be visible in the background view. Because of the addition of higher density development in the midground and background views and redevelopment of the Multi-Use Building in the foreground view, a potentially significant impact would occur due to the change in community character along the eastern campus perimeter.

North of Campus

KVP-8 shows a southeasterly view taken from eastbound Interstate 8 in the vicinity of the Hotel Circle South exit (Figure 3.1-5). From this location the campus is located in the background view. In this location the hospital would be moved approximately 450 feet north of its existing location and closer to KVP-8; however, it would be equal to or less than the height of the existing hospital, and therefore, its prominence in the viewshed would remain similar to existing. The proposed residential buildings located to the west of the existing hospital would likely be visible in the background view from this location due to their height, which would be potentially as tall as the existing hospital (200 feet). The new north access driveway would not be visible from this location because of intervening foreground buildings and steep vegetated slopes both on- and off-campus. In addition, motorists on this freeway travel at speeds of approximately 65 miles per hour (mph) and pass by the Hillcrest Campus in a matter of seconds. The new hospital would be similarly prominent in the background view and the new residential buildings, although visible, would also be in the background view similar to existing development. Due to the limited duration of viewing time associated with eastbound motorists, as well as the considerable foreground development in this area, a significant impact would not occur.

Mitigation Measures

Implementation of the 2019 LRDP could have the potential to degrade community character due to development of new higher density on-campus structures in proximity to existing lower density off-campus development along the southern and eastern Hillcrest Campus Boundaries (KVPs -2, -3, and -4). Implementation of the following Mitigation Measures AES-2A and AES-2B would reduce potentially significant community character impacts to off-site areas immediately south and east of the Hillcrest Campus Boundary to a less than significant level:

AES-2A: Design Review. Prior to project design approval, any proposed structure or phase that would have the potential to substantially degrade the community character shall undergo design review by the UC San Diego Design Review Board to ensure that the design is consistent with the visual landscape and/or the character of the surrounding development. The design review process shall evaluate and incorporate, where appropriate, factors including but not necessarily limited to building mass and form, building proportion, roof profile, architectural detail and fenestration, texture, color, type and quality of building materials, and landscaping.

AES-2B: Building Design. Proposed structures to be located along the southern and eastern Hillcrest Campus Boundaries shall be reviewed by the UC San Diego Design Review Board, Campus Architect, and other relevant campus committees at the conceptual design stage to ensure structures are designed to incorporate as applicable the following pedestrian-scale features along the facades facing the public realm:

- Pedestrian-oriented architectural details and scale
- Proportional building mass, form, and roof profiles
- Building setbacks, fenestration, and visual reliefs
- Use of high-quality building materials
- Welcoming and wayfinding elements
- Pedestrian connections and pathways
- Pedestrian furniture and signage
- Landscape buffers
- Limited use of walls or pedestrian barriers

3.1.3.3 Issue 3: Lighting and Glare

Aesthetics Issue 3 Summary

Would implementation of the 2019 LRDP create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Impact: Implementation of the 2019 LRDP would not have the potential to create new sources of substantial light or glare on campus or in the immediate vicinity, and would not adversely affect daytime and nighttime views in this area.

Mitigation: No mitigation is required.

Significance Before Mitigation: Less than significant

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant adverse impact if it would create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.

Impact Analysis

Implementation of the 2019 aims to redevelop approximately 34 acres of the 62-acre property, resulting in the removal of all but two of the existing buildings, including the 11-story hospital. Compared to existing conditions, new sources of light would be minimal due to the 2019 LRDP redeveloping existing structures. Potential sources of light would include exterior building illumination, parking lots or structures, new landscaped areas, and new roadway lighting. During the day, lighting has limited potential to impact views. However, new sources of glare could result from reflective building surfaces or the headlights of vehicular traffic.

Potential impacts from glare would primarily occur from the sun reflecting off of reflective building surfaces. Severe glare can interfere with visibility and cause general distraction, nuisance, or hazard to people. A primary goal of the UC San Diego Outdoor Lighting Policy (2009) and UC San Diego Design Guidelines (2018) is to limit nuisance light and glare impacts to adjacent properties. The limitation of luminosity aims to avoid adverse visual impacts to the surrounding community as UC San Diego properties are developed, such as those under the 2019 LRDP. Considering the existing architecture, as designed to minimize glare on campus, and general practices for reviewing design of buildings, implementation of the 2019 LRDP is not anticipated to result in these types of daytime glare impacts from reflective building materials.

Additional new lighting sources would come from the new north access driveway constructed under the 2019 LRDP. However, this internal campus road would comply with the UC San Diego Outdoor

Lighting Policy (2009) and UC San Diego Design Guidelines (2018), which recommends full cutoff fixtures with motion sensors and dimmers to avoid light spillover and upward light trespass.

In urban areas similar to those that exist on and around campus, sensitive views at night could be a view from the public vantage point or scenic outlook of a downtown skyline or lit monument. No such sensitive nighttime views were identified on or around the campus with potential to be impacted by the proposed 2019 LRDP. Viewing of the night sky could also be impacted from new light and glare; however, impacts to views of the night sky from the campus are considered less than significant because viewing is already limited due to existing urban light pollution, and the campus and nearby area do not contain an observatory that could be directly impacted.

Impacts with the most potential to occur from implementation of the 2019 LRDP would be those from new nighttime lighting or glare that could result in distraction, nuisance, or hazard to people. However, as part of the campus design review process, lighting for the new development would be designed to comply with the UC San Diego Outdoor Lighting Policy (2009) and UC San Diego Design Guidelines (2018). The UC San Diego Design Guidelines (2018) set forth specific procedures and policies for exterior lighting in Chapters 3.08–3.09. Compliance with these policies, such as using shielded lighting, directing lighting downward, turning off lighting when not in use, and using energy-efficient lighting, would require fixtures and design that would minimize light pollution or spillover. As a result, impacts would be less than significant.

Currently, substantial nighttime lighting is present on campus, as well as in much of the area surrounding the campus. Major campus roadways and walkways are well lit for the safety of students, faculty, staff, and the public that may be driving or walking through the campus after dark. Residential and commercial areas surrounding the Hillcrest Campus to the east, west, south, and north also contribute to the existing ambient light in the campus vicinity. The addition of new sources of light and glare as a result of the implementation of the 2019 LRDP would be minimal since the 2019 LRDP would involve redevelopment of the current campus. As part of redevelopment the Arbor Parking Structure located at the perimeter of the western campus boundary would be removed and corresponding light impacts from vehicular headlights would be eliminated in this area. In addition, the Bachman Parking Structure would be removed and replaced in a nearby location with the new Multi-Purpose Building, resulting in the potential vehicular headlight impacts to be nearly non-existent. The new residential buildings would add more nighttime lighting from residence windows; however, these lighting levels would not be substantial because they would be a low level of intensity. In addition, the proposed residential buildings would be at a far enough distance in the midground view of existing residential areas to not impact nearby sensitive receptors. The proposed residential buildings would mirror an urban view in an already urban area. The height of the proposed residential buildings would not be higher than the existing hospital, which currently provides nighttime lighting. Due to the highly developed urban nature of the Hillcrest Campus and surrounding communities in general, a significant amount of

existing ambient light exists on campus and in the immediate surrounding area. Therefore, the potential for the implementation of the 2019 LRDP to create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area would be less than significant as projects are required to comply with the UC San Diego Outdoor Lighting Policy (2009) and the UC San Diego Design Guidelines (2018).

Mitigation Measures

Impacts related to light and glare are considered less than significant; therefore, no mitigation is required.

3.1.4 Cumulative Impacts and Mitigation

Aesthetics Cumulative Issue Summary

Would implementation of the 2019 LRDP have a cumulatively considerable contribution to a cumulative aesthetic impact considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Issue 1: Degradation of scenic vista(s)	Less than significant	Not cumulatively considerable
Issue 2: Degradation of existing community character or conflict with applicable zoning or regulations governing visual quality	Potentially significant	Not cumulatively considerable
Issue 3: New source of substantial light or glare on campus	Less than significant	Not cumulatively considerable

3.1.4.1 Cumulative Issue 1: Degradation of Scenic Vistas

Implementation of the 2019 LRDP, in conjunction with other reasonably foreseeable development in the vicinity or region, could result in cumulative aesthetics impacts related to scenic views or vistas. Three scenic vistas were identified and illustrated as KVP-5, KVP-6, and KVP-7 on Figures 3.1-4 and 3.1-5. The only cumulative project that might be in these viewsheds is Legacy International Center project, which is located in Mission Valley on Hotel Circle South. This cumulative project is visible in the foreground view of KVP-8, however because it is somewhat similar to the buildings that it is replacing, the character of this view would not change, and it would not contribute to a change in the setting that would contribute to a cumulative scenic vista impact. Therefore, a significant cumulative impact would not occur and the 2019 LRDP's contribution would not be cumulatively considerable.

3.1.4.2 Cumulative Issue 2: Degradation of Existing Community Character or Conflict with Applicable Zoning or Regulations

Implementation of the 2019 LRDP, in conjunction with other reasonably foreseeable development in the vicinity or region, could result in cumulative aesthetics impacts related to degradation of existing community character or conflicts with other regulations governing visual quality. Cumulative projects reviewed for this 2019 LRDP EIR as described in Table 3-1, Cumulative Projects, in Chapter 3, Environmental Setting, Impacts, and Mitigation, would occur in off-campus areas located within the Uptown Community Plan Area or the Mission Valley Community Plan Area. No cumulative projects have been identified on campus because the 2019 LRDP is described as one five-phase project. One cumulative project, Scripps Mercy Hospital, San Diego Campus, Medical Office Building Replacement Substantial Conformance Review, has been identified in the Medical Complex Neighborhood of the Uptown Community Plan in the vicinity of the campus. However, the project would not be visible from any of the KVPs and would replace a medical office building of similar size. One cumulative project, Legacy International Center project, is located in Mission Valley on Hotel Circle South and is visible in the foreground view of KVP-8. However, because it is somewhat similar to the buildings that it is replacing, the character of this view would not change and it would not contribute to a change in the setting that would contribute to a cumulative aesthetic impact. The other cumulative projects are typically redevelopment endeavors located outside the Medical Complex Neighborhood in locations where the visibility of the 2019 LRDP is minimal or unavailable because of intervening buildings and vegetation or because the distance from the Hillcrest Campus is too great. Therefore, none of the cumulative projects would contribute to cumulatively considerable visual aesthetics impact to the surrounding community. Furthermore, the 2019 LRDP would require mitigation measures to be implemented for on-campus structures and phases with the potential to affect adjacent off-site development south and east of the Hillcrest Campus Boundary. Mitigation Measure AES-2A would require proposed structures and phases with the potential to affect community character to undergo design review by the DRB to ensure that the design is consistent with the visual landscape and/or the character of the surrounding development. Mitigation Measure AES-2B would require proposed structures located along the southern and eastern Hillcrest Campus Boundaries to be reviewed by the DRB, Campus Architect, and other relevant campus committees at the conceptual design stage to ensure structures are designed to incorporate pedestrian-scale features along the facades facing the public realm. Therefore, the proposed 2019 LRDP would not contribute considerably to a cumulative impact to community character or conflict with applicable zoning or regulations.

3.1.4.3 Cumulative Issue 3: Lighting and Glare

Implementation of the 2019 LRDP, in conjunction with other reasonably foreseeable development in the vicinity or region, could result in cumulative aesthetics impacts related to new sources of light and glare. However, all cumulative projects are in an urbanized area where there is considerable

night lighting associated with buildings and streetlights, as well as glare from some existing building windows. There are two cumulative projects within 1,000 feet of the campus. The first project is Legacy International Center project, which is located in Mission Valley on Hotel Circle South. It involves the replacement of an existing commercial development with a mixed-use religious and lodging facility. It would emit similar amounts of night light and glare potential as the existing buildings and would not considerably contribute to a cumulative light and glare impact. The other cumulative project is a single-family residence, which involves redevelopment of an existing residence and would emit similar amounts of light and glare as the existing home. The other cumulative projects are more than 0.5 miles from the campus and are too distant to considerably contribute to a cumulative light and glare impact. Therefore, no cumulative impact would occur, and the proposed 2019 LRDP's contribution would not be cumulatively considerable.

3.1.5 CEQA Issues Where There Is No Potential for a Significant Impact

The following section discusses the other Standards of Significance related to Aesthetics contained in Appendix G of the CEQA Guidelines wherein this 2019 LRDP EIR was determined to not cause a significant effect.

Would implementation of the 2019 LRDP substantially damage scenic resources, including, but not limited to, trees, rocks, outcroppings, and historic buildings within a state scenic highway?

A "state scenic highway" refers to any interstate, state, or county road that has been officially designated as scenic and thereby requires special scenic conservation treatment. SR-163, also known as the Cabrillo Freeway, is a state designated scenic highway which runs in a north–south direction approximately 1 mile southeastward of the campus (Caltrans 2018). The scenic highway designation occurs for approximately 1 mile where SR-163 is located in Balboa Park in a topographic low area and is generally visually isolated from the surrounding developed communities. Because of its distance, intervening buildings and topography, the Hillcrest Campus is not visible from this location. Therefore, implementation of the 2019 LRDP would not have a substantial effect on a scenic resource within a designated state scenic highway viewshed. No impact would occur, and no mitigation would be required.

3.1.6 References

Caltrans (California Department of Transportation). 2018. "California Scenic Highway Mapping System." Accessed December 20, 2018. ttp://www.dot.ca.gov/hq/LandArch/16_livability /scenic_highways/.

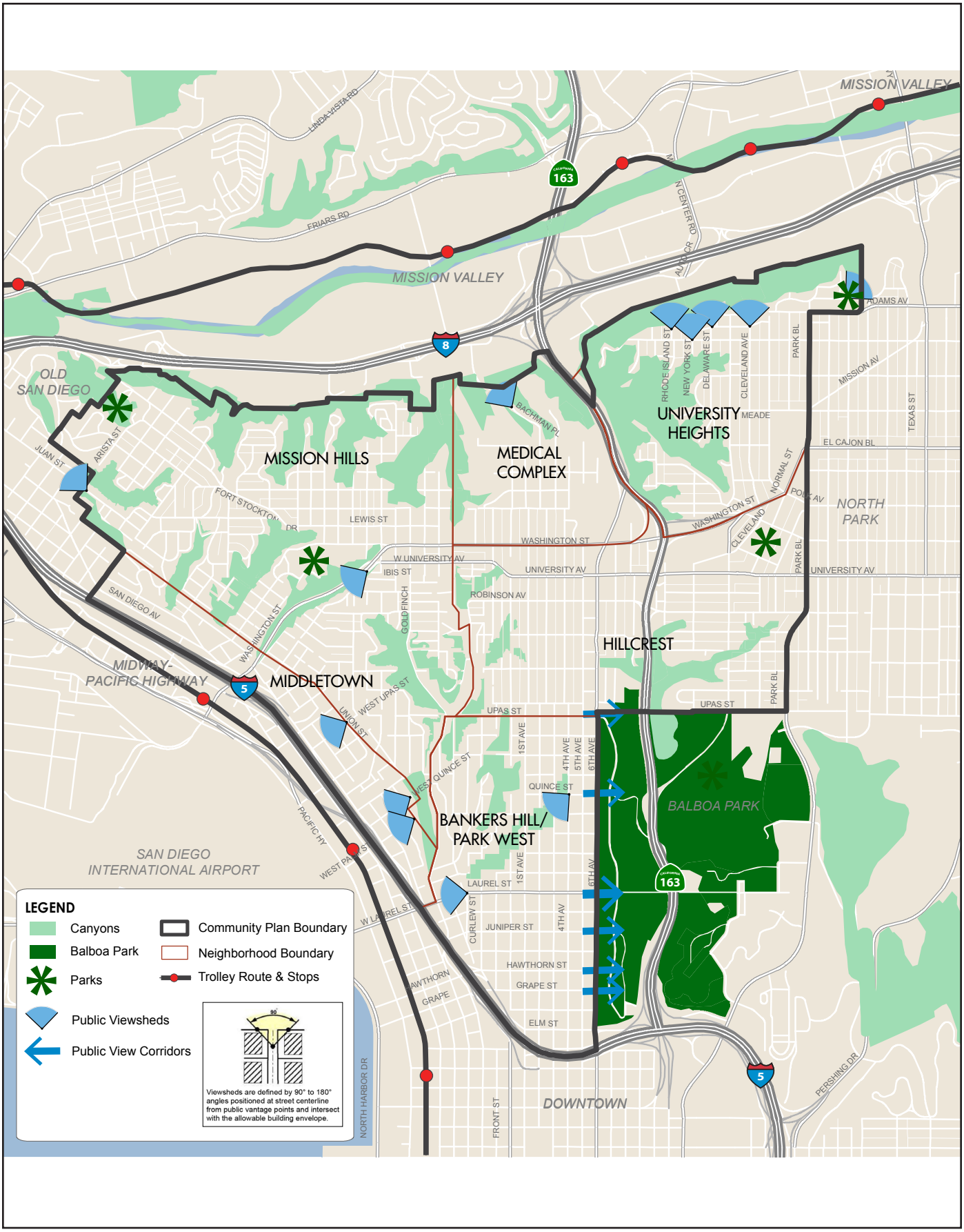
City of San Diego. 2013. Mission Valley Community Plan. Adopted June 1985. Amended May 2013. Accessed November 7, 2018. https://www.sandiego.gov/sites/default/files/ mission_valley_cp_060613_0.pdf.

City of San Diego. 2016. Uptown Community Plan. November 2016. Accessed December 20, 2018. https://www.sandiego.gov/sites/default/files/uptown_community_plan_full_version.pdf.

City of San Diego. 2019. Mission Valley Community Plan Update. Final Draft. June 2019. Accessed June 2019. https://www.sandiego.gov/sites/default/files/missionvalleycpu_draft_053119_8.5x11_printversion_1.pdf.

UC San Diego (University of California, San Diego). 2009. UC San Diego Outdoor Lighting Policy. Effective December 17, 2009.

UC San Diego. 2018. UC San Diego Design Guidelines. October 5, 2018.



Source: Uptown Community Plan, 2016

Figure 3.1-1
Uptown Community Plan Public Viewsheds

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KVP-1: Easterly view from the east end of West Arbor Drive in Mission Hills, east of the intersection of Falcon Street and West Arbor Drive

KVP-2: Northerly view along First Avenue from the intersection of First Avenue and Arbor Drive

Source: SanGIS, 2009

No Scale

N

Key Vantage Point

Figure 3.1-2
Representative Photographs KVP-1 and KVP-2

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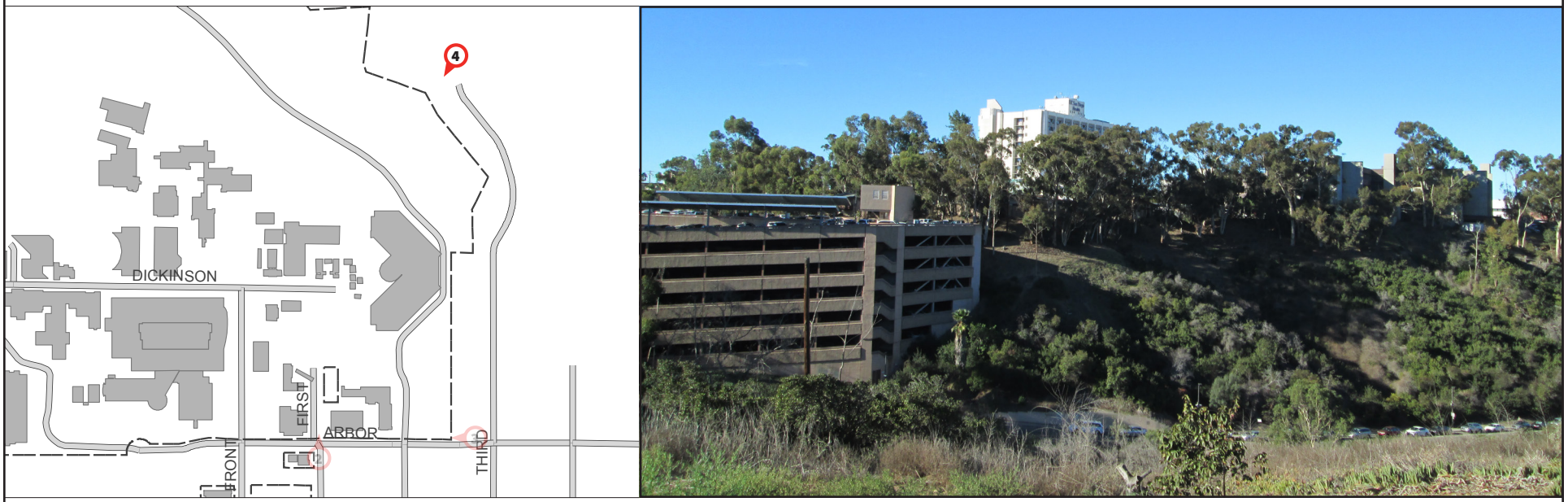
KVP-3: Westerly view along Arbor Drive just west of the intersection of Arbor Drive and Third Avenue



KVP-4: Southwesterly view from the access road just north of the Third Avenue cul-de-sac

Source: SanGIS, 2009

Path: \\hasons-file1\data\Projects\UCSD\1700539001 UCSD Hillcrest LRDP EIR\Figures\3.1 Aesthetics\Work Files\Links

No Scale

N

Key Vantage Point

Figure 3.1-3
Representative Photographs KVP-3 and KVP-4

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KVP-5: Southerly view from Bachman Place south of the Hillcrest Campus boundary coincident with the public viewshed identified in the Uptown Community Plan

KVP-6: Northern view taken from the Hillcrest Campus mesa rim adjacent to 326 Dickinson Street

Source: SanGIS, 2009

No Scale

N

Key Vantage Point

Figure 3.1-4
Representative Photographs KVP-5 and KVP-6

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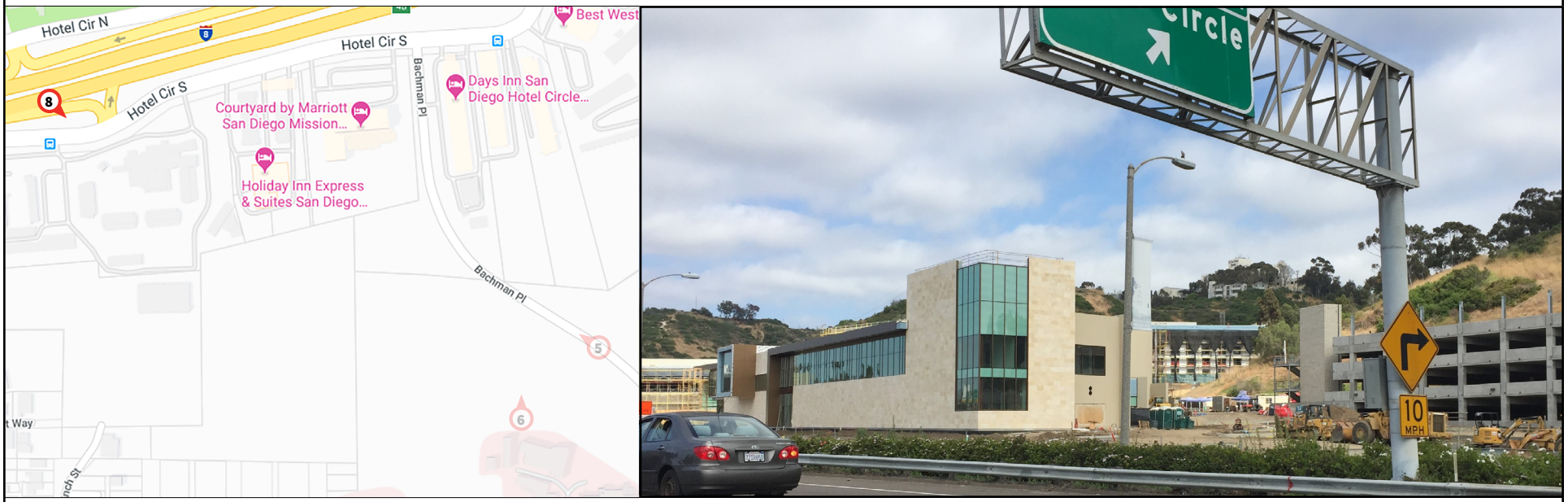
KVP-7: Northeasterly view taken from Hillcrest Campus adjacent to the east side of Bannister Family House



KVP-8: Southeasterly view taken from eastbound Interstate 8 in the vicinity of the Hotel Circle South exit

Source: SanGIS 2009, Google Maps 2019

No Scale

N

Key Vantage Point

Figure 3.1-5
Representative Photographs KVP-7 and KVP-8

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3.2 Air Quality

This section describes the existing air quality conditions and surrounding area, potential air quality impacts resulting from implementation of the 2019 LRDP for the Hillcrest Campus, recommended mitigation measures to help reduce or avoid impacts, and the level of significance of impacts after mitigation. This evaluation includes the potential for the 2019 LRDP to result in significant emissions of criteria pollutants, toxic air contaminants (TACs), or odors. This section is based on the Air Quality Technical Study prepared for the 2019 LRDP by Harris & Associates (Harris) (2019) (Appendix F) and the Health Risk Assessment for the University of California – San Diego Hillcrest Campus 2019 Long Range Development Plan prepared by Ascent Environmental (2019) (Appendix F). The following information is based on these reports and other sources and authorities, as referenced herein. Please note that a discussion of naturally occurring hazardous materials is provided in Section 3.8, Hazards and Hazardous Materials.

3.2.1 Environmental Setting

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

Climate, topography, and meteorology influence regional and local ambient air quality. Southern California is characterized as a semiarid climate, although it contains three distinct zones of rainfall that coincide with the coast, mountain, and desert. The Hillcrest Campus is located in the City in the central Uptown Community of the County, and within the San Diego Air Basin (SDAB). The SDAB is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountain ranges to the east. The topography in the SDAB region varies greatly, from beaches on the west, to mountains and then desert to the east.

3.2.1.1 Climatology

Regional climate and local meteorological conditions influence ambient air quality. The Hillcrest Campus is located in the SDAB. The climate of the SDAB is dominated by a semi-permanent high pressure cell located over the Pacific Ocean. This high-pressure cell typically creates a pattern of late-night and early morning low clouds, hazy afternoon sunshine, daytime onshore breezes, and little temperature variation year-round. The climatic classification for San Diego is a Mediterranean climate, with warm, dry summers and mild, wet winters (County of San Diego 2007). Meteorological data in the project area is gathered at the San Diego International Airport

Lindbergh Field station, located approximately 1.3 miles southwest of the Hillcrest Campus. In the project area, the normal daily maximum temperature is 76 degrees Fahrenheit (°F) in August, and the normal daily minimum temperature is 48° F in January. The normal precipitation in the project area is about 10 inches annually, occurring primarily from November through March.

The high pressure cell creates subsidence inversions, also known as temperature inversions, which occur during the warmer months as descending air associated with the Pacific high pressure cell comes into contact with cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. In addition, the region experiences daytime onshore flow and nighttime offshore flow, which leads to emissions being blown out to sea at night and returning to land the following day. Under certain conditions, this atmospheric oscillation results in the offshore transport of air, and pollutants, from the Los Angeles region to San Diego County, which typically results in higher ozone (O_3) concentrations being measured at San Diego County (County of San Diego 2007).

3.2.1.2 Air Pollutants

Air quality laws and regulations have divided air pollutants into two broad categories: criteria air pollutants and TACs. Criteria air pollutants are a group of common air pollutants regulated by the federal and state governments by means of ambient standards based on criteria regarding public health and/or environmental effects of pollution (USEPA 2016). TACs are pollutants with the potential to cause significant adverse health effects. In California, the California Air Resources Board (CARB) identifies exposure thresholds for TACs that indicate the level below which no significant adverse health effects are anticipated from exposure to the identified substance. However, thresholds are not specified for TACs that have no safe exposure level, or where insufficient data is available to identify an exposure threshold (CARB 2011).

Criteria Air Pollutants

Individual air pollutants at certain concentrations may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation. Six air pollutants have been identified by the U.S. Environmental Protection Agency (USEPA) and CARB as being of concern both on a nationwide and statewide level: carbon monoxide (CO), nitrogen oxides (NO_x), O_3, particulate matter (PM), sulfur dioxide (SO_2), and lead. The following describes the health effects for each of these criteria air pollutants. Emissions from lead typically result from industrial processes such as ore and metals processing, and leaded aviation gasoline (USEPA 2016). These sources are not proposed as part of the 2019 LRDP, and lead emissions are not included in this analysis.

Carbon Monoxide (CO)

CO is a colorless, odorless, poisonous gas, produced by combustion processes, primarily mobile sources. When CO gets into the body, it combines with chemicals in the blood and prevents the blood from providing oxygen to cells, tissues, and organs. Because the body requires oxygen for energy, high-level exposures to CO can cause serious health effects, including death (USEPA 2016).

Nitrogen Oxides (NO_x)

NO_x is a general term pertaining to compounds, including nitric oxide (NO), nitrogen dioxide (NO_2), and other oxides of nitrogen. NO_x is produced from burning fuels, including gasoline, diesel, and coal. NO_x reacts with volatile organic compounds (VOCs) to form ground-level O_3 (smog). NO_x is linked to a number of adverse respiratory system effects (USEPA 2016).

Ozone (O_3)

Ground-level O_3 is not emitted directly in the air, but is formed by chemical reactions of "precursor" pollutants – NO_x and volatile organic compounds (VOCs) – in the presence of sunlight. Major emissions sources include NO_x and VOC emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents. O_3 can trigger a variety of health problems, particularly for sensitive receptors, including children, the elderly, and people of all ages who have lung diseases such as asthma (USEPA 2016).

Particulate Matter (PM_{10} and $PM_{2.5}$)

PM includes dust, metals, organic compounds, and other tiny bits of solid materials that are released into and move around in the air. Particulates are produced by many sources, including burning of diesel fuels by trucks and buses, industrial processes, and fires. Particulate pollution can cause nose and throat irritation and heart and lung problems. PM is measured in microns, which are one millionth of a meter in length (or one-thousandth of a millimeter). PM_{10} is small (respirable) PM measuring no more than 10 microns in diameter, while $PM_{2.5}$ is fine PM measuring no more than 2.5 microns in diameter (USEPA 2016).

Sulfur Dioxide (SO_2)

SO_2 is formed primarily by the combustion of sulfur-containing fossil fuels, especially at power plants and industrial facilities. SO_2 is linked with a number of adverse effects on the respiratory system (USEPA 2016).

3.2.1.3 Existing Air Quality

Air Quality Monitoring Data

Ambient air pollutant concentrations in the SDAB are measured at air quality monitoring stations operated by CARB and the San Diego Air Pollution Control District (SDAPCD). The closest air

quality monitoring station to the Hillcrest Campus is the San Diego station at 1110 Beardsley Street, approximately 4 miles south of the Hillcrest Campus. This station monitors ambient O_3, NO_2, PM_{10}, and $PM_{2.5}$ concentrations. Table 3.2-1 presents a summary of the highest pollutant concentrations monitored during the three most recent years (2014 through 2016) for which the SDAPCD has reported data for these stations. No CO data is available from any monitoring site in the SDAB after 2012, and no data is available for SO_2 after 2013. However, with one exception for CO during the firestorms of October 2003, the SDAB has not violated the state or federal standards for CO or SO_2 in the last 20 years (SDAPCD 2017a).

As shown in Table 3.2-1, the 1-hour O_3 concentration did not exceed the state or federal standards during the 2014–2016 time period. The 8-hour O_3 concentration exceeded the state standard one time during 2014, and no violations occurred during 2015 or 2016. The daily PM_{10} concentration exceeded the state standard in 2015 and 2016. The federal standard for daily PM_{10} was not exceeded during this period. The federal 24-hour $PM_{2.5}$ standard was violated one day during 2014, but was not exceeded during 2015 or 2016. The state standard for NO_2 was not exceeded at any time during 2014–2016.

Table 3.2-1. Air Quality Monitoring Data

Pollutant	Monitoring Station	2014	2015	2016
Ozone				
Maximum 1-hour concentration (ppm)	San Diego – 1110 Beardsley Street	0.093	0.089	0.072
Days above 1-hour state standard (>0.09 ppm)		0	0	0
Maximum 8-hour concentration (ppm)		0.072	0.067	0.061
Days above 8-hour state standard (>0.07 ppm)		1	0	0
Respirable Particulate Matter (PM_{10})				
Peak 24-hour concentration ($\mu g/m^3$)	San Diego – 1110 Beardsley Street	41	54	51
Days above state standard (>50 $\mu g/m^3$)		0	1	1
Days above federal standard (>150 $\mu g/m^3$)		0	0	0
Fine Particulate Matter ($PM_{2.5}$)				
Peak 24-hour concentration ($\mu g/m^3$)	San Diego – 1110 Beardsley Street	37.2	44.9	34.4
Days above federal standard (>35 $\mu g/m^3$)		1	0	0
Nitrogen Dioxide				
Peak 1-hour concentration (ppm)	San Diego – 1110 Beardsley Street	0.075	0.062	0.073
Days above state 1-hour standard (0.18 ppm)		0	0	0

Source: Harris 2019.

Notes: PPM = parts per million, $\mu g/m^3$ = micrograms per cubic meter

Existing Criteria Pollutant Emissions

Operation of the Hillcrest Campus currently generates criteria pollutant emissions from area (landscape equipment), mobile, and stationary sources. The total estimated operational emissions from the existing Hillcrest Campus are provided in Table 3.2-2.

Table 3.2-2. Existing Operational Daily Maximum Air Pollutant Emissions

Emission Source	Maximum Daily Emissions (pounds/day)					
	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Natural Gas	5	43	36	<1	3	3
Landscape	<1	<1	3	<1	1	<1
Consumer Products	24	0	0	0	0	0
Hearth	49	1	60	0	9	8
Architectural Coatings	7	0	0	0	0	0
Vehicular Sources	82	319	902	2	176	50
Total Operational Emissions	**167**	**363**	**1,001**	3	**189**	**61**

Source: Harris 2019; CalEEMod, version 2016.3.2. See Appendix F for model output.

Notes: Emission quantities are rounded to the nearest whole number. Exact values are provided in Appendix F.

Toxic Air Contaminants

In addition to criteria pollutants, both federal and state air quality regulations also focus on TACs. TACs can be separated into carcinogens and noncarcinogens based on the nature of the effects associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which health impacts would not occur. Any exposure to a carcinogen poses some risk of contracting cancer. Noncarcinogens differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

TACs may be emitted by stationary, area, or mobile sources. Common stationary sources of TAC emissions include gasoline stations, dry cleaners, and diesel backup generators, which are subject to local air district permit requirements. The other, often more significant, sources of TAC emissions are motor vehicles on freeways, high-volume roadways, or other areas with high numbers of diesel vehicles, such as distribution centers. Off-road mobile sources are also major contributors of TAC emissions and include construction equipment, ships, and trains.

Particulate exhaust emissions from diesel-fueled engines (diesel particulate patter [DPM]) were identified as a TAC by CARB in 1998. Federal and state efforts to reduce DPM emissions have focused on the use of improved fuels, adding particulate filters to engines, and requiring the production of new-technology engines that emit fewer exhaust particulates.

Diesel engines tend to produce a much higher ratio of fine particulates than other types of internal combustion engines. The fine particles that make up DPM tend to penetrate deep into the lungs

and the rough surfaces of these particles makes it easy for them to bind with other toxins within the exhaust, thus increasing the hazards of particle inhalation. Long-term exposure to DPM is known to lead to chronic, serious health problems including cardiovascular disease, cardiopulmonary disease, and lung cancer.

The SDAPCD samples for TACs at the El Cajon and Chula Vista monitoring stations. Excluding DPM, data from these stations indicate that the background cancer risk in 2014 due to TACs was 345 in one million in Chula Vista and 394 in one million in El Cajon (AECOM 2018). ARB estimates the excess cancer risk from DPM in California in 2012 as 520 in a million (SDAPCD 2017b).

The Hillcrest Campus conducts routine operations that generate emissions of TACs, including DPM. The emissions sources include boilers, standby/emergency generators driven by internal combustion engines, and laboratory chemical usage. UC San Diego currently operates 11 active permitted diesel emergency generators at the Hillcrest Campus. Two of these generators are assigned to the main hospital facility; three are assigned as auxiliary back-up generators; and six are assigned to other individual research and telecommunication facilities. UC San Diego also operates three natural gas-powered boilers (with diesel backup) at the existing CUP. Two of the boilers (Central Plant Boiler 1 and 2) have emission controls via low NO_X burners and flue gas. The third boiler (Central Plant Boiler 3) has no specified emissions controls. Three existing facilities currently use and store chemicals that are considered TACs: the Clinical Teaching Facility, the Surgery Research Laboratory, and the Medical Center. A total of 65 individual TACs are emitted across these three facilities, listed in the project-specific Health Risk Assessment (Appendix F).

Sensitive Receptors

Some members of the population are especially sensitive to air pollutant emissions and should be given special consideration when evaluating air quality impacts from projects. The City's CEQA Guidelines defines a sensitive receptor as a person who is particularly susceptible to health effects due to exposure to an air contaminant relative to the population at large. These include children, the elderly, and people with preexisting respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Air quality regulators typically define sensitive receptors as schools, hospitals, resident care facilities, daycare centers, or other facilities that may house individuals who are particularly susceptible to health effects that would be adversely impacted by changes in air quality.

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 pollutants present. Recreational land uses are considered moderately sensitive to air pollution. Exercise places a high demand on respiratory functions, which can be impaired by air pollution even though exposure periods during exercise are generally short. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are

considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent as the majority of workers tend to stay indoors most of the time. Sensitive receptors on campus include residences and the hospital. Sensitive receptors off campus include medical facilities, schools, and single and multi-family residences in the surrounding neighborhoods. Table 3.2-3 identifies the closest non-residential sensitive receptors to the Hillcrest Campus.

Table 3.2-3. Non-Residential Sensitive Receptors Near the Hillcrest Campus

Receptor	Receptor Type	Location
Scripps Mercy Hospital San Diego	Hospital	4077 Fifth Avenue
St. Vincent Catholic Church	Church	4080 Hawk Street
Mission Hills Health Care	Nursing Facility	4033 Sixth Avenue
Francis Parker Lower School	K-12 School	4201 Randolph Street
St. Vincent's Elementary School	Elementary School	4077 Ibis Street
UC San Diego Medical Offices: Fourth and Lewis	Medical Offices	330 Lewis Street
Scripps Mercy Hospital: Mercy Clinic	Medical Offices	4094 Fourth Avenue
Bannister Family House	Residence	406 Dickinson Street
UC San Diego Medical Center – Hillcrest	Hospital	200 West Arbor Drive
Florence Elementary School	Elementary School	3914 First Avenue
Unitarian Cooperative Preschool	Preschool	4190 Front Street

Source: Ascent Environmental 2019.

Odor

Odors are considered an air quality issue both at the local level (e.g., odor from wastewater treatment) and at the regional level (e.g., smoke from wildfires). Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

The ability to detect odors varies considerably among the population and is subjective. Some individuals have the ability to smell minute quantities of specific substances while others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person (e.g., from a fast-food restaurant or bakery) may be perfectly acceptable to another. Unfamiliar odors may be more easily detected and likely to cause complaints than familiar ones.

Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for

instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

Several examples of common land use types that generate substantial odors include wastewater treatment plants, landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, and food packaging plants. There are no wastewater treatment plants, landfills, composting facilities, refineries, or chemical plants in the vicinity of the Hillcrest Campus. The existing Hillcrest Campus consists of primarily medical, research, teaching, office, and to a lesser extent, residential land uses. Therefore, the existing land uses on the Hillcrest Campus are not major odor sources that would cause substantial odors.

3.2.2 Regulatory Framework

Air quality in the SDAB is regulated by the USEPA, CARB, and the SDAPCD. Each of these agencies develops rules, regulations, or policies, and/or goals to attain the directives imposed through legislation. Although USEPA regulation may not be superseded, both state and local regulations may be more stringent. Below are the applicable federal, state, and local regulations pertaining to air quality.

3.2.2.1 Federal

Clean Air Act

The Clean Air Act (CAA) of 1970 is the comprehensive federal law that regulates air emissions from stationary and mobile sources. The CAA authorizes the USEPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants. Current NAAQS are listed in Table 3.2-4. The primary standards listed below have been set at levels intended to protect public health. The USEPA has classified air basins (or portions thereof) as being in "attainment," "nonattainment," or "unclassified" for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. The USEPA classifies the SDAB as in attainment for the federal CO, NO_2, lead, $PM_{2.5}$, and SO_2 standards. It is unclassifiable for PM_{10} with respect to federal air quality standards. The SDAB is classified as moderate nonattainment for O_3 (SDAPCD 2016a). Table 3.2-5 lists the attainment status of the SDAB for criteria pollutants.

The CAA requires states to develop a plan to attain and maintain the NAAQS in all areas of the country and a specific plan to attain the standards for each area designated nonattainment for a NAAQS. These plans, known as State Implementation Plans (SIPs), are developed by state and local air quality management agencies and submitted to USEPA for approval. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The

SIP is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them.

Table 3.2-4. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]	Federal Standards[2]	
		Concentration[3]	Primary[3, 4]	Secondary[3, 5]
Ozone (O_3)[6]	1-hour	0.09 ppm (180 µg/m^3)	—	Same as Primary Standards
	8-hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	
Respirable Particulate Matter (PM_{10})[7]	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary Standards
	Annual Arithmetic Mean	20 µg/m^3	—	
Fine Particulate Matter ($PM_{2.5}$)[7]	24 Hour	—	35 µg/m^3	Same as Primary Standards
	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	15 µg/m^3
Carbon Monoxide (CO)	8-hour	9 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	None
	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	
Nitrogen Dioxide (NO_2)[8]	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary Standard
	1-hour	0.18 ppm (470 mg/m^3)	100 ppb (188 µg/m^3)	
Sulfur Dioxide (SO_2)[9]	Annual Arithmetic Mean	—	0.030 ppm (for certain areas)	—
	24 Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (for certain areas)	—
	3 Hour	—	—	0.5 ppm (1300 µg/m^3)
	1-hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	—
Lead[10, 11]	30 Day Average	1.5 µg/m^3	—	—
	Calendar Quarter	—	1.5 µg/m^3 (for certain areas)	Same as Primary Standard
	Rolling 3-Month Average[7]	—	0.15 µg/m^3	
Visibility Reducing Particles[12]	8-hour	See Footnote 12.	No Federal Standards	
Sulfates	24 Hour	25 µg/m^3	No Federal Standards	
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m^3)	No Federal Standards	
Vinyl Chloride[10]	24 Hour	0.01 ppm (26 µg/m^3)	No Federal Standards	

Source: CARB 2016.

Notes:

[1] California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, $PM_{2.5}$, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, lead, hydrogen sulfide, and vinyl chloride standards 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.

[2] National standards (other than O_3, PM, and those based on annual averages) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in 1 year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained

when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the USEPA for further clarification and current national policies.

[3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parenthesis are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; parts per million (ppm) in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[5] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[6] On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[7] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[8] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[9] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm

[10] The CARB had identified lead and vinyl chloride as “toxic air contaminants” with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[11] The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[12] In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Table 3.2-5. San Diego Air Basin Attainment Status

Pollutant	Averaging Time	California Standards	Federal Standards
Ozone (O_3)	1 Hour	**Nonattainment**	No Federal Standard
	8 Hour		**Nonattainment (Moderate)**
Respirable Particulate Matter (PM_{10})	Annual Arithmetic Mean	**Nonattainment**	No Federal Standard
	24 Hour		Unclassified[1]
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	**Nonattainment**	Attainment
	24 Hour	No State Standard	
Carbon Monoxide (CO)	8 Hour	Attainment	Maintenance
	1 Hour		
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	No State Standard	Attainment
	1 Hour	Attainment	No Federal Standard
Lead	Calendar Quarter	No State Standard	Attainment
	30 Day Average	Attainment	No Federal Standard
	Rolling 3-Month Average	No State Standard	Attainment
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	No State Standard	Attainment
	24 Hour	Attainment	Attainment
	1 Hour	Attainment	No Federal Standard
Sulfates	24 Hour	Attainment	No Federal Standard
Hydrogen Sulfide	1 Hour	Unclassified	No Federal Standard
Visibility Reducing Particulates	8 Hour (10:00 a.m. to 6:00 p.m., PST)	Unclassified	No Federal Standard

Source: USEPA 2015; SDAPCD 2016ba, 2016b.

Note:

[1] Unclassified; indicates data are not sufficient for determining attainment or nonattainment.

3.2.2.2 State

California Ambient Air Quality Standards

The CARB, a part of the California EPA, is responsible for the coordination and administration of both federal and state air pollution control programs within California. The CAA allows states to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. California has adopted ambient standards (the California Ambient Air Quality Standards [CAAQS]) that are equal to or stricter than the federal standards for six criteria air pollutants. The CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations, and provided in Table 3.2-4. Similar to the federal CAA, areas have been designated as attainment, nonattainment or unclassified with respect to the state ambient air quality standards. The County is in nonattainment with the CAAQS for O_3, PM_{10}, and $PM_{2.5}$. The County is designated as an attainment area for the state CO, NO, SO_2, lead, and sulfates standards. Hydrogen sulfide and visibility-reducing particles are unclassified in the County.

Toxic Air Contaminant Regulations

California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807, Tanner Act) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588, Hot Spots Act). The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB designates a substance as a TAC. The Hot Spots Act requires existing facilities that emit toxic substances above specified levels to (1) prepare a toxic emission inventory, (2) prepare a risk assessment if emissions are significant (i.e., 10 tons per year or on the air district's Hot Spots Risk Assessment list), (3) notify the public of significant risk levels, and (4) prepare and implement risk reduction measures.

Diesel Risk Reduction Plan

The CARB adopted a Diesel Risk Reduction Plan, which recommends control measures to achieve a DPM reduction of 85 percent by 2020 from year 2000 levels. Recent regulations and programs include the low-sulfur diesel fuel requirement and more stringent emission standards for heavy-duty diesel trucks and off-road in-use diesel equipment. As emissions are reduced, it is expected that the risks associated with exposure to the emissions will also be reduced.

Air Quality and Land Use Handbook: A Community Health Perspective

The CARB has also developed the Air Quality and Land Use Handbook: A Community Health Perspective to provide guidance on land use compatibility with sources of TACs (CARB 2005). These sources include freeways and high-traffic roads, commercial distribution centers, rail yards, refineries, dry cleaners, gasoline stations, and industrial facilities. The handbook is not a law or adopted policy, but offers advisory recommendations for the siting of sensitive receptors near uses associated with TACs. The handbook indicates that land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues. The recommendations relevant to the 2019 LRDP include avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.

3.2.2.3 Regional/Local

San Diego Air Pollution Control District

The SDAPCD has jurisdiction over air quality programs in the County. State and local government projects, as well as projects proposed by the private sector, are subject to SDAPCD requirements if the sources are regulated by the SDAPCD. Additionally, the SDAPCD, along with CARB, maintains and operates ambient air quality monitoring stations at numerous locations throughout the County. The stations are used to measure and monitor criteria and toxic air pollutant levels in the ambient air.

Under the requirements of the California Clean Air Act (CCAA), each local air district is required to develop its own strategies to achieve both state and federal air quality standards for its air basin. The SDAPCD developed the 2016 Revision of the Regional Air Quality Strategy for San Diego County (RAQS). The RAQS was developed pursuant to CCAA requirements and identifies feasible emission control measures to provide progress in the County toward attaining the state O_3 standard. The pollutants addressed are VOCs and NO_x, precursors to the photochemical formation of O_3 (the primary component of smog). The RAQS control measures focus on emission sources under the SDAPCD's authority, specifically stationary emission sources (such as power plants, manufacturing and industrial facilities) and some area-wide sources (such as water heaters, architectural coatings, and consumer products). However, the emission inventories and emission projections in the RAQS reflect the impact of all emission sources and all control measures, including those under the jurisdiction of CARB (on-road and off-road motor vehicles) and the USEPA (aircraft, ships, and trains). Thus, while legal authority to control various pollution sources is divided among agencies, the SDAPCD is responsible for reflecting federal, state, and local measures in a single plan to achieve state O_3 standards in the County. The RAQS was initially adopted by the SPAPCD in 1992 and has generally been updated on a triennial basis, in accordance with state requirements. The latest version of the RAQS was adopted by the SDAPCD in 2016 (SDAPCD 2016c).

Additionally, as mentioned previously, because the County is currently designated as a non-attainment area for the 8-hour O_3 NAAQS, the SDAPCD must submit to USEPA, through CARB, an implementation plan as part of the California SIP identifying control measures and associated emission reductions as necessary to demonstrate attainment of the federal eight hour O_3 standard within the County. SDAPCD adopted its 2008 Eight-Hour Ozone Attainment Plan for the County in December 2016.

Neither the RAQS nor the SIP address emissions of PM in the SDAB. The SDAPCD prepared the report, Measures to Reduce Particulate Matter in San Diego County, in December 2005. This report identifies existing federal, state, and local measures to control particulates in the SDAB. This plan outlines potential measures for PM control that the SDAPCD may further evaluate for future rule adoption. It does not outline a plan for ambient air quality standards (AAQS) compliance that the 2019 LRDP would need to implement or demonstrate compliance with. As such, this report is not discussed further in this analysis.

The SDAPCD is also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws. All development projects within the City may be subject to the following SDAPCD rules (as well as others):

- **Rule 51, Nuisance:** prohibits emissions that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or which endanger the comfort, repose, health, or safety of any such persons or the public; or which cause injury or damage to business or property.

- **Rule 52, Particulate Matter:** establishes limits to the discharge of any PM from non-stationary sources.
- **Rule 54, Dust and Fumes:** establishes limits to the amount of dust or fume discharged into the atmosphere in any 1 hour.
- **Rule 55, Fugitive Dust Control:** sets restrictions on visible fugitive dust from construction and demolition projects.
- **Rule 67, Architectural Coatings:** establishes limits to the VOC content for coatings applied within the SDAPCD.

Projects proposed under the 2019 LRDP are required to comply with these rules and conformance would be incorporated into project specifications and procedures.

3.2.3 Project Impacts and Mitigation

The following sections address various potential impacts relating to air quality that could result due to the implementation of the proposed 2019 LRDP.

3.2.3.1 Issue 1: Consistency with Applicable Air Quality Plan

Air Quality Issue 1 Summary

Would implementation of the 2019 LRDP result in a conflict with or obstruct implementation of the applicable air quality plan?

Impact: Implementation of the 2019 LRDP would not conflict with or obstruct implementation of the applicable air quality plan.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP would have a significant impact if it would result in a conflict with or obstruct implementation of the applicable air quality plan. For the 2019 LRDP, applicable air quality plans include the SDAPCD RAQS and the California SIP.

Impact Analysis

The California SIP is the document that sets forth the state's strategies for achieving federal air quality standards. The applicable air quality planning documents for the SDAPCD are the 2016 RAQS (SDAPCD 2016c) and the 2008 Eight-Hour Ozone Attainment Plan for the County, which is the SDAPCD portion of the California SIP. The RAQS and Ozone Attainment Plan were

prepared by the SDAPCD for the CARB to be included as part of the SIP. These plans demonstrate how the SDAB would either maintain or strive to attain the NAAQS. Both documents were developed in conjunction with each other by the SDAPCD to reduce regional O_3 emissions.

The SDAPCD relies on information from the CARB and the SANDAG, including projected growth in the County and mobile, area and all other source emissions, in order to project future emissions and develop appropriate strategies for the reduction of source emissions through regulatory controls. The majority of regional emissions (67 percent) result from motor vehicle emissions. These emissions are primarily reduced through emissions standards, which are established by the CARB, but further reduced at the air district level through incentive programs to encourage the use of alternative transportation (SDAPCD 2016d). Because of the limited jurisdiction that the SDAPCD has over mobile source emissions, and even smaller control that individual projects have on influencing the public's ultimate use of motor vehicles, compliance with the RAQS is based on whether or not an individual project would comply with the emissions projections contained in the plan. Reduction strategies are applied to the region as a whole and were determined to be adequate to meet the NAAQS based on the regional emissions projections. A project that proposes growth that exceeds planned growth assumptions would potentially conflict with the RAQS and SIP because it would potentially result in mobile source emissions that would exceed the projected emissions inventory.

The CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and the County. That is, the emissions estimates that CARB and the SDAPCD use to plan for achieving AAQS compliance are based on the land uses projected by SANDAG. The use of construction equipment in the RAQS is estimated for the region on an annual basis, and construction-related emissions are estimated as an aggregate in the RAQS. Therefore, the 2019 LRDP would not increase the assumptions for off-road equipment use in the RAQS.

Assumptions for land use development used in the RAQS were taken from local and regional planning documents. Emission forecasts rely on projections of vehicle miles traveled (VMT) by the Metropolitan Planning Organizations, such as the San Diego Association of Governments (SANDAG), and population, employment, and land use projections made by local jurisdictions during development of the area and general plans. As such, as determined in the County's Guidelines for Determining Significance – Air Quality, projects that propose development consistent with, or less than, the growth projections anticipated by a general plan would be consistent with the RAQS and SIP because the emissions resulting from these project have been accounted for in the air quality plans (County of San Diego 2007). The existing 1995 LRDP for the Hillcrest Campus is the applicable plan for the campus and would be replaced by the 2019 LRDP as the applicable campus development plan. Implementation of the 2019 LRDP would redevelop the Hillcrest Campus with hospital, medical office and research, and residential uses,

similar in type to those identified in the 1995 LRDP and currently built out on the campus. As such, the 2019 LRDP is consistent with the existing designation for the Hillcrest Campus. However, the campus would be expanded under the 2019 LRDP and, as addressed in Section 3.15, Transportation, would result in a net increase in vehicle trips compared to the existing campus, which is representative of the existing land use plan. Implementation of 2019 LRDP would include additional residences compared to previously adopted plans for the campus.

While the RAQS acknowledges mobile and area sources, minor changes in the assumptions relative to these sources would not obstruct successful implementation of the strategies for improvement of SDAB's air quality. As shown in Table 3.2-14, emissions of O_3 precursors (VOC and NO_x) from buildout of the 2019 LRDP would be reduced compared to the existing condition. Therefore, implementation of the 2019 LRDP would not exceed the regional emissions projections used for air quality planning, and the 2019 LRDP would not conflict with RAQS or the SIP. Additionally, the proposed 2019 LRDP incorporates the following strategies, which are addressed in greater detail in Section 3.7, Greenhouse Gas Emissions, and Section 3.15, to ensure that mobility is preserved within the community and across the region:

- Promote pedestrian, bicycle, and other wheeled device mobility
- Improved transit accessibility, ridership, and performance
- Promote transportation demand management strategies

The proposed 2019 LRDP land uses are generally consistent with the current campus land use types and is consistent with the goals developed by SANDAG to reduce VMT. Implementation would result in a net decrease in O_3 precursors compared to existing conditions. Therefore, the proposed 2019 LRDP would not conflict with or obstruct implementation of the applicable air quality plan. This impact would be less than significant.

Mitigation Measures

Implementation of the 2019 LRDP would not conflict with or obstruct implementation of the applicable air quality plan; therefore, no mitigation measures are required.

3.2.3.2 Issue 2: Cumulative Increase in Criteria Pollutant Emissions

Air Quality Issue 2 Summary

Would implementation of the 2019 LRDP 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?

Impact: Implementation of the 2019 LRDP could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.

Mitigation: Architectural Coatings (AIR-2)

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP would have a significant impact if it would 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. The following analysis also includes criteria pollutants for which the basin is not in non-attainment. If the 2019 LRDP would exceed the applicable threshold for these pollutants, the 2019 LRDP would have a significant direct and potentially cumulatively considerable impact.

By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development within the SDAB, and this regional impact is cumulative rather than attributable to any one source, and is representative of an existing air quality violation. A project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and probable future development projects. The standards of significance are relevant to whether a project's individual emissions would result in a cumulatively considerable incremental contribution to the existing cumulative air quality conditions. The SDAPCD has not developed quantitative significance standards for CEQA projects. However, the City has established recommended screening level standards of significance for regional pollutant emissions. Therefore, the City screening standards of significance for regional pollutant emissions were used to analyze the impacts of the proposed 2019 LRDP. The screening level standards are shown in Table 3.2-6.

The standards in Table 3.2-6 are designed to identify those projects that would result in significant levels of air pollution and to assist the region in attaining the applicable state and federal ambient air quality standards, and as such are cumulative in nature. Projects that would not exceed the standards of significance would not contribute a considerable amount of criteria air pollutant

emissions to the region's emissions profile, and would not impede attainment and maintenance of ambient air quality standards. However, if the region is in nonattainment status for a particular criteria pollutant and a project's individual emissions exceed the threshold levels, its incremental contribution could be considered cumulatively considerable.

The SDAB is listed as non-attainment for O_3, PM_{10}, and $PM_{2.5}$. Therefore, there is a significant cumulative impact to air quality resulting from air quality violations of PM_{10}, $PM_{2.5}$, and O_3 precursor (VOC and NO_x) emissions.

If the 2019 LRDP would result in net emissions that exceed the thresholds in Table 3.2-6 for CO or SO_x, the 2019 LRDP would result in a potentially significant air quality violation. If the 2019 LRDP would result in net emissions that exceed the thresholds in Table 3.2-6 for PM_{10}, $PM_{2.5}$, and O_3 precursor (VOC and NO_x), the impact would be considered a potentially significant air quality violation, in addition to being a cumulatively considerable impact.

Table 3.2-6. City of San Diego Air Screening Level Standards of Significance

Pollutant	Pounds Per Hour[1]	Pounds Per Day	Tons Per Year[1]
Carbon monoxide (CO)	100	550	100
Nitrogen Oxides (NO_x)	25	250	40
Respirable Particulate Matter (PM_{10})	—	100	15
Fine Particulate Matter ($PM_{2.5}$)	—	55[2]	10
Oxides of Sulfur (SO_x)	25	250	40
Volatile Organic Compounds (VOC)	—	137[3]	15

Source: City of San Diego 2011.

Notes: — = No standard proposed; VOC = volatile organic compounds; NOX = oxides of nitrogen; SOX = sulfur oxides; CO = carbon monoxide; PM_{10} = particulate matter less than 10 micrometers in diameter; $PM_{2.5}$ = particulate matter less than 2.5 micrometers in diameter

1 Standards for stationary sources. Impacts from stationary sources relevant to the 2019 LRDP are addressed in the Health Risk Assessment prepared by Ascent Environmental (2018).

2 Standard for $PM_{2.5}$ from SCAQMD

3 VOC standards based on levels per South Coast Air Quality Management District (SCAQMD) and the Monterey Bay Air Pollution Control District (MBAPCD), which have similar federal and state attainment status as San Diego.

Methodology

Construction

Daily air pollutant emissions during construction were estimated using the assumed worst-case activity data and the emission factors included in the California Emissions Estimator Model (CalEEMod), Version 2016.3.2. For the purposes of modeling a worst-case construction scenario, a total number of working days is assumed for each construction activity within each multiple-year phase, presented in Table 3.2-7. Table 3.2-7 also presents the total soil and demolition material export, and resulting approximate number of haul trips that would be required in each phase, as well as total phase disturbance area. The analysis assumes that a maximum of two construction activities may be occurring at once in different areas of the phase's construction area.

Model defaults were used to estimate emissions associated with construction equipment, except pile driving equipment, which was added to grading in Phases 1A, 1B, 2A, 2B, and 3. Daily worker and vendor vehicle trips are conservatively assumed to be the same across all construction activities and estimated based on known trip requirements of similar large projects requiring extensive construction, including the North Torrey Pines Living and Learning Neighborhood and Jacobs Medical Center projects on the UC San Diego La Jolla Campus (Clark Construction 2018). This 2019 LRDP EIR assumes, for construction under the 2019 LRDP, an average of 447 workers per day and 60 trips per day for vendor deliveries. A 15 cy truck capacity was assumed for soil export, and one truck was assumed for every 9 square feet of demolition for construction under the 2019 LRDP, based on the NTPLL estimate of 800 trucks for 7,155 square feet of demolition. The La Jolla Campus projects also determined that the maximum feasible number of trucks per day is 150. Adequate working days for grading and earthwork are assumed in this 2019 LRDP EIR so that average daily truck trips would not exceed 150 trucks during any phase of construction under the 2019 LRDP. Building coating is assumed in this 2019 LRDP EIR to occur simultaneously with building construction and would not result in additional worker or vendor trips. The CalEEMod default haul trip distance of 20 miles was assumed. It is not known with certainty at this time which landfill or landfills would be used during construction; however, Miramar Landfill and Otay Landfill are most likely. Miramar Landfill is located approximately 10 miles from the campus, and Otay Landfill is located approximately 20 miles away. Therefore, the default trip length is appropriate for the 2019 LRDP.

The analysis assumed that standard dust and emission controls during grading operations would be implemented to reduce potential nuisance impacts and to ensure compliance with SDAPCD Rule 55 (Fugitive Dust Control). The analysis also assumed architectural coatings would comply with SDAPCD Rule 67.0.1 (Architectural Coatings). A complete list of model inputs is provided in Appendix F.

Table 3.2-7. Construction Assumption Summary

Construction Phase	Working Days by Activity	Demolition Material Export (SF)	Demolition Haul Trips	Soil Export (CY)	Soil Haul Trips	Disturbance Area (acres)
Phase 1A	Demolition - 60 days Grading and earthwork - 110 days Building construction - 670 days Architectural coating - 446 days Paving - 55 days	61,400	13,730	238,000	31,733	5.4
Phase 1B	Demolition - 259 days Grading and earthwork - 260 days Paving - 260 days	173,600	38,820	—	—	2.4
Phase 2A/2B	Demolition - 580 days Grading and earthwork - 65 days Building construction - 345 days Architectural coating - 230 days Paving - 30 days	777,000	173,753	146,000	19,446	16.8
Phase 3	Grading and earthwork – 520 days Building construction - 520 days Architectural coating - 345 days Paving - 260 days	—	—	156,000	20,800	8.6
Phase 4	Demolition - 450 days Grading and earthwork - 320 days	597,500	133,613	—	—	9.9
Phase 5	Grading and earthwork - 258 days Building construction - 260 days Architectural coating - 180 days Paving - 260 days	—	—	140,000	18,667	9.9

Source: Harris 2019.

Notes: See Appendix F for detailed model input.

Operation

Operational emissions for the 2019 LRDP were estimated using the CalEEMod, Version 2016.3.2 as part of the project-specific Greenhouse Gas Reduction Strategy prepared by LSA (Chen, pers. comm. 2018) based on project-specific energy use data provided by UC San Diego and traffic data from the project-specific Transportation Impact Analysis (TIA) (LLG 2019). LSA also estimated criteria pollutant emissions from CUP operation using USEPA emissions factors (Hendrix, pers. comm. 2018). This analysis assumes that no hearths would be installed at the proposed residences, consistent with implementation of the GHG Reduction Strategy. Model output, including detailed model assumptions, are provided in Appendix F. The 2019 LRDP would replace existing campus operations, which are an existing source of criteria pollutant emissions. The existing campus emissions are part of existing ambient air quality. As such, the 2019 LRDP's net change in emissions are relevant to this analysis.

Year 2025 was selected as the worst-case interim operation scenario because the year 2025 scenario in the project-specific TIA shows the highest net increase in average daily trips (ADT) compared to existing conditions (LLG 2019). This scenario includes operation of Phases 1A, 1B, 2A, 2B, and the remaining existing facilities including the existing hospital and CUP. Operational emissions for this interim phase were modeled using the CalEEMod, Version 2016.3.2 based on the assumptions from Greenhouse Gas Reduction Strategy (LSA 2019) for existing and proposed facilities, including vehicle trip rates. For campus use categories that include both existing and proposed structures, such as medical offices, existing trip rates were conservatively assumed. CalEEMod default natural gas usage is assumed for new structures because the new CUP would not be operational in year 2025, and is consistent with the CalEEMod calculations for existing campus conditions, which reflect the existing CUP.

Impact Analysis

Implementation of the 2019 LRDP would result in both construction and operational air pollutant emissions, as described in the following sections.

Construction Emissions

Construction activities would result in temporary increases in air pollutant emissions associated with fugitive dust, heavy construction equipment, and construction workers commuting to and from the site. These emissions would be generated in the forms of fugitive dust emissions from earth disturbance during fine site grading, and exhaust emissions from operation of heavy equipment and vehicles during construction. Paving activities and building coating would emit volatile organic compounds during off-gassing.

Construction of the projects identified in the proposed 2019 LRDP would be completed in five phases over a period of 14 years, with Phases 1 and 2 split into separate sub-phases. Construction

in each of the five phases is described in detail in Section 2.9, Construction Phasing, in Chapter 2, Project Description.

The construction timeframe for the entire buildout of the 2019 LRDP is expected to begin in 2019 and last for 14 years until buildout in 2033. Construction activities in all phases would involve grading and earthwork, as well as utilities installation, and surface improvements including paving and landscaping. All phases except Phase 4 would involve building construction, and external/internal building work. Phases 1A, 1B, 2A, 2B, and 4 would require demolition. Pile driving is anticipated for shoring and/or building construction in Phases 1A, 1B, 2A, 2B, and 3.

Tables 3.2-7 through 3.2-13 present a summary of estimated maximum daily air pollutant emissions for each construction phase associated with 2019 LRDP implementation. Construction activities within a phase may not occur consecutively. For example, some building construction or paving may occur before grading and earthwork is complete, or an individual activity such as paving would start and stop several times during the phase. No more than two construction activities are anticipated to occur simultaneously on a given day. The following tables present the calculated emissions for individual construction activities, as well as a worst-case scenario assuming two simultaneous construction activities. Phase 1B is anticipated to begin prior to completion of Phase 1A; therefore, Table 3.2-9 also presents a worst-case scenario for simultaneous construction of Phase 1A and Phase 1B. Construction of Phases 2A and 2B are anticipated to occur simultaneously and are modeled together as one phase. These simultaneous construction scenarios conservatively assume that a full construction fleet would be required for each activity; meaning twice the number of worker vehicle trips and no sharing of equipment is assumed between activities.

Table 3.2-8. Phase 1A Construction Daily Maximum Air Pollutant Emissions

Construction Phase	Maximum Daily Emissions (pounds/day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Demolition	10	115	66	<1	14	5
Earthwork and Grading	10	130	67	<1	22	8
Building Construction/Coating	23	30	45	<1	9	3
Paving	5	19	27	<1	9	3
Worst Case Simultaneous Construction	33	245	133	<1	36	13
Significance Threshold	**137**	**250**	**550**	**250**	**100**	**55**
Significant Impact?	No	No	No	No	No	No

Source: Harris 2019; CalEEMod, version 2016.3.2. See Appendix F for model output.
Notes: Emission quantities are rounded to the nearest whole number. Exact values are provided in Appendix F.

Table 3.2-9. Phase 1B Construction Daily Maximum Air Pollutant Emissions

Construction Phase	Maximum Daily Emissions (pounds/day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Demolition	6	52	50	<1	12	4
Earthwork and Grading	6	36	42	<1	12	5
Paving	5	19	37	<1	9	3
Worst Case Simultaneous Construction (Phase 1B Only)	12	88	92	<1	24	9
Worst Case 1A/1B Simultaneous Construction (Grading in Both Phases)	16	166	109	<1	32	13
Significance Threshold	**137**	**250**	**550**	**250**	**100**	**55**
Significant Impact?	No	No	No	No	No	No

Source: Harris 2019; CalEEMod, version 2016.3.2. See Appendix F for model output.

Notes: Emission quantities are rounded to the nearest whole number. Exact values are provided in Appendix F.

Table 3.2-10. Phase 2A/2B Construction Daily Maximum Air Pollutant Emissions

Construction Phase	Maximum Daily Emissions (pounds/day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Demolition	8	104	63	<1	20	6
Earthwork and Grading	7	73	55	<1	17	6
Building Construction/Coating	134	21	37	<1	9	3
Paving	4	10	31	<1	8	2
Worst Case Simultaneous Construction	**142**	177	118	<1	37	12
Significance Threshold	**137**	**250**	**550**	**250**	**100**	**55**
Significant Impact?	**Yes**	No	No	No	No	No

Source: Harris 2019; CalEEMod, version 2016.3.2. See Appendix F for model output.

Notes: Emission quantities are rounded to the nearest whole number. Exact values are provided in Appendix F.

Table 3.2-11. Phase 3 Construction Daily Maximum Air Pollutant Emissions

Construction Phase	Maximum Daily Emissions (pounds/day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Earthwork and Grading	5	29	37	<1	13	5
Building Construction/Coating	59	19	34	<1	9	3
Paving	3	13	27	<1	8	2
Worst Case Simultaneous Construction	64	48	71	<1	22	8
Significance Threshold	**137**	**250**	**550**	**250**	**100**	**55**
Significant Impact?	No	No	No	No	No	No

Source: Harris 2019; CalEEMod, version 2016.3.2. See Appendix F for model output.

Notes: Emission quantities are rounded to the nearest whole number. Exact values are provided in Appendix F.

Table 3.2-12. Phase 4 Construction Daily Maximum Air Pollutant Emissions

Construction Phase	Maximum Daily Emissions (pounds/day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Demolition	7	83	61	<1	18	5
Earthwork and Grading	4	13	28	<1	11	4
Worst Case Simultaneous Construction	11	96	89	<1	29	9
Significance Threshold	**137**	**250**	**550**	**250**	**100**	**55**
Significant Impact?	No	No	No	No	No	No

Source: Harris 2019; CalEEMod, version 2016.3.2. See Appendix F for model output.
Notes: Emission quantities are rounded to the nearest whole number. Exact values are provided in Appendix F.

Table 3.2-13. Phase 5 Construction Daily Maximum Air Pollutant Emissions

Construction Phase	Maximum Daily Emissions (pounds/day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Earthwork and Grading	4	21	26	<1	12	4
Building Construction/Coating	91	14	28	<1	8	2
Paving	3	11	25	<1	8	2
Worst Case Simultaneous Construction	95	35	54	<1	20	6
Significance Threshold	**137**	**250**	**550**	**250**	**100**	**55**
Significant Impact?	No	No	No	No	No	No

Source: Harris 2019; CalEEMod, version 2016.3.2. See Appendix F for model output.
Notes: Emission quantities are rounded to the nearest whole number. Exact values are provided in Appendix F.

The estimate of construction emissions indicates that the 2019 LRDP would not exceed the significance thresholds for any criteria air pollutants during any phase of construction, with the exception of VOC emissions during simultaneous construction of Phases 2A and 2B. VOC emissions would have the potential to exceed the significance threshold if building construction and architectural coating would occur simultaneously with another construction activity. Architectural coating accounts for 129 pounds of the total 134 pounds of VOC emissions in Phases 2A/2B. Therefore, a potentially significant impact would occur when architectural coating would occur simultaneously with building construction and another activity, such as demolition, earthwork and grading, or paving. A significant impact would not occur if building construction alone would occur concurrently with one of the other activities (see above). Mitigation Measure AIR-2 would reduce construction impacts related to VOC emissions during Phases 2A and 2B to a less than cumulatively considerable level.

Regarding health effects related to criteria pollutant emissions, the applicable significance thresholds are established for regional compliance with the state and federal AAQS, which are intended to protect public health from both acute and long-term health impacts, depending on the potential effects of the pollutant (USEPA 2018). Because emissions of criteria pollutants under the 2019 LRDP, after implementation of Mitigation Measure AIR-2, would be below the applicable

thresholds, it would not result in a cumulatively considerable contribution to regional acute and long-term health impacts related to non-attainment of the AAQS.

As discussed in Section 3.2.1.2, O_3 also has the potential to result in health impacts at the time of exposure, such as respiratory issues for sensitive receptors. However, individual exposure levels and individual reactions to localized short-term exposure to O_3 from VOC emissions from project construction cannot be feasibly determined. The localized level of O_3 that receptors may be exposed to from VOC emissions cannot be determined because the formation of O_3 is not directly determined by the quantity of VOC and NO_x emissions generated by a project (San Joaquin Valley APCD 2015). The amount of O_3 formed depends on heat and sunlight exposure, and once formed, O_3 is likely to be dispersed or carried away from the site by wind. Conversely, O_3 exposure on the site could have been transported to the site by wind and be attributable to another source (USEPA 2019). At present, there are no known methodologies that can feasibly ascertain the ultimate locations of O_3 formation associated with the emissions of O_3 precursors such as VOC and NO_x (San Joaquin Valley APCD 2015). However, because project construction emissions are anticipated to be below the significance thresholds after mitigation, and those emissions would be spread out across the Hillcrest Campus and off site on haul routes, significant adverse acute health impacts as a result of project construction are not anticipated.

Although construction is not anticipated to result in potentially significant emissions from the remaining criteria pollutants, it is noted that, similar to O_3 emissions, calculated emissions of the remaining pollutants, PM in particular, do not necessarily equate to local concentrations. For example, PM can be transported by wind, and formation is also dependent on chemical processes (San Joaquin Valley APCD 2015). Additionally, calculated construction emissions result from on-site emissions from equipment and off-site vehicle and truck emissions that do not occur on the site. As such, the calculated emissions for all pollutants in Tables 3.2-8 through 3.2-13 do not represent localized emissions. Potential health impacts related to project construction emissions of TACs, including DPM, are calculated and further addressed in Section 3.2.3.3.

Operational Emissions

After construction, day-to-day activities associated with operation of the proposed 2019 LRDP would generate emissions from a variety of sources. Operational emissions may be both direct and indirect emissions, and would be generated by area, mobile, and stationary sources associated with implementation of the 2019 LRDP. Total long-term operational emissions were estimated for the existing campus and buildout of the 2019 LRDP. Area sources of air pollutant emissions associated with the 2019 LRDP include fuel combustion emissions from space and water heating; fuel combustion emissions from landscape maintenance equipment; VOC emissions from periodic repainting of interior and exterior surfaces; and natural gas usage.

Buildout operational emissions and net change in emissions as a result of the 2019 LRDP are provided in Table 3.2-14. As shown in Table 3.2-14, operational emissions from the 2019 LRDP would have the potential to result in a net decrease in VOC and CO emissions compared to existing conditions and a net increase in NO_x, PM_{10}, and $PM_{2.5}$ emissions that would not exceed the significance thresholds for maximum daily emissions. The decrease or minimal increase in emissions anticipated compared to existing conditions is primarily due to increasingly stringent vehicle emissions standards. Therefore, air quality impacts associated with operation of the 2019 LRDP would not be potentially significant or cumulatively considerable.

As discussed previously for construction emissions, because emissions of criteria pollutants under the 2019 LRDP would be below the applicable thresholds, operation would not result in a cumulatively considerable contribution to regional acute and long-term health impacts related to non-attainment of the AAQS. Calculated emissions do not represent localized concentrations, and localized short-term health impacts cannot be feasibly determined.

Table 3.2-14. Buildout Operational Daily Maximum Air Pollutant Emissions

Emission Source	Maximum Daily Emissions (pounds/day)					
	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Central Utility Plant Operation	6	160	96	1	9	9
Landscape	3	1	84	<1	<1	<1
Consumer Products	59	0	0	0	0	0
Architectural Coatings	19	0	0	0	0	0
Vehicular Sources	46	220	462	2	205	55
Total Operational Emissions	133	381	642	3	214	64
Net Change in Emissions	**(-34)**	**18**	**(-359)**	0	**25**	**3**
Significance Threshold	137	250	550	250	100	55
Significant Impact?	*No*	*No*	*No*	*No*	*No*	*No*

Source: Harris 2019; CalEEMod, version 2016.3.2. See Appendix F for model output.
Notes: Emission quantities are rounded to the nearest whole number. Exact values are provided in Appendix F.

Other Stationary Sources

Potential increases in criteria air pollutant emissions associated with the proposed 2019 LRDP from the CUP are included above in the analysis of total buildout emissions. Other stationary sources of emissions on the campus include diesel emergency generators. New emergency generators installed under the 2019 LRDP would replace all existing generators on campus. Generators installed under the 2019 LRDP are expected to incorporate newer technology and be more efficient than the generators that are being replaced. Generators would continue to be tested on a similar schedule as existing conditions; as such, pollutant emissions from periodic generator testing would only nominally contribute to the net increase in pollutants from 2019 LRDP implementation.

Emissions from use of helicopters or ambulances for emergency services would be similar to existing conditions. Implementation of the 2019 LRDP would provide similar emergency services as currently provided at the existing hospital, although the total number of inpatient beds would decrease. The number of emergency helicopter or vehicle trips required in a given period varies as a result of need, rather than operations at the Hillcrest Campus. Implementation of the 2019 LRDP would not result in any change in the demand for emergency helicopter or vehicle trips. The new helipad would be designed to accommodate similarly sized helicopters to those accommodated by the existing helipad. Therefore, no net increase in emissions from fuel use associated with emergency helicopter or vehicle trips would result from project implementation. Impacts would be less than significant for this issue.

Overlap of Construction and Operation

During all years (2019 through 2033) of the proposed 2019 LRDP construction, construction-related and operational emissions would overlap. A portion of the 2019 LRDP would be completed and in operation, as well as operation of existing structures to remain or those not demolished yet, while construction is underway in other campus areas. Additionally, emissions from both construction equipment and on-road vehicles are anticipated to decrease over time due to increased efficiency standards. Therefore, emissions associated with near-term interim phases of operation are more conservative than long-term phases. Year 2025 reflects the worst-case interim operation scenario. This scenario includes operation of Phases 1A, 1B, 2A, 2B and the remaining existing facilities including the existing hospital and CUP.

Table 3.2-15 estimates the net increase in emissions compared to existing emissions in the interim year 2025 scenario. Table 3.2-16 estimates the worst case interim net increase of daily emissions from overlapping unmitigated construction emissions and interim net operational emissions in year 2025.

Table 3.2-15. Interim Year 2025 Operational Daily Maximum Air Pollutant Emissions

Emission Source	Maximum Daily Emissions (pounds/day)					
	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Energy	2	14	11	<1	1	1
Landscape	1	1	48	<1	<1	<1
Consumer Products	44	0	0	0	0	0
Architectural Coatings	14	0	0	0	0	0
Vehicular Sources	62	243	680	2	246	67
Total Operational Emissions (Year 2025)	123	258	739	3	247	68
Net Change in Emissions	*(-44)*	*(-105)*	*(-262)*	*0*	*58*	*7*
Significance Threshold	137	250	550	250	100	55
Significant Impact?	*No*	*No*	*No*	*No*	*No*	*No*

Source: Harris 2019; CalEEMod, version 2016.3.2. See Appendix F for model output.
Notes: Emission quantities are rounded to the nearest whole number. Exact values are provided in Appendix F.

Table 3.2-16. Overlapping Construction and Year 2025 Operation Maximum Net-Increase Air Pollutant Emissions

Emissions Source	Maximum Daily Emissions (pounds/day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Worst-Case Construction Emissions[1]	142	245	133	<1	37	13
2025 Interim Net Emissions	44	(-105)	(-262)	0	58	7
Worst-Case Interim Net Increase	***186***	*140*	*(-129)*	*<1*	*95*	*20*
Significance Threshold	**137**	**250**	**550**	**250**	**100**	**55**
Significant Impact?	**Yes**	No	No	No	No	No

Source: Harris 2019; CalEEMod, version 2016.3.2. See Appendix F for model output.

Notes: Emission quantities are rounded to the nearest whole number. Exact values are provided in Appendix F.

[1] Worst-case scenario for NOx, CO, SOx, and $_{PM2.5}$ would occur during simultaneous demolition and earthwork during Phase 1A. Worst-case VOC emissions would occur during simultaneous building construction, architectural coating, and demolition during Phase 2A/2B. Worst-case PM10 emissions would occur during simultaneous demolition and earthwork during Phase 2A/2B.

As shown in Table 3.2-15, similar to buildout conditions, interim year 2025 operation would result in a significant net increase in VOC emissions. NO_x and CO emissions are anticipated to decrease compared to existing conditions, primarily as a result of increasingly stringent vehicle emissions standards. The net increase in PM_{10}, and $PM_{2.5}$ emissions would not exceed significance thresholds. Therefore, combined unmitigated construction emissions and interim net operational emissions of VOCs in year 2025 would result in a cumulatively considerable contribution to an existing violation. Impacts would be potentially significant. However, as shown in Table 3.2-18, Mitigations Measure AIR-2 would reduce overlapping construction and operational emissions impacts to less than significant.

Mitigation Measures

Construction of Phases 2A and 2B of the 2019 LRDP and simultaneous construction and operation activities in year 2025 would have the potential to exceed air quality standards and result in a cumulatively considerable impact. Mitigation Measure AIR-2 would reduce VOC emissions during construction of Phases 2A and 2B by limiting construction activities from occurring simultaneously with architectural coating in these phases.

> **AIR-2: Architectural Coating.** Architectural coating activities in Phases 2A and 2B shall not occur simultaneously with any of the following construction activities: demolition, earthwork and grading, or paving. Architectural coating can occur simultaneously with building construction. In the absence of architectural coating, building construction may occur simultaneously with demolition, earthwork and grading, or paving activities. This measure shall be included on the final grading and construction plans for Phase 2A and 2B and shall be implemented by the construction contractor.

Table 3.2-17 shows Phase 2A/2B construction emissions with implementation of Mitigation Measure AIR-2. Estimated worst-case year 2025 overlapping construction and operation

emissions with implementation of Mitigation Measure AIR-2 are provided in Table 3.2-18. As shown in these tables, with mitigation, emissions of all pollutants during construction and operation would be below the thresholds, and emissions would be less than significant and less than cumulatively considerable.

Table 3.2-17. Mitigated Phase 2A/2B Construction Daily Maximum Air Pollutant Emissions

Construction Phase	Maximum Daily Emissions (pounds/day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Demolition	8	104	63	<1	20	6
Earthwork and Grading	7	73	55	<1	17	6
Building Construction	5	20	35	<1	8	3
Architectural Coating	129	1	2	<1	<1	<1
Paving	4	10	31	<1	8	2
Worst-Case Simultaneous Construction with Coating (Building Construction and Coating)	134	21	37	<1	9	3
Worst-Case Simultaneous Construction without Coating (Building Construction and Demolition)	13	124	98	<1	28	9
Significance Threshold	**137**	**250**	**550**	**250**	**100**	**55**
Significant Impact?	*No*	*No*	*No*	*No*	*No*	*No*

Source: Harris 2019; CalEEMod, Version 2016.3.2. See Appendix F for model output.

Notes: Emission quantities are rounded to the nearest whole number. Exact values are provided in Appendix F.

Table 3.2-18. Mitigated Overlapping Construction and Operation Maximum Net-Increase Air Pollutant Emissions

Construction Phase	Maximum Daily Emissions (pounds/day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Worst-Case Construction Emissions[1]	134	245	133	<1	37	13
2025 Interim Net Emissions	(-44)	(-105)	(-262)	0	58	7
Worst-Case Interim Net Increase	90	140	(-129)	<1	95	20
Significance Threshold	**137**	**250**	**550**	**250**	**100**	**55**
Significant Impact?	*No*	*No*	*No*	*No*	*No*	*No*

Source: Harris 2019; CalEEMod, version 2016.3.2. See Appendix F for model output.

Notes: Emission quantities are rounded to the nearest whole number. Exact values are provided in Appendix F.

[1] Worst-case scenario for NO_x, CO, SO_x, and PM2.5 would occur during simultaneous demolition and earthwork during Phase 1A. Worst-case VOC emissions would occur during simultaneous building construction, and architectural coating during Phase 2A/2B. Worst-case PM_{10} emissions would occur during simultaneous demolition and earthwork during Phase 2A/2B.

3.2.3.3 Issue 3: Sensitive Receptors

Air Quality Issue 3 Summary

Would implementation of the 2019 LRDP expose sensitive receptors to substantial pollutant concentrations?

Impact: Construction under the 2019 LRDP could expose sensitive receptors to substantial pollutant concentrations.

Mitigation: Construction Equipment Performance Standards (AIR-3)

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Significant and unavoidable

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP would have a significant impact if it would expose sensitive receptors to substantial pollutant concentrations. For CO emissions, an air quality impact is considered significant if CO emissions create a hot spot where either the California 1-hour standard of 20 ppm or the federal and California eight-hour standard of 9.0 ppm is exceeded. A project's impact on health risks would be considered significant if the project-related increase in risks would exceed the thresholds shown in Table 3.2-19.

Table 3.2-19. Significant Health Risk Levels

Health Risk	Significant Risk Threshold
Maximum Incremental Cancer Risk[1]	10.0 in a million
Total Chronic Non-Cancer Health Hazard Index[2]	1.0
Total Acute Non-Cancer Health Hazard Index[3]	1.0

Source: Ascent Environmental 2019.

Notes:

[1] Maximum Incremental Cancer Risk is the maximum lifetime excess cancer risk estimate (per million) at residential or worker receptor (whichever is greater). The maximum estimated risk generally is possible at only one location. All other locations show lower risks. Actual cancer risk would likely be less.

[2] Total Chronic Health Hazard Index (THI) is the sum of the ratios of the average annual exposure level of each compound to the compound's Reference Exposure Level (REL). Actual chronic THI would likely be less.

[3] Total Acute Health Hazard Index (THI) is the sum of the ratios of the maximum one-hour exposure level of each compound to the compound's REL. Actual acute THI would likely be less.

Impact Analysis

Sensitive receptors typically include schools (preschool–12th grade), residences, hospitals, resident care facilities, daycare centers, or other facilities that may house individuals with health conditions that would be adversely affected by changes in air quality. The following analysis addresses the potential for on- and off-site sensitive receptors to be exposed to CO hot spots or TACs during project construction and operation. Additionally, exposure of new sensitive receptors to existing off-site sources of TACs is evaluated.

Carbon Monoxide Hot Spots

Areas with high vehicle density, such as congested intersections and parking garages, have the potential to create high concentrations of CO, known as CO hot spots. An air quality impact is considered significant if CO emissions create a hot spot where either the California 1-hour standard of 20 ppm or the federal and California eight-hour standard of 9.0 ppm is exceeded. This typically occurs at severely congested intersections (LOS E or worse) (Caltrans 2010).

The TIA prepared for the 2019 LRDP (LLG 2019) used project-level trip generation analysis and distribution to evaluate the intersections in the project vicinity that would carry the majority of project traffic. The TIA concluded that intersections would operate at LOS E or F at buildout of the 2019 LRDP (year 2035), and all interim scenarios (year 2022, 2025, and 2030). One intersection would operate as LOS F with or without project implementation under all four scenarios:

- Hotel Circle Drive South/I-8 Eastbound Ramps

One additional intersection would operate at LOS E with project implementation at project buildout:

- Hotel Circle Drive South/Bachman Place

Localized CO concentrations are evaluated by using the CALINE4 microscale dispersion model, in accordance with the Caltrans Transportation Project-Level Carbon Monoxide Protocol, in combination with EMFAC 2017 emission factors. The CALINE 4 model was used to estimate the potential CO impact at these two intersections during the most congested peak hour (Caltrans 2011). To estimate the most conservative conditions for the hot spot analysis, CO concentrations were analyzed at the Hotel Circle Drive South/I-8 Eastbound Ramps intersection under year 2025 conditions because vehicle emissions factors are projected to decrease over time, and the 2019 LRDP would result in the greatest additional delay at the intersection under this scenario. Table 3.2-20 displays the estimated CO concentrations at the nearest receptor from the affected intersections. As shown in Table 3.2-20, CO concentrations would not exceed the state or federal AAQS for 1-hour or 8-hour CO concentrations at either intersection. This impact would be less than significant.

Table 3.2-20. Estimated Carbon Monoxide Concentrations

Intersection	1-Hour CO Concentration (ppm)	8-Hour CO Concentration (ppm)	Impact?
Hotel Circle Drive South/I-8 Eastbound Ramps (year 2025)	1.9	1.2	No
Hotel Circle Drive South/Bachman Place (Year 2035)	1.9	1.2	No
Significance Threshold	20.0 (State) / 35.0 (Federal)	9.0 (State and Federal)	

Source: CALINE 4 using EMFAC 2017 emission factors.

Notes: CO = carbon monoxide

See Appendix F for model output sheets.

Modeling assumptions: One-hour CO concentrations were calculated using the worst-case wind angle scenario in the CALINE 4 model. Receptor locations were set 30 feet from the roadway centerline. CO emission factors were generated using the EMFAC 2017 model, using the CO emission factor associated with the appropriate analysis year for the total vehicle mix during conditions in January at a temperature of 40°Fand 40 percent relative humidity. The assumed vehicle speed is 5 miles per hour. An ambient 1-hour CO concentration of 1.81 ppm was used to reflect ambient conditions. The 8-hour CO concentration is based on a persistence factor of 0.7 for urban uses (Caltrans 2010).

Toxic Air Contaminants

An HRA was prepared to determine the public health impacts of TACs emitted during the construction and operation of the 2019 LRDP. Preparation of the HRA included an inventory of potential emissions sources and review of potential pollutants. Dispersion modeling was conducted using AERMOD Version 9.6.5 software for three scenarios: construction, existing operation, and proposed operation of the 2019 LRDP. Emissions source data, receptor locations and parameters, on-site buildings, terrain data, and meteorological data were the primary inputs into AERMOD to determine how emissions would be dispersed and the resulting ground level concentrations over a receptor grid surrounding the Hillcrest Campus and at 11 discrete receptors (see Table 3.2-3). The discrete receptors include schools, hospitals, daycares, and churches. Cancer and non-cancer risks were modeled using HARP2 sofware and incorporating the ground level concentrations outputs from AERMOD and calculated emission rates from each source. Acute risks were calculated from a 1-hour exposure. Chronic risks were calculated for both long term exposure (30 years for resident and 25 years for worker receptors). Refer to Appendix F for detailed HRA methodology and assumptions, including emissions factors.

Construction

Construction-related emissions sources of DPM include on-site diesel equipment performing various activities and off-site diesel hauling and vendor trucks that travel to and from the Hillcrest Campus. Risks from DPM far outweigh those associated with other pollutants generated during construction activities; therefore, DPM is the TAC of primary concern. In accordance with California Office of Environmental Health and Hazard Assessment guidance, estimated emissions of PM_{10} from diesel combustion sources are used as a proxy for DPM in the HRA. Annual PM_{10} emissions were estimated based on results from the previously described CalEEMod modeling

prepared for the project-specific air quality technical report (Harris 2019). Emissions were divided by the number of years over which construction would occur to obtain average annual emissions. Emissions from on-site construction activity were assumed to vary by location based on the proposed building footprints in each phase. Vehicle trips for construction, including trucks, were assumed to access the site from I-8 and Bachman Place. DPM does not have an acute reference exposure level; therefore, only long-term cancer and chronic risk are addressed below. Refer to Appendix F for detailed HRA inputs and assumptions, including emissions factors.

Table 3.2-21 shows the modeled change in cancer risks resulting from construction of the development proposed in the 2019 LRDP. As shown in Table 3.2-21, construction would result in an incremental increase in cancer risk that exceeds SDAPCD's significance threshold of 10.0 in a million at sensitive receptors and residences on and off site. The majority of land uses within this area are residential land uses. Although the Unitarian Cooperative Preschool is located with 100 meters of the Hillcrest Campus, the construction emissions and resulting cancer risks would be distributed in such a way that areas southwest of the campus tend to have lower risks than areas southeast of the campus. Worker cancer risks would not exceed the threshold of 10.0 in a million on or off site.

Table 3.2-21. Modeled Cancer Risks from Construction Emissions Sources

Receptor[1]	Construction Scenario Cancer Risk (Chances in a million)	Exceeds Threshold? (10.0 in a million)
Point of maximum impact (on-site) (on Front Street 33 meters south of Dickinson Street)[2]	**134.6**	**Yes**
Point of maximum impact (off-site) (on Front Street 30 meters south of West Arbor Drive)[2]	**17.0**	**Yes**
Maximally exposed individual resident (on-site) (110 Dickinson Street)	**41.5**	**Yes**
Maximally exposed individual resident (off-site) (125 Arbor Drive)	**14.6**	**Yes**
Maximally exposed individual worker (on-site) (Surgery Research Laboratory)	3.88	No
maximally exposed individual worker (off-site) (Unitarian Universalist Church)	0.46	No
Maximally exposed non-residential sensitive receptor (on-site) (UC San Diego Medical Center – Hillcrest)	**42.04**	**Yes**
Maximally exposed non-residential sensitive receptor (off-site) (Unitarian Cooperative Preschool)	8.72	No

Source: Ascent Environmental 2019.

Notes:

[1] Receptors selected based on occurrence under buildout scenario.

[2] Based on residential exposure assumptions.

Table 3.2-22 shows the modeled non-cancer chronic risks due to construction activity. As shown in Table 3.2-22, based on the exposure and the construction emissions assumptions discussed in above, construction of the 2019 LRDP would not result chronic risks that exceed the SDAPCD chronic risk threshold of 1.0 or greater on the hazard index.

Table 3.2-22. Modeled Chronic Risks from Construction Emissions Sources

Receptor[1]	Construction Chronic Risk (Hazard Index)	Exceeds Threshold? (Hazard Index of 1.0 or greater)
Point of maximum impact (on-site) (on Front Street 33 meters south of Dickinson Street)[2]	0.02	No
Point of maximum impact (off-site) (on Front Street 30 meters south of West Arbor Drive)[2]	0.02	No
Maximally exposed individual resident (on-site) (Crest Chateau)	0.03	No
Maximally exposed individual resident (off-site) (125 Arbor Drive)	0.02	No
Maximally exposed individual worker (on-site) (Surgery Research Laboratory)	0.02	No
Maximally exposed individual worker (off-site) (Unitarian Universalist Church)	<0.01	No

Source: Ascent Environmental 2019.

Notes:

1. Receptors selected based on occurrence under buildout scenario.

2 Based on residential exposure assumptions.

Operation

Although many of the existing buildings would be replaced under the 2019 LRDP, the types of emissions sources from buildout of the 2019 LRDP would be similar to existing conditions. The Hillcrest Campus under the 2019 LRDP would operate emergency generators and two new boilers to replace the existing three boilers. The new campus would also include a new natural gas fired cogeneration facility. Under the 2019 LRDP, existing medical and research facilities would be replaced by similar uses. It is assumed that the type of chemicals used on the Hillcrest Campus under the 2019 LRDP would not change because the campus would continue to operate its existing programs as a medical research facility. Thus, the emission sources and TACs emitted from laboratories per square foot are assumed to be the same for the existing and proposed scenarios, although location of emissions would change. Assumptions for existing and proposed emissions sources, including number of units, usage hours, fuel usage, and inventory of laboratory chemicals were provided by UC San Diego. Refer to Appendix F for detailed HRA inputs and assumptions, including emissions factors.

Table 3.2-23 shows the modeled change in cancer risk as a result of operation of buildout of the 2019 LRDP. As shown in Table 3.2-23, operational emissions from buildout of the 2019 LRDP would not result in an incremental increase in cancer risk that exceeds SDAPCD's significance threshold of 10.0 in a million at any residential or non-residential receptor. At the point of

maximum impact, the increase in cancer risk would exceed 10.0 in a million. However, the point of maximum impact would occur at a location that is a public courtyard. Unlike a house or place of employment, receptors would not spend a significant portion of their time (multiple consecutive hours) in the courtyard each day. Therefore, a significant impact would not occur.

Table 3.2-23. Modeled Cancer Risks from Operational Emissions Sources

Receptor[1]	Existing Scenario Cancer Risk (chances in a million)	Proposed Scenario Cancer Risk (chances in a million)	Change in Cancer Risk (chances in a million)	Exceeds Threshold? (10.0 in a million)
Point of maximum impact (on-site) (Courtyard between HC-6, HC-2, and HC-1)[2]	9.37	22.87	13.50	Yes
Point of maximum impact (off-site) (Third Ave 115 meters north of Arbor Drive)[2]	4.51	6.30	1.79	
Maximally exposed individual resident (on-site) (Residential Building 3 [R-3])	0.00[3]	4.80	4.80	No
Maximally exposed individual resident (off-site) (4250 Fourth Ave)	3.80	4.75	0.95	No
Maximally exposed individual worker (on-site) (HC-6)	0.73	1.40	0.67	No
maximally exposed individual worker (off-site) (Unitarian Cooperative Preschool)	0.25	0.24	-0.01	No
Maximally exposed non-residential sensitive receptor (on-site) (UC San Diego Medical Center – Hillcrest)	3.69	7.41	3.72	No
Maximally exposed non-residential sensitive receptor (off-site) (Unitarian Cooperative Preschool)	3.37	2.91	-0.46	No

Source: Ascent Environmental 2019.

Notes:

[1] Receptors selected based on occurrence under buildout scenario.

[2] Based on residential exposure assumptions.

[3] This receptor had zero risk at this site under existing conditions, because this site does is not currently a residential land use.

Table 3.2-24 shows the modeled change in non-cancer chronic risk and Table 3.2-25 shows the modeled change in non-cancer acute risk from operation under buildout of the 2019 LRDP. As shown in Table 3.2-24 and Table 3.2-25, based on the exposure and the operational emissions assumptions discussed above, operation of the 2019 LRDP would not result in a chronic or acute risk that exceeds SDAPCD's significance threshold of 1.0 or greater on the hazard index.

Table 3.2-24. Modeled Chronic Risks from Operational Emissions Sources

Receptor[1]	Existing Scenario Chronic Risk (Hazard Index)	Proposed Scenario Chronic Risk (Hazard Index)	Exceeds Threshold? (Hazard Index of 1.0 or greater)
Point of maximum impact (on-site) (Uninhabited hillside west of existing Bachman Parking Structure)[2]	0.02	0.05	No
Point of maximum impact (off-site) (on Third Ave 115 meters north of Arbor Drive)[2]	0.01	0.03	No
Maximally exposed individual resident (on-site) (Residential Building 4 [R-4])	0.00[3]	0.02	No
Maximally exposed individual resident (off-site) (4232 Fourth Ave)	0.01	0.03	No
Maximally exposed individual worker (on-site) (HC-2)	0.03	0.04	No
Maximally exposed individual worker (off-site) (Unitarian Universalist Church)	0.00[3]	0.02	No

Source: Ascent Environmental 2019.

Notes:

[1] Receptors selected based on occurrence under Proposed Scenario.

[2] Based on residential exposure assumptions.

[3] This receptor had zero risk at this site under existing conditions because this site is not currently a residential land use.

Table 3.2-25. Modeled Acute Risks from Operational Emissions Sources

Receptor[1]	Existing Scenario Chronic Risk (Hazard Index)	Proposed Scenario Chronic Risk (Hazard Index)	Exceeds Threshold? (Hazard Index of 1.0 or greater)
Point of maximum impact (on-site) (Courtyard between HC-6, HC-2, and HC-1)[2]	0.02	0.03	No
Point of maximum impact (off-site) (Unitarian Universalist Church parking lot)[2]	0.02	0.02	No
Maximally exposed individual resident (on-site) (Residential Building 3 [R-3])	0.00[3]	0.02	No
Maximally exposed individual resident (off-site) (125 Arbor Drive)	0.02	0.01	No
Maximally exposed individual worker (on-site) (HC-6)	0.02	0.02	No
Maximally exposed individual worker (off-site) (Unitarian Universalist Church)	0.00[3]	0.02	No

Source: Ascent Environmental 2019.

Notes:

[1] Receptors selected based on occurrence under Proposed Scenario.

[2] Based on residential exposure assumptions

[3] This receptor had zero risk at this site under existing conditions because this site is not currently a residential land use.

Summary

Operation under the 2019 LRDP would not result in an incremental increase in cancer or non-cancer risk that exceeds the SDAPCD thresholds. However, cancer risk as a result of 2019 LRDP construction would exceed the SDAPCD significance threshold. Construction under the 2019 LRDP would potentially expose sensitive receptors to substantial pollutant concentrations. This impact would be potentially significant and Mitigation Measure AIR-3 would be required.

Existing Off-Site Toxic Air Contaminant Sources and New Receptors

Based on the CARB siting recommendations within the Air Quality and Land Use Handbook (CARB 2005), a detailed health risk assessment should be conducted for proposed sensitive receptors within 1,000 feet of a warehouse distribution center, 300 feet of a large gas station, 50 feet of typical gas dispensing facilities, or 300 feet of a dry cleaning facility that uses perchloroethlyene, among other siting recommendations (CARB 2005). Additionally, the CARB recommends that a health risk assessment be prepared for any sensitive receptors proposed within 500 feet of a highway. The Hillcrest Campus is not located within the screening distances of any existing off-site sources of TACs, such as warehouse distribution center, large gas station, gas dispensing facilities, dry cleaning or highways, which would require a health risk assessment for on-campus sensitive receptors. Impacts to new sensitive receptors related to off-site sources of TACs would be less than significant.

Mitigation Measures

Construction under the 2019 LRDP would have the potential to result in a significant incremental increase in cancer risk. Implementation of Mitigation Measure AIR-3 would reduce PM emissions by up to 90 percent compared to uncontrolled Tier 1-rated equipment. However, construction fleets available in California, including San Diego, are composed of a combination of engines, ranging from Tier 1 to Tier 4. As older equipment is rebuilt or replaced, the composition of higher tiered engines will increase. In addition, the use of high-performance renewable diesel can reduce DPM emissions by approximately 34 percent. With implementation of Mitigation Measure AIR-3, it would be possible to reduce emissions by the necessary amount (i.e., 77 percent) to achieve the applicable threshold of 10 chances in a million. The selected construction fleet would be required to comply with Mitigation Measure AIR-3. However, because a construction fleet has not been selected at this time, the selected contractor's fleet ratio of Tier 4 or Tier 3 engines and the availability of high-performance renewable diesel cannot be determined with certainty. Therefore, although it is possible to reduce emissions by the necessary amount (i.e., 77 percent) to achieve the applicable threshold of 10 chances in a million, the likely effective amount of reduction from implementation of Mitigation Measure AIR-3 cannot be quantified at this time. This impact would be significant and unavoidable.

AIR-3: Construction Equipment Performance Standards. UC San Diego, through bid and contract specifications, shall require the construction contractor to implement the following performance standards for the use of heavy-duty construction equipment during all construction activities:

- Use off-road construction diesel engines that meet, at a minimum, the Tier 4 interim California Emissions Standards, unless such an engine is not available for a particular item of equipment. Tier 3 engines shall be allowed on a project-by-project basis when the contractor has documented that no Tier 4 interim equipment or emissions equivalent retrofit equipment is available or feasible for the project.
- To the extent feasible and available, use high-performance renewable diesel fuel.

3.2.3.4 Issue 4: Odors

Air Quality Issue 4 Summary

Would implementation of the 2019 LRDP result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impact: Implementation of the 2019 LRDP could result in minor amounts of odorous emissions.

Mitigation: No mitigation is required.

Significance Before Mitigation: Less than significant

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, an impact is considered significant if implementation of the 2019 LRDP would result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. The potential for the 2019 LRDP to result in exposure to significant odors is based on a review of the CARB's Air Quality and Land Use Handbook and comparison of the 2019 LRDP's land use types to the odor causing uses listed in the Handbook.

Impact Analysis

Construction associated with the 2019 LRDP could result in minor amounts of odor compounds associated with diesel heavy equipment exhaust. However, all diesel equipment would not be operating at once, and construction near existing receptors would be temporary. SO_X is the only criteria air pollutant with a strong, pungent odor (ATSDR 2015). As shown in Tables 3.2-6 through 3.2-11, maximum construction emissions of SO_X would be less than one pound per day, well below

the threshold of 250 pounds per day. Therefore, construction of the 2019 LRDP would not cause nuisance odors that would result in a significant impact.

The CARB's Air Quality and Land Use Handbook includes a list of the most common sources of odor complaints received by local air districts. Typical sources of odor complaints include facilities such as sewage treatment plants, landfills, recycling facilities, petroleum refineries, and livestock operations. Implementation of the 2019 LRDP would not add any new operational odor sources, and any odors generated would be similar to existing odors associated with land uses on-campus and in the area. The 2019 LRDP proposes land uses similar to existing campus conditions, including a hospital, other medical office and research buildings, and residential uses. These types of land uses do not typically cause operational nuisance odors. Therefore, odors would not be considered objectionable. Operational odor impacts would be less than significant.

Mitigation Measures

Impacts related to odors under the 2019 LRDP would be less than significant; therefore, no mitigation measures are required.

3.2.4 Cumulative Impacts and Mitigation

3.2.4.1 Cumulative Issue 1: Consistency with Applicable Air Quality Plan

Air Quality Cumulative Issue Summary

Would implementation of the 2019 LRDP have a cumulatively considerable contribution to a cumulative air quality impact considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Issue 1: Consistency with applicable air quality plan	Less than significant	Not cumulatively considerable
Issue 2: Cumulative increase in criteria pollutant emission	Less than significant	Not cumulatively considerable
Issue 3: Expose sensitive receptors to substantial pollutant concentrations	Potentially significant	Cumulatively considerable and unavoidable
Issue 4: Result in other emissions (such as those leading to odors)	Less than significant	Not cumulatively considerable

The geographic context for the analysis of cumulative impacts to consistencies with an applicable air quality plan is the SDAB. The RAQS and SIP are intended to address cumulative impacts in

the SDAB based on future growth predicted by SANDAG. As described above, implementation of the 2019 LRDP would be consistent with the growth projections in the RAQS and SIP. Cumulative development is not expected to result in a significant impact in terms of conflicting with the SDAPCD air quality management plans and the California SIP because the majority of cumulative projects would propose development that is consistent with the applicable growth projections incorporated into local air quality management plans. Implementation of the 2019 LRDP, in combination with other cumulative projects, would not conflict with or obstruct implementation of the RAQS or SIP air quality plans. A cumulative impact would not occur and the 2019 LRDP's contribution would not be cumulatively considerable.

3.2.4.2 Cumulative Issue 2: Cumulative Increase in Criteria Pollutant Emissions

An existing cumulative impact related to PM_{10}, $PM_{2.5}$, and O_3 precursors (NO_x and VOC) exists in the basin. As previously described in Section 3.2.3.2, the thresholds listed in Table 3.2-6 reflect the potential for the proposed 2019 LRDP to result in a potentially significant contribution of criteria pollutant emissions to regional air quality and AAQS attainment. A project that is consistent with the thresholds in Table 3.2-6 is considered to result in less than cumulatively considerable emissions. As demonstrated above, with implementation of Mitigation Measure AIR-2, construction and operation of the 2019 LRDP would not exceed the significance thresholds and would not result in a cumulatively considerable contribution. Mitigation Measure AIR-3 would further reduce construction emissions; however, the emissions reductions cannot be quantified at this time.

3.2.4.3 Cumulative Issue 3: Sensitive Receptors

Cumulative growth in the planning area would have the potential to increase congestion and potentially result in CO hot spots. However, as described above, the increase in vehicle trips associated with the implementation of the 2019 LRDP, in combination with cumulative trips, would not result in significant congestion at any intersection during construction or operation. Therefore, a significant cumulative impact related to CO hot spots would not occur.

The cumulative projects would also have the potential to result in a significant cumulative impact associated with sensitive receptors if, in combination, they would expose sensitive receptors to a substantial concentration of TACs that would significantly increase cancer risk. As discussed above, the 2019 LRDP would have the potential to result in a significant incremental increase in cancer risk during construction. The cumulative projects surrounding the Hillcrest Campus include residential and commercial projects that would not be expected to result in significant emissions of TACs during operation or require extended construction periods similar to the 2019 LRDP. However, construction of these projects would require diesel equipment and truck trips and would incrementally contribute to TACs exposure. As such, the cumulative projects, in combination with the proposed 2019 LRDP, would result in an increased risk in exposure to TAC sources, and a

significant cumulative impact would occur. Mitigation Measure AIR-3 would reduce the 2019 LRDP's contribution to the extent feasible but not to a less than cumulatively considerable level.

3.2.4.4 Cumulative Issue 4: Odors

The geographic context for the analysis of impacts relative to objectionable odors are limited to the area immediately surrounding the odor source and are not cumulative in nature because the air emissions that cause odors disperse beyond the sources of the odor. As the emissions disperse, the odor becomes decreasingly detectable. The cumulative projects surrounding the Hillcrest Campus include residential and commercial projects (i.e., the Legacy International Center project and the 141 multi-family residential unit project) that would not be expected to result in objectionable odors. In addition, implementation of the 2019 LRDP would not generate a new source of objectionable odors. Therefore, a cumulative impact would not occur and the 2019 LRDP's contribution would not be cumulatively considerable.

3.2.5 CEQA Issues Where There Is No Potential for a Significant Effect

All checklist items in Appendix G of the CEQA Guidelines under Air Quality are evaluated above. There are no CEQA issues where there is no potential for significant effect.

3.2.6 References

AECOM. 2018. Air Quality Technical Study for the University of California San Diego 2018 Long Range Development Plan Environmental Impact Report, San Diego, California. Prepared for UC San Diego. July 2018.

Ascent Environmental. 2019. Health Risk Assessment for the University of California – San Diego Hillcrest Campus 2019 Long Range Development Plan. June 2019.

ATSDR (Agency for Toxic Substances and Disease Registry). 2015. "Environmental Odors – Frequently Asked Questions." October 23, 2015. Accessed December 26, 2018. https://www.atsdr.cdc.gov/odors/faqs.html.

Caltrans (California Department of Transportation). 2010. Transportation Project-Level Carbon Monoxide Protocol. Searchable PDF Version. December 1997. Revised October 13, 2010.

Caltrans. 2011. CALINE 4 – A Dispersion Model for Predicting Air Pollutant Concentrations Near Roadways. Version 2.1. October 28, 2011.

CARB (California Air Resources Board). 2005. Air Quality and Land Use Handbook: A Community Health Perspective. April.

CARB. 2011. "Toxic Air Contaminant Identification List." Page updated July 18, 2011. Accessed February 29, 2016. http://www.arb.ca.gov/toxics/id/taclist.htm.

CARB. 2016. "Ambient Air Quality Standards." Revised May 4. Accessed January 2019. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

Chen. Zhe. 2018. Email from Chen Zhe (LSA) to Sharon Toland (Harris & Associates). November 16, 2018.

City of San Diego. 2011. California Environmental Quality Act Significance Determination Thresholds. January 2011.

Clark Construction. 2018. NTPLL – Environmental Impact Report, Construction Traffic Study. January 31, 2018.

County of San Diego. 2007. Guidelines for Determining Significance, Air Quality, Department of Planning and Land Use. March 19, 2007.

Harris (Harris & Associates). 2019. Air Quality Technical Report for the UC San Diego Hillcrest Campus 2019 Long Range Development Plan. June 2019.

Hendrix, Michael. 2018. Email from Michael Hendrix (LSA) to Sharon Toland (Harris & Associates). November 19, 2018.

LLG (Linscott, Law and Greenspan, Engineers). 2019. UC San Diego Hillcrest Campus 2019 Long Range Development Plan – Transportation Impact Analysis. June 2019.

LSA (LSA Associates, Inc.). 2019. Greenhouse Gas Emissions Reduction Strategy – University of California, San Diego Hillcrest Campus Long Range Development Plan EIR. June 2019.

San Joaquin Valley APCD (San Joaquin Valley Air Pollution Control District). 2015. Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P. Fifth Appellate District Case No. F066798. April 2, 2015.

SDAPCD (San Diego Air Pollution Control District). 2016a. Notice of Workshop for Discussion of Draft Updated Plans for Attaining the State and National Ozone Standards in San Diego County. August 17, 2016.

SDAPCD. 2016b. "Attainment Status." Accessed March 18, 2016. http://www.sdapcd.org/content/sdc/apcd/en/air-quality-planning/attainment-status.html.

SDAPCD. 2016c. "Air Quality Planning." Accessed March 18, 2016. http://www.sdapcd.org/content/sdc/apcd/en/air-quality-planning.html.

SDAPCD. 2016d. 2016 Revision of the Regional Air Quality Strategy for San Diego County. December 2016.

SDPACD. 2017a. San Diego Air Pollution Control District Annual Network Plan 2013. Submitted for USEPA review June 30, 2017.

SDAPCD. 2017b. California Air Toxics "Hot Spots" Information and Assessment Act (AB 2588). January 25, 2017.

USEPA (U.S. Environmental Protection Agency). 2015. "The Green Book Nonattainment Areas for Criteria Pollutants." October 1, 2015. Accessed March 8, 2016. https://www3.epa.gov/airquality/greenbook/index.html.

USEPA. 2016. “What are the Six Common Air Pollutants?” Accessed February 29, 2016. http://www.epa.gov/air/urbanair/.

USEPA. 2018. America's Children and the Environment, Third Edition. Environments and Contaminants: Criteria Air Pollutants section. Updated January 2018.

USEPA. 2019. “Ground-level Ozone Basics.” Accessed February 22, 2019. https://www.epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics#formation.

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3.3 Biological Resources

This section of this 2019 LRDP EIR evaluates the potential for biological impacts associated with implementation of the 2019 LRDP for the Hillcrest Campus. The term "biological resources" refers to both botanical and wildlife communities on the Hillcrest Campus. For the purposes of this document, "special-status" species include those species that have been recognized by either federal or state resource management agencies or conservation organizations as having special management needs due to limited distribution, limited numbers, or significant population declines associated with natural or human-made causes. Special-status species include those designated as endangered, threatened, rare, protected, sensitive, or species of special concern according to the U.S. Fish and Wildlife Service (USFWS); California Department of Fish and Wildlife (CDFW); California Native Plant Society (CNPS); or applicable regional plans, policies, or regulations. The information provided in this section is based on the Biological Resources Technical Report prepared for the proposed 2019 LRDP by Harris & Associates (Harris 2019), which is included as Appendix B of this 2019 LRDP EIR.

3.3.1 Environmental Setting

The following sections provide an overview of the biological survey methods used during the 2018 surveys of the Hillcrest Campus, as well as the results of those surveys. The vegetation communities, jurisdictional areas, and sensitive plant and animal species are summarized in this section, with greater detail provided in Appendix B.

3.3.1.1 Biological Survey Methods

The most recent biological surveys were conducted on the Hillcrest Campus by qualified Biologists from Harris and Associates (Harris) in 2018. Surveys were conducted for vegetation mapping, preliminary drainage mapping, general wildlife, rare plants, and the federally threatened coastal California gnatcatcher (CAGN) (*Polioptila californica californica*). Prior to conducting biological field surveys, Harris performed a review of aerial imagery, and previous vegetation and sensitive resources mapping for the Hillcrest Campus from the 1995 UC San Diego Medical Center – Hillcrest LRDP EIR (UC San Diego 1995), the City's Multiple Species Conservation Program (MSCP) Subarea Plan (City of San Diego 1997), the Helix 2015 CAGN Survey Report for the UC San Diego Central Plant and Cooling Tower Expansion Project (HELIX 2015), and the Recon 2015 Results of the Biological Survey for the 101 Dickinson Project (RECON 2015). In addition, Harris conducted a search of sensitive species databases for information regarding sensitive species known to occur within 1 mile of the project area, including the USFWS Information for Planning and Consultation species records (USFWS 2018a); the CDFW California Natural Diversity Database (CNDDB) (CDFW 2017, 2018a); and CNPS Rare and Endangered Plant Electronic Inventory (CNPS 2017, 2018). Searches through the CNPS online inventory database (CNPS 2018) and CNDDB online inventory were conducted to assist in the determination of

special-status plant and animal species potentially present on site. Specifically, a 1-mile search radius included the La Jolla and Point Loma quadrants.

Biological resources surveys were conducted on foot to visually cover 100 percent of the project area and a 200-scale (i.e., 200 feet = 1 inch) aerial photograph map (Google Earth 2017) with an overlay of the project boundary was utilized to map the vegetation communities and record any special-status biological resources directly in the field. Harris Biologists made updates to the vegetation community boundaries and documented special-status biological resources directly in the field during the spring 2018 CAGN surveys (refer to Appendix B) (Harris 2019).

Botanists conducted a general biological reconnaissance survey by visually inspecting the project area on May 8, 2017, to determine the habitat communities and potential for sensitive plant and animal species. The botanists mapped the vegetation communities within the Hillcrest Campus in May 2017 (TRC 2017).

Observable biological resources, including perennial plants and conspicuous wildlife (i.e., birds and some reptiles) commonly accepted as regionally special status by the CNPS, CDFW, and USFWS, were recorded.

Plant and animal species observed or otherwise detected during the surveys were recorded (Appendix B). Animal identifications were made in the field by direct, visual observation or indirectly by detection of calls, burrows, tracks, or scat. Binoculars were used to aid in the identification of wildlife. All plant species observed during the survey were recorded (Appendix B). Plants of uncertain identity were photographed or collected and subsequently identified from keys, descriptions, and illustrations in The Jepson Manual, Vascular Plants of California, Second Edition (Baldwin et al. 2012).

During 2018, special-status plant species were observed, but a focused rare plant survey was not conducted. Special-status species observed during 1995, 2017, and 2018 surveys are described in Sections 3.3.1.2 and 3.3.1.4.

Nomenclature used in this section generally comes from Holland (1986) and Oberbauer et al. (2008) for vegetation; Baldwin et al. (2012), Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2018), and the Checklist of the Vascular Plants of San Diego County, Fifth Edition (Rebman and Simpson 2014), for plants; Collins and Taggart (2009), Crother (2017), and CaliforniaHerps.com (2018) for reptiles; American Ornithological Society (2018) for birds; and Bradley et al. (2014) for mammals. Plant species status is from the CNPS (2018) and CDFW (2018b). Animal species status is from CDFW (2018c).

3.3.1.2 Vegetation Communities

Surveys conducted in 2018 documented seven vegetation communities and land use types on the Hillcrest Campus (Figure 3.3-1, Biological Resources). These include Diegan coastal sage scrub including disturbed sage scrub, eucalyptus woodland, non-native grassland, disturbed southern willow scrub, non-vegetated channels, and an existing dirt and gravel access road (Baldwin et. al 2012; Oberbauer et al. 2008; Holland 1986). Table 3.3-1, Vegetation Communities and Land Use Types within the Hillcrest Campus, lists the total acreage for each vegetation community or land use type. A description of each vegetation community and land use type is provided following Table 3.3-1.

Table 3.3-1. Vegetation Communities and Land Use Types within the Hillcrest Campus

Vegetation Community	Project Area Acreage
Wetland Vegetation Communities	
Southern Willow Scrub Disturbed[1]	1.38
Non-Vegetated Channel[2]	0.04
Wetlands Subtotal	*1.42*
Upland Vegetation Communities	
Diegan Coastal Sage Scrub[1]	19.49
Diegan Coastal Sage Scrub Disturbed[1]	1.29
Non-Native Grassland[1]	0.62
Eucalyptus Woodland	6.69
Urban/Developed Land	33.15
Uplands Subtotal	*61.24*
Total	**62.66**

Sources: TRC 2017; Harris 2019.

Notes:

[1] Considered a sensitive vegetation community.

[2] Potentially sensitive resource.

An additional 1 acre of land was surveyed to evaluate the off-site traffic mitigation area required for the off-campus widening of Bachman Place to three lanes from the northern Hillcrest Campus Boundary to the intersection of Hotel Circle South. The vegetation communities in this area include 0.19 acre of non-native grassland, 0.42 acre of disturbed habitat, and 0.39 acre of developed land. As the off-site traffic mitigation area is not within the Hillcrest Campus, these vegetation community and land use acreages are not included in Table 3.3-1.

The vegetation communities observed on Hillcrest Campus are described in the following sections. Those identified as sensitive were designated as such because of the general scarcity of the community; impacts to the habitat are often regulated by USFWS, CDFW, and/or U.S. Army Corps of Engineers (ACOE); and/or the species it supports and the functions that it provides.

Wetlands

Southern Willow Scrub Disturbed

Southern willow scrub consists of dense, broad-leaved, winter-deciduous stands of trees dominated by shrubby willows (*Salix* spp.) in association with mulefat (*Baccharis salicifolia*). This vegetation community typically occurs on loose, sandy, or fine gravelly alluvium deposited near stream channels during flood flows (Oberbauer et al. 2008).

The 1.38 acres of southern willow scrub disturbed on the Hillcrest Campus occurs north of Dickinson Street and along a concrete drainage channel east of Bachman Place. The southern willow scrub patch north of Dickinson Street occurs at the outlet of multiple storm drains and consists of willows, western sycamore (*Platanus racemosa*), Fremont's cottonwood (*Populus fremontii*), and non-native pampas grass (*Cortaderia* sp.). The southern willow scrub along the concrete channel east of Bachman Place is disturbed due to the presence of the concrete-lined channel, areas of no vegetation, and relatively high percentage of non-native species such as salt cedar (*Tamarix ramosissima*), Mexican fan palm (*Washintongia robusta*), pepper trees (*Schinus* spp.), and castor bean (*Ricinis communis*). Arroyo willow (*Salix lasiolepis*), black willow (*Salix gooddingii),* Fremont's cottonwood, mulefat, and cat-tails (*Typha latifolia*) occur along the concrete drainage.

Southern willow scrub is often considered sensitive and declining by the USFWS and CDFW. Southern willow scrub may be regulated by CDFW under Section 1602 of the California Fish and Game (CFG) Code and/or the ACOE under Section 404 of the Clean Water Act (CWA) if adjacent to waters of the state and/or United States.

The willows, western sycamore, and Fremont's cottonwood north of Dickinson Street and along the concrete channel east of Bachman Place provide additional habitat for insectivorous bird species especially during the dry summer months.

In Southern California, southern willow scrub has been impacted by such activities as filling, draining, clearing of vegetation, water diversion projects, impoundment projects, channelization, increased sediment loading, lowering of water tables, human recreational activities, gravel mining, proliferation of exotic species, grazing, and urban development (Bowler 1990). Southern willow scrub provides important breeding habitat for many animals, such as the state and federally endangered least Bell's vireo (*Vireo bellii pusillus*) and other breeding birds, as well as other important functions such as flood conveyance, flood storage, water quality, and sediment control; however, it is naturally limited by topography, soil, and hydrologic conditions. Southern willow scrub, which usually grows along drainages, at the base of canyons, or along watercourses, also provides cover and shelter for wildlife movement. Even in urbanized areas such as San Diego, southern willow scrub can provide necessary resources for wildlife species to move through the matrix of urbanized habitats.

Non-Vegetated Channel

Non-vegetated channel consists of predominantly unvegetated sandy, gravelly, or rocky channels. Variable water lines inhibit the growth of vegetation, although some weedy species of grasses may grow along the outer edges of the channel. Vegetation may exist here but is usually less than 10 percent total cover (Oberbauer et al. 2008).

Harris Biologists preliminarily mapped approximately 0.04 acre of non-vegetated channel, including four narrow non-vegetated earthen bottom channels and one concrete-lined channel within the project area (Harris 2019). Since the concrete-lined channel east of Bachman Place is human made, it is discussed in Section 3.3.1.3 (Figure 3.3-1).

The three non-vegetated earthen bottom channels are described below and identified A through C as presented on Figure 3.3-1:

1. Channel A is an approximately 1,100-foot long drainage channel that begins at the location of three storm drain outlets at the northern edge of the mesa top west of North Annex Replacement Facility and east of the Multipurpose Facility north of Dickinson Street. This drainage flows north along an existing dirt access road to Bachman Place where it flows east under the road to connect to the concrete channel. A total of four smaller tributary channels and seven storm drains flow into Channel A on the Hillcrest Campus.
   A potential wetland consisting of willows, western sycamore, Fremont's cottonwood, and pampas grass also occurs at the storm drain outlets between the Multipurpose Facility, Telecommunications, and North Annex Replacement Facility buildings north of Dickinson Street. The area is mapped as Southern Willow Scrub Disturbed on Figure 3.3-1.
2. Channel B is a small drainage that begins at a storm drain outlet west of the Magnetic Resonance Institute building near the western edge of the Hillcrest Campus and flows west down the canyon and off site outside the Hillcrest Campus Boundary.
3. Channel C is an approximately 350-foot-long earthen bottom drainage channel that begins at a storm drain outlet east of Front Street in the southeastern portion of the Hillcrest Campus then follows the low area through the eucalyptus dominated vegetation area to Bachman Place. At Bachman Place, the channel connects to a storm drain and goes underground along the east side of Bachman Place.

Uplands

Diegan Coastal Sage Scrub (Including Disturbed)

Coastal sage scrub is one of the two major shrub types (the other being chaparral) that occur in Southern California, occupying xeric sites characterized by shallow soils. Four distinct coastal sage scrub geographical associations (northern, central, Venturan, and Diegan) are recognized along the California coast. Diegan coastal sage scrub may be dominated by a variety of species depending upon soil type, slope, and aspect. Typical species found within Diegan coastal sage

scrub include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), lemonadeberry (*Rhus integrifolia*), white sage (*Salvia apiana*), and black sage (*Salvia mellifera*) (Oberbauer et al. 2008).

Approximately 19.49 acres of Diegan coastal sage scrub and 1.29 acres of disturbed Diegan coastal sage scrub were mapped on the Hillcrest Campus.

Within the relatively flat areas in the northwestern portion of the project area and the west-facing slope east of Bachman Place, Diegan coastal sage scrub habitat is dominated by California sagebrush and California buckwheat. The steep west-facing slopes on the western portion of the project area are dominated by California sagebrush. The northern portion of the slope west of Bachman Place is dominated by open Diegan coastal sage scrub with areas of bare ground and special-status San Diego barrel cactus (*Ferocactus viridescens*) (refer to Section 3.3.1.4). Small pockets of native grassland dominated by native purple needle-grass (*Stipa lepida*), native bulbs, and non-native grasses occur on the north-facing slope within the central portion of the Diegan coastal sage scrub habitat area. On the steep slopes west of Bachman Place, the Diegan coastal sage scrub is dominated by dense stands of lemonadeberry.

Diegan coastal sage scrub (including disturbed) is often considered sensitive by the USFWS, and is given the highest inventory priority (sensitivity) by CNDDB. Diegan coastal sage scrub was listed as the third most extensive vegetation community in the County in 1965 (CDFG 1965); however, Oberbauer and Vanderwier (1991) suggest that nearly 72 percent of the County's original sage scrub habitat has been destroyed or modified, primarily due to urban expansion. Many species are dependent upon Diegan coastal sage scrub, including the federally listed threatened CAGN and several species of small mammals and reptiles.

The highest quality CAGN suitable habitat in the survey area consists of Diegan scrub coastal sage scrub dominated California sagebrush. The largest area of sagebrush dominated Diegan coastal sage scrub occurs in the northwestern portion of the survey area west of the existing dirt access road connecting the mesa top area to Bachman Place. Smaller and more open patches of sagebrush dominated Diegan coastal sage scrub occur east of Bachman Place upslope of the concrete drainage and disturbed southern willow scrub habitat area.

Much of the survey area is within steep slopes. Thick stands of mature/old growth lemonadeberry dominate the Diegan coastal sage scrub on the steep slopes. The mature/older growth vegetation is more dense and shrubby than typically associated with coastal sage scrub.

Non-Native Grassland

Non-native grassland is a dense to sparse cover of annual grasses, sometimes associated with numerous species of native annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. Characteristic species include oats (*Avena* sp.), red brome (*Bromus*

rubens), ripgut (*B. diandrus*), barley (*Hordeum* sp.), and mustard (*Brassica* sp.). The majority of species and biomass within the non-native grassland community originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to California (Oberbauer et al. 2008).

Characteristic non-native grass species found in this vegetation community on the Hillcrest Campus include foxtail chess (*Bromus madritensis* ssp. *madritensis*), oats, and ripgut. The 0.62-acre patch of non-native grassland west of Bachman Place in the northwestern area of the Hillcrest Campus is comprised primarily of non-native grass species, black mustard (*Brassica nigra*), and small California sunflower (*Encelia californica*) bushes.

In addition, approximately 0.19 acre of non-native grassland occur within the off-site traffic mitigation area along Bachman Place immediately north of the Hillcrest Campus.

Smaller, unmapped, patches of non-native grassland occur within the Diegan coastal sage scrub east of the existing dirt and gravel access road.

Directly and indirectly, non-native grasslands provide foraging habitat for raptors and may be succeeded naturally by coastal sage scrub or other native habitats over time. For these reasons, non-native grassland and disturbed non-native grassland are considered sensitive by CDFW.

Eucalyptus Woodland

Eucalyptus woodland is dominated by eucalyptus, an introduced genus that produces a large amount of leaf and bark litter. The chemical and physical characteristics of this litter limit the ability of other species to grow in the understory, and floristic diversity decreases. If sufficient moisture is available, eucalyptus becomes naturalized and is able to reproduce and expand its range (Oberbauer et al. 2008).

Eucalyptus woodland mapped on the Hillcrest Campus consists of stands of eucalyptus trees dominated red gum (*Eucalyptus camaldulensis*) that have a naturalized understory (not maintained or otherwise landscaped or developed) and/or that occur in association with native vegetation communities. Eucalyptus woodland occupies 6.69 acres on the Hillcrest Campus. While it is not considered a sensitive vegetation community, it does have the potential to support nesting bird species.

Disturbed Habitat

Disturbed areas include those that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association, but continues to retain a soil as substrate. Typically, vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamental or ruderal exotic species that take advantage of disturbance, or shows signs of past or present animal usage that removes any capability of providing viable natural habitat for uses other than dispersal (Oberbauer et al. 2008).

The disturbed area within the off-site traffic mitigation area includes 0.42 acre of disturbed habitat north of the Hillcrest Campus and east of the Bachman Place (Figure 3.3-1). The area is dominated by hottentot fig (*Carpobrotus edulis*), pampas grass, and Mexican fan palm. Even though the area is disturbed and noisy, the trees could support nesting, roosting, and foraging avian species. The remainder of the area provides little value for most non-avian native wildlife.

Urban/Developed Land

Urban/developed land includes areas of existing development (locations of existing manufactured structures), roadways, parking lots, pedestrian paths, horticultural open spaces, landscape buffers and courtyards, plazas, gardens, and recreation fields on the Hillcrest Campus. Urban/developed land occupies 33.15 acres on the Hillcrest Campus and is not considered sensitive.

3.3.1.3 Jurisdictional Areas

Jurisdictional delineations were not conducted as part of the 2017 and 2018 survey efforts. However, wetlands and waters potentially subject to the regulatory jurisdiction of the ACOE pursuant to Section 404 of the CWA (33 USC 1344), the San Diego Regional Water Quality Control Board (SDRWQCB) pursuant to Section 401 of the CWA and/or the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), and the CDFW pursuant to Sections 1600 et seq. of the CFG Code occur on the Hillcrest Campus, and jurisdictional delineations of these potential jurisdictional resources may be required. Wetland vegetation communities (i.e., southern willow scrub [including disturbed], herbaceous wetland) occur on the Hillcrest Campus and may fall under the regulatory jurisdiction of the ACOE, RWQCB, and/or CDFW.

Non-wetland waters, including non-vegetated stream channels, erosional features, gullies, and concrete lined channels occur on the Hillcrest Campus and are mostly associated with canyons. These features may also fall under the regulatory jurisdiction of the ACOE, San Diego (SD) RWQCB, and/or CDFW. As part of the survey effort, four non-vegetated stream/drainage channels and one concrete-lined channel were preliminarily mapped on the Hillcrest Campus (Harris 2019). These features are described in Section 3.3.1.2 and presented on Figure 3.3-1.

The concrete-lined channel begins at a culvert northeast of Bachman Circle across the street from the Bachman Parking Structure and flows approximately 1,300-foot north to the northern edge of the project area. Just north of the project area the concrete channel flows into a culvert and goes underground. The underground channel continues north of the project area toward Mission Valley under I-8 and connects to the San Diego River.

A potential herbaceous wetland consisting of a large arroyo willow is located along the concrete channel. This area is mapped as southern willow scrub disturbed habitat on Figure 3.3-1. Downstream portions of the concrete channel have cracked, and stagnant water collects in this

area. Herbaceous wetlands dominated by cattails have become established in cracks in the channel and potential wetlands consisting of willows and Fremont cottonwoods abut the channel.

Future project phases implemented under the proposed 2019 LRDP with potential to impact these areas would require site-specific delineations and permits from the ACOE, SDRWQCB, and/or CDFW as necessary.

3.3.1.4 Sensitive Plant and Animal Species

A total of 127 plant species were observed within the project area during 2017 and 2018 biological surveys, of which 63 (50 percent) were native species and 64 (50 percent) were non-native species. Appendix B presents the list of plant species observed. Dominant plant species include red gum, lemonadeberry, and ripgut grass. Additional dominant species are listed in Section 3.3.1.2. Ornamental/landscape species occurring within urban/developed land are not included in the species tally.

Thirty-three species of wildlife were observed during the surveys (29 bird species, 2 mammal species, and 2 reptile species). Appendix B presents the list of animal species observed. Dominant species in the Diegan coastal sage scrub included wrentit (*Chamaea fasciata*), California towhee (*Pipilo crissalis*), spotted towhee (*Pipilo maculatus*), bushtit (*Psaltriparus minimus*), and Anna's hummingbird (*Calypte anna*). American crow (*Corvus brachyrhynchos*), an avian nest predator, was also common in the project area. California scrub jay (*Aphelocoma californica*), another avian nest predator, also occurred in the survey area. An active bushtit nest was observed in a Peruvian pepper tree (*Schinus molle*) near Bachman Place and the existing dirt and gravel access road on May 3, 2018. Dominant species in the gum trees surrounding the Diegan coastal sage scrub included American crow, house finch (*Haemorhous mexicanus*), lesser goldfinch (*Spinus psaltria*), and western kingbird (*Tyrannus verticalis*).

Raptors observed on the Hillcrest Campus during 2017 and 2018 surveys include red-tailed hawk (*Buteo jamaicensis*) and red-shouldered hawk (*Buteo lineatus*).

Two common mammal species, California ground squirrel (*Spermophilus beecheyi*) and desert cottontail (*Sylvilagus audubonii*), and two common reptile species, San Diego alligator lizard (*Elgaria multicarinata webbii*) and western fence lizard (*Sceloporus occidentalis*), were observed in the undeveloped areas of the Hillcrest Campus.

Sensitivity Designations

Federal listing of endangered and threatened wildlife and plants is administered by the USFWS under the federal Endangered Species Act (FESA). An "endangered" species is one that is in danger of extinction throughout all or a significant portion of its range. A "threatened" species is one that is likely to become endangered in the foreseeable future.

CDFW's implementation of the California ESA (CESA) has created a program similar in structure to, but different in detail from, the USFWS program implementing the FESA. CDFW maintains a list of designated endangered, threatened, and special-status plant and animal species. CDFW also maintains a list of animal "Species of Special Concern," most of which are species whose breeding populations in California may face extirpation (CDFW 2018c). Although these species have no legal status, CDFW recommends consideration of them during analysis of the impacts of proposed projects to protect declining populations and to avoid the need to list them as endangered in the future; therefore, they are included in this 2019 LRDP EIR. Species that have been labeled as "fully protected" are considered sensitive since they are protected by the CFG Code. Species that are considered "watch list" species by CDFW are not considered sensitive species per CEQA and therefore are not mentioned herein.

Under the provisions of Section 15380(d) of CEQA, the lead agency, in making a determination of significance, must treat rare non-listed plant and animal species as equivalent to listed species if such species satisfy the minimum biological criteria for listing. In general, CDFW considers plant species with a California Rare Plant Rank (CRPR) 1A, 1B, 2A, or 2B of the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (CNPS 2017) as qualifying for consideration under this CEQA provision. Species on the CNPS CRPR List 3 or 4 may, but generally do not, qualify for protection under this provision.

Sensitive vegetation communities are defined by CDFW as land that supports unique vegetation communities or the habitats of rare or endangered species or subspecies of animals or plants as defined by Section 15380 of the CEQA Guidelines (CDFW 2019). Of the seven identified vegetation communities and land use types on the Hillcrest Campus, a total of four are considered to be sensitive vegetation communities. These include southern willow scrub (including disturbed), potentially sensitive non-vegetated channel, Diegan coastal sage scrub (including disturbed), and non-native grassland (including disturbed). Eucalyptus woodland and developed lands do not meet the definition of sensitive vegetation community.

Therefore, plant and wildlife species are considered sensitive for purposes of inclusion in this 2019 LRDP EIR if they are federally listed as threatened or endangered, state listed as threatened or endangered, listed as a state fully protected species, listed as a state species of special concern, or listed as a CNPS CRPR List 1 or 2 species. However, two species that do not meet this sensitivity definition were detected on the Hillcrest Campus and have been included both in this 2019 LRDP EIR and in the Biological Resources Technical Report (Appendix B) for informational purposes (Harris 2019).

Sensitive Plant Species

Five CNPS ranked plant species were observed on the Hillcrest Campus during the 2018 CAGN surveys: ashy spike-moss (*Selaginella cinerascens*), San Diego barrel cactus (*Ferocactus viridescens*), wart-stemmed ceanothus (*Ceanothus verrucosus*), San Diego County sunflower

(*Bahiopsis laciniata*), and Torrey pine (*Pinus torreyana* ssp. *torreyana*) (CNPS 2017, 2018). Additionally, coast live oak (*Quercus agrifolia*) was identified on campus, which is not CNPS ranked but is considered locally sensitive. The five sensitive plant species that occur in patches of the Diegan coastal sage scrub and the three coast live oak individuals in the project area are shown on Figure 3.3-1. A sixth CNPS ranked plant species, San Diego goldenstar (*Bloomeria clevelandii*), was observed in 1993 but was not located in the recent survey effort. A protocol rare plant survey was not conducted; therefore, population counts and locations of sensitive plant species were not documented.

Although observed during biological surveys, Torrey pine, do not occur naturally on the Hillcrest Campus. Torrey pine is planted as a landscape ornamental. Because this species does not occur naturally on the Hillcrest Campus, it is not considered sensitive for purposes of CEQA.

The sensitive plant species are discussed in more detail below.

Ashy spike-moss (*Selaginella cinerascens***)** is a CRPR 4.1 species. Ashy spike-moss exists in Orange and San Diego counties and northwestern Baja California, Mexico. The species may be found in undisturbed soils in Diegan coastal sage scrub and chaparral. On the UC San Diego Hillcrest Campus, ashy spike-moss was observed during 2018 in the Diegan coastal sage scrub habitat on the relatively flat area north of Bannister Family House near the western campus boundary. CRPR 3 or 4 species are not considered sensitive for the purposes of CEQA and, therefore, are not analyzed further in this 2019 LRDP EIR.

San Diego barrel cactus (*Ferocactus viridescens***)** is a CRPR 2.1 and City MSCP covered species distributed in the County and Baja California, Mexico. San Diego barrel cactus occupies openings in coastal sage scrub and chaparral. On the Hillcrest Campus, a few individuals were observed during the spring of 2018 in the Diegan coastal sage scrub habitat on the flat area of the steep slope canyon areas located north of Bannister Family House along the western Hillcrest Campus Boundary (Harris 2019).

San Diego County sunflower (*Bahiopsis laciniata***)** is a CRPR 4.2 species that most often occurs in Diegan coastal sage scrub, with shrub cover that is generally more open than at coastal locales supporting sage scrub and occurs on a variety of soil types. The species exists in San Diego and Orange County and Baja California, Mexico. San Diego County sunflower was observed in 1993 and 2018 on the steep west facing slopes east of Bachman Place. CRPR 3 or 4 species are not considered sensitive for purposes of CEQA and therefore are not analyzed further in this EIR

Wart-stemmed ceanothus (*Ceanothus verrucosus*) is a CRPR 2B.2 and City MSCP covered species, and is known to occur in western San Diego County and adjacent Baja California, Mexico. The species prefers xeric chamise or southern maritime chaparral. On the Hillcrest Campus, it was

observed in 2018 on the west-facing slope east of Bachman Place. An exact count of the population was not feasible due to steep slopes that restricted access to the area.

Torrey pine (*Pinus torreyana* ssp. *torreyana*) is a CRPR 1B.2, MSCP covered, and California endemic species. It occurs naturally in only two locations: along the San Diego coast near Del Mar (*Pinus torreyana* ssp. *torreyana*) and on Santa Rosa Island (*P. t.* ssp. *insularis*). It occurs in Torrey pine woodlands and southern maritime chaparral. On the Hillcrest Campus, one small individual was observed during 2018 in the steep slope canyon area located northwest of the central utilities plant (CUP). This species does not occur naturally on the Hillcrest Campus, and the individual observed was planted. Therefore, the individual occurring on the Hillcrest Campus is not considered sensitive for purposes of CEQA and is not analyzed further in this 2019 LRDP EIR.

Coast live oak (*Quercus agrifolia***)** is a locally sensitive species but does not have a CRPR. Coast live oak exists west of the Sierra Nevada from Mendocino County, California, and south to northern Baja California, Mexico. This species most often occurs in oak woodlands and mixed evergreen forests. Three coast live oak species were observed in 2018 in the eucalyptus woodland habitat on the eastern side of the Hillcrest Campus (Figure 3.3-1). Coast live oak is not considered sensitive for the purposes of CEQA and, therefore, is not analyzed further in this 2019 LRDP EIR.

San Diego goldenstar (*Bloomeria clevelandii***)** is a CRPR 1B.1 and City MSCP covered species that most often occurs on clay soil in grasslands, vernal pools, meadows, seeps, and open Diegan coastal sage scrub. San Diego goldenstar exists in the Counties of San Diego and Riverside and Baja California, Mexico. This species was observed in 1993 on the steep west-facing slopes east of Bachman Place. The area was too steep to access during the 2017 and 2018 surveys. No construction is proposed in this area. In 2018, common goldenstar (*Bloomeria crocea*) was observed in the same area as the 1993 observation of San Diego goldenstar. Common and San Diego goldenstar can co-occur.

Sensitive Animal Species

No sensitive animal species were observed or otherwise detected on the Hillcrest Campus during 2017 and 2018 surveys. Appendix E of Appendix B of this 2019 LRDP EIR presents sensitive species that have been documented within 1 mile of the project area and those species with potential to occur in the project area.

Three sensitive animal species, two birds and a reptile, have a moderate or high potential to occur within the Hillcrest Campus. The three species are documented in Appendix B and described below.

Cooper's hawk *(Accipiter cooperii)* is a watch list and City MSCP-covered species that exists in riparian and wooded habitat throughout the United States, Mexico, Latin America, and southern Canada. There is a high potential for the species to fly over the project area and a moderate potential for foraging in the project area. There is a low potential for the Cooper's hawk to nest in the project

area. This species was observed west of the project area in an existing neighborhood in 2018 and observed northwest of project area in the Legacy International Center cumulative project area.

Loggerhead shrike (*Lanius ludovicianus***)** is a CDFW species of special concern that occurs in grasslands and open scrub habitat throughout the United States, Mexico, and southern Canada. The species has a moderate potential to forage in the project area and a low potential to nest in the project area. The loggerhead shrike was last observed in the project area in 1993.

Orange-throated whiptail (*Aspidoscelis hyperythrus***)** is a watch list and City MSCP-covered species that is commonly found in Coastal sage scrub, chaparral, edges of riparian woodland, and washes, as well as weedy, disturbed areas adjacent to these habitats. The species occurs in Southern California in Orange County, a small area of southern San Bernardino County, western Riverside County, western San Diego County, and Baja California, Mexico. Important habitat requirements include open, sunny areas, shaded areas, and abundant insect prey base, particularly termites (*Reticulitermes* sp.). The orange-throated whiptail has a moderate potential to occur in the project area as the Diegan coastal sage scrub in the project area provides suitable habitat for foraging and breeding.

Coastal California gnatcatcher (*Polioptila californica californica*) habitat (Diegan coastal sage scrub) occurs within the project area; therefore, a CAGN protocol survey was conducted in 2018 (refer to Appendix B). No CAGN were observed in the project area. The habitat is suitable to support CAGN; however, the survey area is isolated from habitat occupied by CAGN. This species is not expected to occur in the project area.

Although CAGN is not expected to occur in the project area, CAGN is a federally threatened species and a CDFW species of special concern. CAGN typically occur at elevations below 1,800 feet, where they are year-round resident species in coastal sage scrub and various scrub and chaparral habitats. The breeding season for CAGN is defined by USFWS as February 15 through August 30 (USFWS 1997). Nests are built in shrubs approximately 3 feet above the ground and consist of grass, bark, small leaves, and spider webs. Both males and females participate with the incubation, which lasts 14 to 16 days.

Nesting Birds

The Hillcrest Campus contains nesting habitat for several bird species, including raptors, protected under the CFG Code and Migratory Bird Treaty Act (MBTA).

3.3.1.5 Wildlife Corridors and Linkages

Wildlife corridors and linkages are defined by CDFW as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance (CDFW 2019). Natural features such as canyon drainages, ridgelines, or undeveloped areas with vegetation can provide corridors for wildlife. Wildlife corridors are important because

they provide access to food, water, and mates; allow dispersal of individuals away from high population densities; and facilitate the exchange of genetic material between populations. Wildlife corridors are considered sensitive by the City and resource agencies.

There are two main areas that support the majority of wildlife habitat on the Hillcrest Campus: the steep slope canyon areas located east and west of Bachman Place. Wildlife can move locally through the project area and west to the Presidio Park area south of I-8 and east of I-5. Presidio Park, located along the south side of I-8, is a City-designated historic park that includes public trails and is part of a system of canyons that have a limited connection to canyons located within the northern portion of the Hillcrest Campus. The wildlife habitat within the project area is restricted from larger wildlife habitat areas due to surrounding development and major roadways and highways including State Route 163, I-8 and I-5. Due to this lack of connectivity, the Hillcrest Campus is not considered a regional wildlife corridor or linkage.

Although the Hillcrest Campus does not support regional wildlife corridors or linkages, the steep slope canyon areas provide live-in habitat for several common reptile, bird, and mammal species.

3.3.2 Regulatory Framework

Biological resources on the Hillcrest Campus are subject to regulatory administration by the federal government and State of California. The federal government administers non-marine plant and wildlife-related issues through the USFWS, while waters of the United States issues are administered by the ACOE. California law relating to wetland, water-related, and wildlife issues is administered by the CDFW. Under CEQA, impacts associated with a proposed project or program are assessed with regard to significance criteria determined by the CEQA lead agency (in this case, UC San Diego) pursuant to CEQA Guidelines. Biological resources-related laws and regulations that apply include FESA, MBTA, CWA, CEQA, CESA, and CFG Code.

3.3.2.1 Federal

Federal Endangered Species Act

Administered by the USFWS, the FESA provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a "take" under the FESA. Section 3(19) of the FESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" and "harass" are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

The USFWS designates critical habitat for endangered and threatened species. Critical habitat is defined as areas of land that are considered necessary for endangered or threatened species to

recover. The ultimate goal is to restore healthy populations of listed species within their native habitats, so they can be removed from the list of threatened or endangered species. Once an area is designated as critical habitat pursuant to the FESA, all federal agencies must consult with the USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in destruction or adverse modification of the critical habitat. No designated critical habitat occurs within 4 miles of the Hillcrest Campus (USFWS 2018b).

Sections 7 and 10(a) of the FESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. In this case, take can be authorized via a letter of biological opinion issued by the USFWS for non-marine related listed species issues. A Section 7 consultation (formal or informal) is required when there is a nexus between endangered species' use of a site and impacts to ACOE jurisdictional areas, or to other areas for which a federal action is required. Section 7 consultations with the USFWS are initiated by the federal agency that will be taking a federal action on a project (e.g., ACOE initiates the consultation if they are reviewing a 404 application that results in impacts to occupied listed species habitat). Section 10(a) allows issuance of permits for incidental take of endangered or threatened species with preparation of a Habitat Conservation Plan (HCP) when there is no federal nexus. The term "incidental" applies if the taking of a listed species is incidental to, and not the purpose of, an otherwise lawful activity. An HCP demonstrating how the taking would be minimized and how steps taken would ensure the species' survival must be submitted for issuance of Section 10(a) permits.

In 2017, the USFWS and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) jointly proposed revisions to regulations that implement portions of the FESA (USFWS 2018c). The USFWS and NOAA Fisheries sought public input on how the federal government could improve upon the regulatory framework and received substantial input from a wide range of stakeholders on modernizing the implementation of the FESA in order to improve collaboration, efficiency, and effectiveness. The agencies proposed changes to some of the parameters under which other federal agencies must consult with the USFWS and NOAA Fisheries to ensure their actions do not jeopardize the continued existence of listed species, or destroy or adversely modify critical habitat. The agencies also proposed various measures to clarify and improve some of the standards under which listings, delisting, and reclassifications, and critical habitat designations are made.

In addition, the USFWS independently proposed a change in its approach to applying protections to threatened species that would align its practice with NOAA Fisheries so the two agencies are consistent in their application of this provision of the FESA. The USFWS proposes to remove its blanket rule under Section 4(d) of the FESA that automatically conveys the same protections for threatened species as for endangered species. This change would not affect the protections for species currently listed as threatened, but would ensure that species listed as threatened in the

future receive the protections tailored to the species' individual conservation needs. All changes are being proposed as part of a public process. The proposed rules were published in the Federal Register on July 25, 2018, and more than 69,500 comments for each notice were collected for 60 days, with the comment period ending on September 24, 2018. As of February 2019, a final ruling has not been submitted on these proposed revisions to Section 4(d) of the FESA.

Migratory Bird Treaty Act

All migratory bird species that are native to the United States or its territories are protected under the federal MBTA, as amended under the Migratory Bird Treaty Reform Act of 2004 (Federal Register Doc. 05-5127). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the MBTA is now used to place restrictions on disturbance of active bird nests during the nesting season (generally January 15 to August 31). In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests.

On December 22, 2017, the U.S. Department of the Interior Office of the Solicitor released a memorandum (M-37051) entitled The Migratory Bird Treaty Act Does Not Prohibit Incidental Take (hereinafter "the memorandum"), analyzing whether the MBTA prohibits the accidental or incidental taking or killing of migratory birds (U.S. Department of the Interior 2017). The memorandum permanently withdraws and replaces the previous Solicitor's Opinion M-37041 (Opinion M-37041) Incidental Take Prohibited under the Migratory Bird Treaty Act, issued January 10, 2017. Opinion M-37041 concluded that the MBTA's broad prohibition on taking and killing migratory birds by any means and in any manner includes incidental taking and killing. Opinion M-37041 was suspended pending review on February 6, 2017. The memorandum found that the MBTA's "prohibitions on pursuing, hunting, taking, capturing, killing, or attempting to do the same apply only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs" (U.S. Department of the Interior 2017). Further, the memorandum states that "interpreting the MBTA to criminalize incidental takings raises serious due process concerns" and concludes that the MBTA does not prohibit incidental take.

In addition to the memorandum, Representative Liz Cheney (Republican-Wyoming) introduced an amendment to House of Representatives (H.R.) 4239 titled "Clarification Regarding Liability under Migratory Bird Treaty Act" (U.S. House of Representatives 2017). The amendment aims to rewrite Section 6 of the MBTA by adding the following: "(e) This Act shall not be construed to prohibit any activity proscribed by section 2 of this Act that is accidental or incidental to the presence or operation of an otherwise lawful activity." H.R. 4239 was further amended by the Committee on Natural Resources on November 2, 2018, in House Report 115-1000, where it remains in committee.

In response to the U.S. Department of the Interior memorandum, a coalition of conservation organizations, including the Audubon Society, American Bird Conservancy, Center for Biological Diversity, Defenders of Wildlife, National Wildlife Federation, and the Natural Resources Defense Council, filed the federal lawsuit Audubon v. Dept. of the Interior (Audubon v. Dept. of the Interior, May 24, 2018). In addition, AB 2627 (February 15, 2018) in California aims to guarantee the same protections as currently outlined in the federal MBTA while providing a path forward for industries (California Legislature 2018). AB 2627 was passed by the State Senate on August 13, 2018, referred to Senate Appropriations (California Legislative 2018), and is summarized in Section 3.3.2.2, Assembly Bill 2627. AB 2627 remains in Senate Appropriations since November 30, 2018.

Clean Water Act and Rivers and Harbors Act

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the CWA. The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the United States.[1] Permitting for projects filling waters of the United States is overseen by the ACOE under Section 404 of the CWA. Most development projects are permitted using Individual Permit (IP) or Nationwide Permit (NWP) instruments. IPs are assessed individually and approved based on the type of action and amount of fill and typically require substantial time for approval, as well as having a public review period. An IP is required when a project exceeds the allowable impact thresholds for NWPs. NWPs are pre-approved if a project conforms with the conditions of the specific NWP as well as the general conditions applied to all NWPs. Review by the ACOE is still required for many NWPs, but tends to be a more streamlined process than obtaining an IP.

3.3.2.2 State

Assembly Bill 2627

AB 2627 is an act to amend Section 3513 of the CFG Code relating to migratory nongame birds. This bill would deem an entity in compliance with the state prohibition against taking any migratory nongame bird, as defined, if the potential take is incidental to otherwise lawful activity, the entity completes a certification process by submitting certain information to the department, and the entity implements best management practices for avoiding, minimizing, and mitigating take of migratory nongame birds, as identified by the entity pursuant to specified guidelines that are intended to avoid significant adverse impacts, as defined, to migratory nongame birds. AB 2627 would require, as part of the certified process, the submission of an annual report to CDFW

[1] Waters of the United States, which are subject to ACOE jurisdiction under Section 404 of the Clean Water Act, include territorial seas, measured seaward a distance of 3 miles; coastal and inland waters, lakes, rivers, and streams and their tributaries; interstate waters and their tributaries; wetlands adjacent to all of the above waters; and isolated wetlands and lakes, intermittent streams, and other waters that are not part of a tributary system to interstate waters or to navigable waters of the United States, the degradation or destruction of which could affect interstate commerce (ACOE 2019).

after the initial certification. The bill would specify the information to be included in a certification and annual reports.

AB 2627 would exempt the take of migratory birds from the state prohibition against taking any migratory nongame bird in other circumstances. These circumstances would include, among others, if the take that is accidental, as defined, and results from an act that occurs on a farm or ranch in the course of otherwise lawful routine and ongoing agricultural activities. AB 2627 would require that CDFW, no later than December 31, 2019, establish for compliance with these provisions. As of April 2019, AB 2627 is in Senate Appropriations.

California Environmental Quality Act

Primary environmental legislation in California is found in CEQA and its implementing guidelines (CEQA Guidelines), which require that projects with potential adverse effects (or impacts) on the environment undergo environmental review. Adverse environmental impacts are typically mitigated as a result of the environmental review process in accordance with existing laws and regulations.

California Endangered Species Act

The CESA established that it is state policy to conserve, protect, restore, and enhance state endangered species and their habitats. Under state law, plant and animal species may be formally designated rare, threatened, or endangered by official listing by the CFG Commission. The CESA authorizes that private entities may "take" plant or wildlife species listed as endangered or threatened under the FESA and CESA, pursuant to a federal Incidental Take Permit if the CDFW certifies that the incidental take is consistent with CESA (CFG Code, Section 2080.1[a]). For state-only listed species, Section 2081 of CFG Code authorizes the CDFW to issue an Incidental Take Permit for state listed threatened and endangered species if specific criteria are met.

Native Plant Protection Act

Sections 1900–1913 of the CFG Code (Native Plant Protection Act) direct the CDFW to carry out the state legislature's intent to "preserve, protect and enhance endangered or rare native plants of this state." The Native Plant Protection Act gives the CFG Commission the power to designate native plants as "endangered" or "rare" and protect endangered and rare plants from take.

California Fish and Game Code

The CFG Code provides specific protection and listing for several types of biological resources. Section 1600, et seq. of CFG Code requires a Streambed Alteration Agreement for any activity that would alter the flow, change, or use any material from the bed, channel, or bank of any perennial, intermittent, or ephemeral river, stream, and/or lake. Typical activities that require a Streambed Alteration Agreement include excavation or fill placed within a channel, vegetation clearing,

structures for diversion of water, installation of culverts and bridge supports, cofferdams for construction dewatering, and bank reinforcement. Notification is required prior to any such activities.

Pursuant to CFG Code, Section 3503, it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto." Raptors and owls and their active nests are protected by CFG Code, Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird unless authorized by the CDFW. Section 3513 states that it is "unlawful to take or possess any migratory nongame bird as designated" in the MBTA. These regulations could require that construction activities (particularly vegetation removal or construction near nests) be reduced or eliminated during critical phases of the nesting cycle unless surveys by a qualified Biologist demonstrate that nests, eggs, or nesting birds will not be disturbed, subject to approval by CDFW and/or USFWS.

Porter-Cologne Water Quality Control Act

The State Water Resources Control Board works in coordination with the nine RWQCBs to preserve, protect, enhance, and restore water quality. Each RWQCB makes decisions related to water quality for its region, and may approve, with or without conditions, or deny projects that could affect waters of the state. Their authority comes from the CWA and the state's Porter-Cologne Act, codified in Section 13000, et seq. of the California Water Code. The Porter-Cologne Act, in California Water Code, Section 13050, broadly defines waters of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state." Because the Porter-Cologne Act applies to any water, whereas the CWA applies only to certain waters, California's jurisdictional reach overlaps and may exceed the boundaries of waters of the United States. For example, Water Quality Order No. 2004-0004-DWQ states that "shallow" waters of the state include headwaters, wetlands, and riparian areas. Moreover, in practice the RWQCBs claim jurisdiction over riparian areas. Where riparian habitat is not present, such as may be the case at headwaters, jurisdiction is taken to the top of bank.

Under the Porter-Cologne Act, the State Water Resources Control Board and the nine regional boards also have the responsibility of granting CWA National Pollutant Discharge Elimination System (NPDES) permits and Waste Discharge Requirements for certain point-source and non-point discharges to waters. These regulations limit impacts on aquatic and riparian habitats from a variety of urban sources.

3.3.2.3 Local (Non-Regulatory)

Natural Community Conservation Planning and Multiple Species Conservation Program

The Natural Community Conservation Planning (NCCP) Act of 1991 (CFG Code, Section 2800 et. seq.) provides the framework for regional resource planning to address impacts to sensitive vegetation communities. Coastal sage scrub is afforded special protection because it provides habitat for a number of sensitive species, including the federally listed threatened CAGN. The Coastal Sage Scrub NCCP Process Guidelines (CDFG and California Resources Agency 1993) explain the roles of local, state, and federal governments for planning for the conservation of coastal sage scrub. Under this program, jurisdictions that are enrolled in the planning process are bound to follow certain guidelines regarding development of this vegetation community. UC San Diego is not an enrolled jurisdiction, and as such, the rules of the NCCP Program do not apply. However, non-enrolled jurisdictions must still address impacts to threatened and endangered species as required by the Endangered Species Act (both state and federal), and impacts to all species and vegetation communities considered sensitive by state and federal resource agencies are required to be disclosed under CEQA.

The Hillcrest Campus is within the City but is not included within the City's MSCP (City of San Diego 1997), nor is UC San Diego an enrolled agency in the NCCP Program. As discussed in Chapter 2, Project Description, the UC is governed by the UC Regents, which under Article IX, Section 9, of the California Constitution have "full powers of organization and governance" subject only to very specific areas of legislative control. As such, preserve areas designated by the City's MSCP (i.e., in the Multi-Habitat Planning Area [MHPA]) are generally not located on UC San Diego lands; however, the MHPA does occur to the north and west of the Hillcrest Campus (Figure 3.3-2, City of San Diego MHPA). A portion of the MHPA located north of the developed portion of the Hillcrest Campus in the undeveloped steep slope canyon areas appears to be mistakenly mapped within the Hillcrest Campus Boundary. Because UC San Diego is not an enrolled agency, inclusion of these lands in the City's MHPA does not constitute any obligation on the part of UC San Diego to comply with the City's MSCP preservation goals or objectives. However, UC San Diego plans to limit disturbance in the sensitive canyon vegetation areas and would include Open Space principles intended to preserve natural habitat functions and values in the 2019 LRDP.

The off-site traffic mitigation area along Bachman Place includes approximately 0.04 acre of sensitive non-native grassland habitat that is within the MHPA located north of the Hillcrest Campus. Impacts to this off-site area during Phase 2B would require approval of a Right of Entry Permit from the City.

3.3.3 Project Impacts and Mitigation

The following sections describe impacts from future anticipated development under the 2019 LRDP. Development areas have been identified that have the potential to impact biological resources. As discussed in Chapter 2, the analysis of impacts to biological resources are addressed for the entire project and by construction phase. The 2019 LRDP would include five development phases (1A, 1B, 2A, 2B, 3, 4, and 5).

Sensitive species or vegetation communities impacts associated with the implementation of the 2019 LRDP could be direct and indirect. Direct impacts are those associated with direct destruction or displacement of natural habitats during construction and typically occur during the site preparation stage when grading, clearing, grubbing, and other initial land disturbance activities take place. Indirect impacts are those that are not a result of direct land disturbance activities. Indirect impacts include impacts such as water quality degradation, fugitive dust, and introduction of invasive plant species, edge effects, noise, wildlife mortality, lighting, inadvertent encroachments, non-native insects, and fuel management zones. Indirect impacts can occur during all stages of construction and can also occur after construction is complete as a result of increased human activity or from operation of the development itself, such as impacts from the development's lighting or noise.

To estimate direct impacts, areas anticipated for development where none has occurred in the past under the proposed 2019 LRDP and biological resources were identified together on Figures 3.3-3, Biological Resources Impacts, and 3.3-4, Fuel Management Zones. Future growth anticipated in developed or urbanized portions of Hillcrest Campus are not depicted on the figures as there would be no direct biological resource impacts. However, potential development areas that overlap with biological resources are depicted on the figures and provide the opportunity to evaluate approximate impacts from implementation of the 2019 LRDP. It is anticipated that future development of storm water conveyances and structures may be required in slopes, drainages, or other lower elevation areas on Hillcrest Campus in order to comply with NPDES Phase II storm water regulations (discussed in greater detail in Section 3.9, Hydrology and Water Quality). Environmental review pursuant to CEQA would be conducted for all future proposed projects. Appendix G thresholds IV(d), (e), and (f) are addressed in Section 3.3.5, CEQA Issues Where There Is No Potential for a Significant Impact, as there is no potential for a significant impact.

3.3.3.1 Issue 1: Candidate, Sensitive, or Special-Status Plant Species

Biological Resources Issue 1 Summary

Would implementation of the 2019 LRDP result in a substantial adverse effect, either directly or through habitat modifications, on any plant species identified as a candidate, sensitive, or special-status species by the CDFW or USFWS?

Impact: Implementation of the 2019 LRDP would have the potential to impact candidate, sensitive, or special-status species.	**Mitigation:** Sensitive Plant Surveys (BIO-1A); Translocation of San Diego Barrel Cactus (BIO-1B); Translocation of San Diego Goldenstar (BIO-1C); Wart-Stemmed Ceanothus (BIO-1D); Indirect Operational Impacts (BIO-3K through BIO-3O)
Significance Before Mitigation: Potentially significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact on plant species if it would result in 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 CDFW or USFWS.

Potential conflicts with any local policies or ordinances protecting biological resources are discussed in Section 3.3.5.

Impact Analysis

Direct Impacts

Sensitive plant species observed at UC San Diego are described in Section 3.3.1.4 and are identified on Figure 3.3-1. Permanent and temporary impacts are presented on Figure 3.3-3.

As discussed in Section 3.3.1.4, Sensitive Plant and Animal Species, Torrey pine (CRPR 1B.2), coast live oak (locally sensitive species), San Diego County sunflower (CRPR 4.1), and ashy spike-moss (CRPR 4.1) are not considered sensitive species under CEQA and are therefore not included in the analysis of project impacts to sensitive plant species in this 2019 LRDP EIR. Three coast live oaks within the non-sensitive eucalyptus woodland in the southeastern area of the Hillcrest Campus would be removed during the grading for the Arbor Drive–Bachman Place connection and the widening of Bachman Place from Arbor Drive to south of the existing Bachman Parking Structure (Figures 2-11a and 3.3-3). While not sensitive under CEQA, the landscape palette in the Conceptual Landscape Plan (see Section 2.7.2) nevertheless provides for coast live oaks to be planted on site following construction.

Two sensitive plant species were documented within or in the vicinity of the project area in 2018 and are considered sensitive species under CEQA: San Diego barrel cactus (CRPR 2.1) and wart-stemmed ceanothus (CRPR 2B.2). In addition, San Diego goldenstar (CRPR 1B.1) was documented in the project area in 1993, and although this species was not identified during the 2018 habitat assessment and CAGN surveys, it may still be present. Impacts to San Diego barrel cactus, wart-stemmed ceanothus, and San Diego goldenstar are potentially significant under Issue 1 given their higher level of sensitivity and the potential for additional individuals to establish within the project area during implementation of the 2019 LRDP.

Construction of Phases 2A, 2B, and 3 would result in permanent and temporary impacts to vegetation communities that may support special-status plant species. The phasing plan for the 2019 LRDP is depicted on Figures 2-11a and 2-11b in Chapter 2. Impacts to sensitive plant species would be potentially significant.

Phase 1A

Grading and vegetation removal during construction of the Main Parking Structure (HC-4), Canyon Parking Structure (HC-7), the Outpatient Pavilion (HC-2), and the temporary connection from the Canyon Parking Structure (HC-7) to Bachman Place during Phase 1A would not result in direct impacts to sensitive plant species.

Phase 1B

Demolition of existing structures in Phase 1B would not result in impacts to sensitive plant species (Figures 2-11a and 3.3-3). No new construction would occur in Phase 1B; therefore; no impacts to sensitive plant species would result.

Phase 2A

Permanent and temporary impacts to sensitive Diegan coastal sage scrub, southern willow scrub disturbed, and sensitive non-native grassland that may support sensitive plant species, including San Diego barrel cactus and San Diego goldenstar, if present, would occur during construction of the north access driveway. San Diego barrel cactus occurs in the Diegan coastal sage scrub habitat west of the proposed Phase 2A north access driveway (Figures 2-11a, 2-11b, and 3.3-3).

Phase 2B

Permanent and temporary impacts to sensitive Diegan coastal sage scrub that may support sensitive plant species, including San Diego barrel cactus and San Diego goldenstar, if present, would occur during construction of the Multi-Use Building (HC-6) and the Bachman Place widening from the existing Bachman Parking Structure to the Hillcrest Campus Boundary (Figures 2-11a, 2-11b, and 3.3-3). Construction of the off-site Bachman Place widening within the 1-acre off-site traffic mitigation area would temporarily impact 0.19 acre of sensitive non-native grassland (Figure 3.3-3).

Phase 3

Construction of two proposed storm drain pipelines in the northwestern project area would result in temporary impacts to 0.45 acre of sensitive Diegan coastal sage scrub and 0.05 acre of non-sensitive eucalyptus woodland (Figures 2-11a and 3.3-3).

Phases 4 and 5

Construction during Phases 4 and 5 would not result in direct impacts to vegetation communities that may support sensitive plant species (Figures 2-11a and 3.3-3).

Indirect Impacts

Potential indirect impacts to the sensitive vegetation communities of southern willow scrub disturbed, Diegan coastal sage scrub, non-native grassland, and other sensitive plant species with a potential to occur on the Hillcrest Campus could also result from the implementation of the 2019 LRDP. Indirect impacts from fugitive dust, non-native plants, edge effects, inadvertent encroachment, and Fuel Management Zone 2 are considered potentially significant. A detailed discussion of indirect impacts is provided below under Issue 3 (see Section 3.3.3.3 of this 2019 LRDP EIR) as these impacts are more pertinent to vegetation communities as a whole and the potential for these issues to result in impacts to sensitive plant species are less certain.

Mitigation Measures

Sensitive plant species have been documented within the project area. Impacts to sensitive plant species would be reduced to less than significant through implementation of Mitigation Measures BIO-1A, BIO-1B, BIO-1C, and BIO-1D:

> **BIO-1A: Sensitive Plant Surveys.** During the project planning process, updated sensitive plant surveys shall be conducted for all project areas that support potential habitat for sensitive plant species and have not been surveyed within the preceding year. Sensitive plant surveys shall be conducted by a qualified Biologist retained by UC San Diego during the appropriate season for detecting the species as part of the project design phase. Surveys shall be floristic in nature and include lists of all plants identified in the survey area. Surveys shall be conducted on foot, employing a level of effort sufficient to provide comprehensive coverage. The locations and prevalence (estimated total numbers/percent cover, as applicable) of sensitive plants shall be recorded. If site-specific surveys are not required because a survey was conducted within the last 12 months, impact assessment and minimization/mitigation requirements shall be based on the most recent available survey, shall include an analysis of the potential for sensitive plant species to occur on the site based on existing site conditions, and shall be consistent with the most recent USFWS and CDFW survey protocols (USFWS 2018d; CDFW 2014).

If sensitive plant species are observed, they shall be avoided if possible. If species cannot be avoided, impacts to those species must be evaluated and any significant impacts shall be mitigated through plant relocation or conservation of habitat on campus that supports the impacted species in accordance with Mitigation Measures BIO-1B, BIO-1C, and BIO-1D.

BIO-1B: San Diego Barrel Cactus. If San Diego barrel cactus is observed during sensitive plant surveys conducted under Mitigation Measure BIO-1A, mitigation for impacts to San Diego barrel cactus shall occur through salvage and translocation of any impacted San Diego barrel cactus within the project area(s) to appropriate open space canyon locations on site where they would not be disturbed.

BIO-1C: San Diego Goldenstar. If San Diego goldenstar is observed during sensitive plant surveys conducted under Mitigation Measure BIO-1A, mitigation for impacts to San Diego goldenstar shall occur through salvage and translocation of any impacted San Diego goldenstar corms (swollen underground plant stems/storage organs) within the project area(s) to appropriate open space canyon locations on site where they would not be disturbed.

BIO-1D: Wart-Stemmed Ceanothus. If wart-stemmed ceanothus is observed during sensitive plant surveys conducted under Mitigation Measure BIO-3A, mitigation for impacts to wart-stemmed ceanothus shall occur through inclusion of wart-stemmed ceanothus seeds in native plant landscaping seed mix for application in the Canyon District.

3.3.3.2 Issue 2: Candidate, Sensitive or Special-Status Animal Species

Biological Resources Issue 2 Summary

Would implementation of the 2019 LRDP result in a substantial adverse effect, either directly or through habitat modifications, on any animal species identified as a candidate, sensitive, or special-status species by the CDFW or USFWS?

Impact: Implementation of the 2019 LRDP would have the potential to impact sensitive animal species.	**Mitigation:** Surveys for Coastal California Gnatcatcher (BIO-2A); USFWS Permitting and Consultation (BIO-2B); Pre-Construction Raptor and General Avian Nest Surveys and Avoidance (BIO-2C and BIO-2D)
Significance Before Mitigation: Potentially significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact on animal species if it would result in 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 CDFW or USFWS.

Impact Analysis

Direct Impacts

No sensitive animal species were observed during the 2017 and 2018 surveys. However, four sensitive animal species have a high or moderate potential to occur in the project area and may be impacted during implementation of the 2019 LRDP. These species include CAGN and Cooper's hawk.

Implementation of the 2019 LRDP would impact coastal sage scrub and non-native grassland that could be used by orange-throated whiptail and loggerhead shrike. However, the potential for impacts to these species would be less than significant because the vast majority of suitable whiptail and shrike habitat would be conserved on campus in the large canyons to the west, north and east of the mesa top redevelopment area. In addition, the orange-throated whiptail and loggerhead shrike are CDFW watch list species and species of special concern, respectively, and not considered sensitive for the purpose of CEQA.

Potentially significant impacts could occur through modification of habitats that support CAGN and Cooper's hawk, and the impacts are discussed by phase below..

Phase 1A

Permanent and temporary impacts to eucalyptus woodland that may support sensitive animal species including Cooper's hawk would occur from grading and vegetation removal during construction of the Main Parking Structure (HC-4), Canyon Parking Structure (HC-7), Outpatient Pavilion (HC-2), the Arbor Drive–Bachman Place connection and grading of the surrounding area, and the temporary connection from the Canyon Parking Structure (HC-7) to Bachman Place (Figures 2-11a and 3.3-3).

Phase 1B

Demolition of existing structures in Phase 1B would not result in impacts to sensitive animal species (Figures 2-11a and 3.3-3). No new construction would occur in Phase 1B; therefore, no impacts to sensitive animal species would result.

Phase 2A

Permanent and temporary impacts to non-sensitive eucalyptus woodland, sensitive Diegan coastal sage scrub, sensitive southern willow scrub (disturbed), and sensitive non-native grassland that may support sensitive animal species including CAGN and Cooper's hawk would occur during construction of the north access driveway (Figures 2-11a, 2-11b, and 3.3-3).

Phase 2B

Permanent and temporary impacts to non-sensitive eucalyptus woodland and sensitive Diegan coastal sage scrub that may support CAGN and Cooper's hawk would occur during construction of the Multi-Use Building (HC-6) and Bachman Place widening (Figure 2-11a, 2-11b, and 3.3-3).

Phase 3

Permanent and temporary impacts to non-sensitive eucalyptus woodland that may support sensitive animal species including Cooper's hawk are likely to occur during construction of a biofiltration basin in the southwest corner of the project area (Figure 2-11a). Temporary impacts to sensitive Diegan coastal sage scrub and non-sensitive eucalyptus woodland that may support sensitive animal species including CAGN and Cooper's hawk could occur during construction of the two proposed storm drains in the northwestern project area (Figure 3.3-3).

Phase 4

Demolition and removal of the existing hospital and CUP in Phase 4 would not result in impacts to vegetation communities (Figures 2-11a and 3.3-3). No new construction or work within natural communities would occur in Phase 4; therefore; no impacts to sensitive animals are expected.

Phase 5

Permanent impacts to non-sensitive eucalyptus woodland that may support sensitive animal species including Cooper's hawk are expected to occur from clearing associated with the establishment of Fuel Management Zone 1 (Figure 3.3-4).

Nesting Birds

Implementation of the 2019 LRDP Phases 1A through 5 would have the potential to impact nesting birds (including raptors) through direct removal of nesting habitat and through disturbance to nesting birds from substantial sources of noise generated at the commencement of new construction during the breeding season. Construction activities that commence during the raptor breeding season of January 15 through August 31 and the general avian breeding season (including CAGN) of February 15 through August 31 during all phases of the 2019 LRDP implementation would have the potential to significantly impact nesting birds. Impacts to nesting birds protected under the MBTA and CFG Code would be considered significant under Issue 2.

Indirect Impacts

Potential indirect impacts to the sensitive animal species could also result from the implementation of the 2019 LRDP. Those potential impacts may include edge effects, noise, wildlife mortality, lighting, inadvertent encroachment, and others. Indirect impacts from edge effects, noise, wildlife mortality, lighting, and inadvertent encroachment are considered potentially significant. A detailed discussion of indirect impacts is provided below under Issue 3 (see Section 3.3.3.3 of this 2019

LRDP EIR) as these impacts are more pertinent to vegetation communities as a whole and the potential for these issues to result in impacts to sensitive animal species are less certain.

Mitigation Measures

Candidate, Sensitive, or Special-Status Animal Species

Diegan coastal sage scrub habitat is located on the Hillcrest Campus, which has the potential to support CAGN. Protocol-level CAGN surveys were conducted in 2018, and no CAGN were observed within the Diegan coastal sage scrub habitat within the project area. The 2018 survey is valid through 2021. To minimize potential impacts to CAGN to less than significant after 2021, Mitigation Measures BIO-2A and BIO-2B would be implemented during all phases where construction activities would occur adjacent to Diegan coastal sage scrub habitat:

> **BIO-2A: Coastal California Gnatcatcher (CAGN) Surveys.** Beginning in 2022, when a construction project is proposed that would directly or indirectly impact Diegan coastal sage scrub, six surveys at least 7 days apart shall be conducted during the peak breeding season, March 15 to June 30, or nine surveys from July 1 to March 14 at least 2 weeks apart in accordance with the current USFWS protocol (USFWS 1997). The permittee must submit the 15-day pre-survey notification to the USFWS Carlsbad Permits Division, including an explanation that six or nine surveys shall be conducted. Documentation of the survey results shall be provided to USFWS in accordance with current protocol survey guidelines.
>
> **BIO-2B: USFWS Permitting.** If Diegan coastal sage scrub within the open space canyon areas is determined to be occupied by the CAGN based on surveys conducted in accordance with Mitigation Measure BIO-2A, UC San Diego shall contact USFWS to discuss project permitting options that could be accomplished through Section 7 or Section 10(a) of FESA. Impacts to any CAGN and CAGN-occupied habitat shall be avoided/mitigated by the following measures (additional measures could be required as a result of the consultation/permitting process):
>
> 1. Diegan coastal sage scrub occupied by CAGN shall not be removed during the CAGN breeding season (February15 through August 31). If CAGN are not present, then only mitigation for the habitat loss shall be required as described in Mitigation Measures BIO-3B, and habitat clearing can occur at any time of the year following the survey.
> 2. If construction activities commence during the CAGN breeding season and CAGN are found within 500 feet of the grading limits based on the surveys required in BIO-2A, a qualified acoustician shall be consulted to identify appropriate measures for reducing construction noise levels to 60 decibel hourly L_{eq} or ambient, whichever is higher, during the part of the breeding season when active nests are most likely. If noise reduction measures are determined necessary, the construction contractor shall implement the measures and the acoustician shall confirm, through field

measurements, that noise attenuation measures are effective at maintaining noise at or below the specified threshold.

3. Permanent impacts to Diegan coastal sage scrub (regardless of CAGN occupancy) shall be mitigated at a 2:1 ratio as described in Mitigation Measure BIO-3B.

Implementation of Mitigation Measures BIO-2A and BIO-2B would reduce impacts to CAGN from the removal of Diegan coastal sage scrub and construction noise to less than significant.

Nesting Birds

Implementation of the following Mitigation Measures BIO-2C and BIO-2D would reduce potential impacts to nesting raptors and birds protected by the CFG Code and MBTA to below a level of significance:

BIO-2C: Pre-Construction Raptor Nest Surveys. If project construction is scheduled to commence during the raptor nesting season (generally January 15 through August 31), pre-construction surveys for raptor nests shall be performed by a qualified Biologist within 500 feet of project construction activities no more than seven days prior to the initiation of construction.

Construction activities within 500 feet of an identified active raptor nest shall not commence during the breeding season until a qualified Biologist determines that the nest is no longer active and any young birds in the area have adequately fledged and are no longer reliant on the nest. Trees with inactive nests can be removed outside the breeding season without causing an impact.

BIO-2D: Pre-Construction Nesting Bird Surveys. No grubbing, trimming, or clearing of vegetation (including fuel management) from project areas shall occur during the general avian breeding season (February 15 through August 31). If grubbing, trimming, or clearing cannot feasibly occur outside of the general avian breeding season, a qualified Biologist shall perform a pre-construction nesting bird survey no more than seven days prior to the commencement of vegetation clearing or grubbing to determine if active bird nests are present in the affected areas. Should an active migratory bird nest be located, the project Biologist shall direct vegetation clearing away from the nest until it has been determined by the project Biologist that the young have fledged, or the nest has failed. If there are no nesting birds (includes nest building or other breeding/nesting behavior) within the survey area, clearing, grubbing, and grading shall be allowed to proceed.

3.3.3.3 Issue 3: Riparian Habitat and Other Sensitive Natural Communities

Biological Resources Issue 3 Summary

Would implementation of the 2019 LRDP have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS?

Impact: Implementation of the 2019 LRDP would have the potential to impact riparian habitat or other sensitive natural communities.	**Mitigation:** Vegetation Mapping (BIO-3A); Upland Communities (BIO-3B); Wetland Communities (BIO-3C); Diegan Coastal Sage Scrub and Non-Native Grassland (BIO-3D); Jurisdictional Delineation and Permitting (BIO-3E); Indirect Construction Impacts (BIO-3F through BIO-3J); Night Lighting (BIO-3J); Indirect Operational Impacts (BIO-3K through BIO-3O)
Significance Before Mitigation: Potentially significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS.

Impact Analysis

Direct Impacts to Sensitive Vegetation Communities

Impacts to sensitive vegetation communities, including southern willow scrub disturbed, Diegan coastal sage scrub, and non-native grassland from implementation of the 2019 LRDP would be considered significant under Issue 3. Impacts to non-sensitive eucalyptus woodland and urban/developed land would not be considered significant. Permanent and temporary impacts to vegetation communities are presented on Figure 3.3-3 and in Table 3.3-2, Permanent Impacts to Vegetation Communities and Land Use Types, and Table 3.3-3, Temporary Impacts to Vegetation Communities and Land-use Types, respectively. Tables 3.3-2 and 3.3-3 denote wetland and upland vegetation communities and land use types with separate upland and wetland vegetation communities' impact acreages for all. Direct impacts to vegetation from implementation of the 2019 LRDP would be expected to occur from construction and fuel management activities.

Table 3.3-2. Permanent Impacts to Vegetation Communities and Land Use Types

Vegetation Community	Project Area Acreage	Impact Acreage by Phase							Total Impact Acreage
		1A	1B	2A	2B	3	4	5	
Wetland Vegetation Communities									
Southern Willow Scrub Disturbed[1]	1.38	—	—	0.06	—	—	—	—	0.06
Non-vegetated Channel[2]	0.04	<0.01	—	0.03	—	<0.01	—	—	0.03
Wetlands Subtotal	*1.42*	*<0.01*	—	*0.09*	—	*<0.01*	—	—	*0.09*
Upland Vegetation Communities									
Diegan Coastal Sage Scrub[1]	19.49	—	—	1.07	2.24	—	—	0.07	3.38
Diegan Coastal Sage Scrub Disturbed[1]	1.29	—	—	—	—	—	—	—	—
Non-Native Grassland[1]	0.62	—	—	—	0.19	—	—	—	0.19
Eucalyptus Woodland[3]	6.69	2.16	—	0.01	5.05	1.63	—	0.34	9.19
Uplands Subtotal	*28.09*	*2.16*	—	*1.08*	*7.48*	*1.63*	—	*0.41*	*12.76*
Urban/Developed[3]	32.49	—	—	—	—	—	—	—	—
Total	**62**	**2.16**	—	**1.17**	**7.48**	**1.63**	—	**0.41**	**12.85**

Notes:

[1] Considered a sensitive vegetation community.

[2] Potentially sensitive resource.

[3] Non-sensitive vegetation and land use type. No impacts would result from redevelopment of previously developed land.

Table 3.3-3. Temporary Impacts to Vegetation Communities and Land Use Types

Vegetation Community	Project Area Acreage	Impact Acreage by Phase							Total Impact Acreage
		1A	1B	2A	2B	3	4	5	
Wetland Vegetation Communities									
Southern Willow Scrub – Disturbed[1]	1.38	—	—	<0.01	—	—	—	—	<0.01
Non-Vegetated Channel[2]	—	—	—	—	—	—	—	—	—
Wetlands Subtotal	*1.38*	—	—	*<0.01*	—	—	—	—	*<0.01*
Upland Vegetation Communities									
Diegan Coastal Sage Scrub[1]	19.49	—	—	1.04	0.83	0.45	—	—	2.32
Diegan Coastal Sage Scrub – Disturbed[1]	1.29	—	—	—	—	—	—	—	—
Non-Native Grassland[1]	0.62	—	—	0.08	—	—	—	—	0.08
Eucalyptus Woodland[3]	6.69	—	—	0.17	0.44	0.24	—	—	0.85
Uplands Subtotal	*28.09*	*<0.01*	—	*1.29*	*1.27*	*0.69*	—	—	*3.25*
Urban/Developed[3]	32.49	—	—	—	—	—	—	—	—
Total	**62**	**<0.01**	—	**1.29**	**1.27**	**0.69**	—	—	**3.25**

Notes:

[1] Considered a sensitive vegetation community.

[2] Potentially sensitive resource.

[3] Non-sensitive vegetation and land use type. No impacts would result from redevelopment of previously developed land.

Project phases impacting less than 0.10 acre of sensitive upland vegetation communities and less than 0.01 acre for wetland vegetation communities would not be considered significant and would not require mitigation under CEQA because the small size of the impact would not be considered a substantial adverse effect. Notwithstanding, phases impacting less than 0.01 acre of a wetland vegetation community still may be required to provide mitigation by the regulating agencies (e.g., ACOE, RWQCB, and CDFW). Exceptions to the previously described de minimus acreage thresholds would be projects that would impact habitat occupied by federal or state listed endangered or threatened species, which would be considered significant regardless of the acreage impacted. No state or federally listed species are currently (as of November 2018) documented on the Hillcrest Campus.

A summary of vegetation community impacts by construction phase is provided below. Refer to Figures 2-11a and 2-11b for the location of proposed improvements and Figures 3.3-3 and 3.3-4 for permanent and temporary impacts to vegetation communities.

Phase 1A

Temporary and permanent impacts to vegetation communities would occur during the implementation of Phase 1A. Construction of the underground Canyon Parking Structure (HC-7) and Outpatient Pavilion (HC-2), the temporary connection from the Canyon Parking Structure (HC-7) to Bachman Place, and Fuel Management Zone 1 would permanently impact 1.42 acres of non-sensitive eucalyptus woodland and less than 0.01 acre (approximately 120 linear feet) of a non-vegetated channel on the eastern side of the Hillcrest Campus (Figures 2-11a and 3.3-3).

The construction of the Multi-Use Building (HC-6) would temporarily impact small areas, up to 0.002 acre, of sensitive Diegan coastal sage scrub west of the Bachman Parking Structure.

The Arbor Drive–Bachman Place connection from the existing Arbor Drive to south of the existing Bachman Parking Structure would permanently impact 0.74 acre of non-sensitive eucalyptus woodland and less than 0.01 acre (approximately 200 linear feet) of a non-vegetated channel in the southeastern portion of the project area (Figures 2-11a and 3.3-3).

Phase 1B

Demolition of existing structures in Phase 1B would not result in impacts to vegetation communities (Figures 2-11a and 3.3-3). No new construction would occur in Phase 1B; therefore, no impacts to vegetation communities would result.

Phase 2A

The construction of the Residential Building 1 (R-1), the north access driveway from Bachman Place to the entrance of the below-grade parking structure under the Residential Buildings 1 and 2 (R-1 and R-2), and Fuel Management Zone 1 would permanently impact 1.07 acres of sensitive

Diegan coastal sage scrub, 0.06 acre of sensitive southern willow scrub (disturbed), 0.01 acre of non-sensitive eucalyptus woodland, and 0.03 acre (approximately 1,300 linear feet) of non-vegetated channel (Figures 2-11a, 2-11b, and 3.3-3 and Table 3.3-2). The construction would temporarily impact 1.04 acres of sensitive Diegan coastal sage scrub, less than 0.01 acre of sensitive southern willow scrub (disturbed), 0.17 acre of non-sensitive eucalyptus woodland, and 0.08 acre of sensitive non-native grassland (Table 3.3-3).

Phase 2B

The widening of Bachman Place from the Bachman Parking Structure to the northern boundary of the Hillcrest Campus and grading and shoring for construction of the Main Parking Structure (HC-4) and Fuel Management Zone 1 would permanently impact 2.24 acres of sensitive Diegan coastal sage scrub and 1.35 acres of non-sensitive eucalyptus woodland. Grading for the CUP (HC-5) structure pad would permanently impact in 3.7 acres of non-sensitive eucalyptus woodland. Construction would result in temporary impacts to 0.83 acre of sensitive Diegan coastal sage scrub and 0.44 acre of non-sensitive eucalyptus woodland (Figures 2-11a, 2-11b, and 3.3-3). Construction of the off-site Bachman Place widening project (off-site traffic mitigation area) would permanently impact 0.19 acre of sensitive non-native grassland and 0.42 acre of non-sensitive disturbed habitat (Figure 3.3-3). Of the 0.19 acre of sensitive non-native grassland impacts, approximately 0.04 acre is within the City's MHPA located immediately north of the Hillcrest Campus.

Phase 3

Construction of the new Hospital (HC-1), Fuel Management Zone 1, and a biofiltration basin in the southwestern corner of the campus would permanently impact 1.63 acres of non-sensitive eucalyptus woodland and less than 0.01 acre (approximately 50 linear feet) of a non-vegetated channel on the west side of the Hillcrest Campus (Figures 2-11a, 3.3-3, and 3.3-4). Construction of the Hospital (HC-1) would temporarily impact 0.19 acre of non-sensitive eucalyptus woodland and other non-native ornamental trees. Construction of the CUP (HC-5) under Phase 3 would not result in impacts to vegetation communities because grading for the structure pad would occur during Phase 2B (Figures 2-11a and 3.3-3). Construction of two proposed underground storm drain pipelines in the northwestern project area would result in temporary impacts to 0.45 acre of sensitive Diegan coastal sage scrub and 0.05 acre of non-sensitive eucalyptus woodland (Figure 3.3-3).

Phase 4

Demolition and removal of the existing hospital and the central plant in Phase 4 would not result in impacts to vegetation communities (Figures 2-11a and 3.3-3). No new construction would occur in Phase 4; therefore; no impacts to vegetation communities would result.

Phase 5

Construction of the Residential Buildings 3 and 4 (R-3 and R-4) and Fuel Management Zone 1 would permanently impact 0.07 acre of sensitive Diegan coastal sage scrub habitat and 0.34 acre of non-sensitive eucalyptus woodland (Figures 2-11a and 3.3-3).

Fuel Management Zone 1

Fuel Management Zone 1 would result in direct permanent impacts to biological resources in Phases 1A, 2A, 2B, 3 and 5 after construction is completed (Figure 3.3-4). Direct permanent impacts from Zone 1 are included in the impact acreage described for each applicable phase in the discussion above. The direct vegetation impacts associated with Zone 1 describe a worst-case scenario. To the extent feasible, Zone 1 would be restricted to the top of the mesa and out of the canyon slopes by enlarging Zone 2 or expanded wherever feasible in size on the mesa top in order to reduce the width of Zone 2. In practice, if Zone 1 (35 feet from a structure next to undeveloped areas) extends into undeveloped sensitive vegetation communities, the area would likely be thinned and managed as impact neutral Zone 2, therefore avoiding a direct impact. For the purposes of this section and 2019 LRDP EIR analysis, Zone 1 impacts have been conservatively calculated. At the time of final project design, in coordination with the Fire Marshal, UC San Diego would reduce Zone 1 impacts to sensitive habitat areas to the greatest extent feasible.

Direct Impacts to Riparian Habitat

Non-vegetated channels and wetland vegetation communities mapped on the Hillcrest Campus are depicted on Figure 3.3-1 and listed in Table 3.3-1. These areas are potentially subject to the regulatory jurisdiction of the ACOE, RWQCB, and CDFW. Based on a review of the Hillcrest Campus topography, additional jurisdictional areas (i.e., non-wetland waters of the United States and streambeds) may occur in other portions of the Hillcrest Campus, and are anticipated to be located primarily within canyon areas. A jurisdictional delineation shall be completed prior to phases in which potential impacts to riparian habitat could occur. Erosional features such as gullies, pipes, ditches, and swales are generally not waters of the United States because they are not tributaries or do not have a significant nexus to traditionally navigable waters as defined by the ACOE (ACOE 1987). The areas that are determined to be erosional gullies and not jurisdictional wetlands would not require permitting because they would not be subject to the regulatory jurisdiction of the ACOE, RWQCB, or CDFW.

Impacts to riparian habitats would be considered significant under Issue 3. Impacts to riparian habitats would require permits from the appropriate regulatory agencies, including ACOE, RWQCB, and CDFW. Jurisdictional delineations would be required for future projects impacting potential jurisdictional areas and project-specific permits from the appropriate agencies would be sought by UC San Diego.

Phase 1A

Approximately <0.01 acre of the non-vegetated channel C from Front Street through the non-sensitive eucalyptus woodland to Bachman Place in the southeast area of campus would be permanently impacted during the grading and construction of the Canyon Parking Structure (HC-7) (Figures 2-11a and 3.3-3). Construction of the new connection between Arbor Drive and Bachman Place and the widening of Bachman Place from the new Arbor Drive connection to the existing Bachman Parking Structure would permanently impact approximately <0.01 acre of the non-vegetated channel A within the non-sensitive eucalyptus woodland south of the Bachman Parking Structure (Figures 2-11a and 3.3-3).

Phase 1B

Demolition during Phase 1B would not result in direct impacts to potential jurisdictional wetlands and waters (Figures 2-11a and 3.3-3).

Phase 2A

The construction of the north access driveway from Bachman Place to the entrance of the below-grade parking structure under Residential Buildings 1 and 2 (R-1 and R-2) would permanently impact approximately 0.03 acre of the non-vegetated channel A and 0.06 acre of sensitive southern willow scrub (disturbed) habitat (Figures 2-11a, 2-11b, and 3.3-3).

Phase 2B

The widening of Bachman Place from the Bachman Parking Structure to the northern boundary of the Hillcrest Campus would temporarily impact the storm drains that flow under Bachman Place (Figures 2-11a, 2-11b, and 3.3-3).

Phases 3, 4 and 5

Construction of the biofiltration basin or other facility located in the southwestern corner of the project area during Phase 3, demolition during Phase 4, and construction during Phase 5 would not result in direct impacts to jurisdictional wetlands and waters (Figures 2-11a and 3.3-3).

Indirect Impacts

Indirect impacts to riparian habitat or other sensitive natural communities could occur during construction as well as post-construction/operations. Potential indirect impacts from implementation of the 2019 LRDP would include water quality degradation (e.g., through sedimentation, contaminants, or fuel release), fugitive dust, colonization of invasive or non-native plant species, edge effects, noise, wildlife mortality, lighting, inadvertent encroachments, non-native insects, and Fuel Management Zone 2. The majority of projects anticipated in the proposed 2019 LRDP would be situated in non-sensitive and developed areas of the Hillcrest Campus. However, some projects may occur adjacent to sensitive vegetation communities. These projects

have the potential to cause indirect effects on the sensitive natural habitats on the Hillcrest Campus, and such impacts are further discussed below.

The potential indirect impacts that could occur to vegetation communities and sensitive plants and animals during implementation of the 2019 LRDP are described below.

Water Quality

Water quality in riparian areas may be adversely affected by potential surface runoff and sedimentation during all five construction phases. The use of petroleum products (i.e., fuels, oils, lubricants) and erosion of cleared land during and after construction may contaminate surface water and adversely affect biological resources. Decreased water quality may adversely affect vegetation, aquatic animals, and terrestrial wildlife that depend upon these resources.

Degraded surface water quality may be a potentially significant impact. However, UC San Diego would be required through the enforcement of water quality mitigation associated with small MS4 permit and NPDES regulations to minimize water quality impacts during and after construction. Future project phases of the 2019 LRDP would comply with applicable storm water regulations as implemented and enforced by the RWQCB.

Biofiltration basins are proposed to improve water quality in addition to site design, source control, and storm water pollutant control BMPs. After implementation of site design measures, remaining impervious areas would be directed to structural BMPs that may include any combination of infiltration or biofiltration basins. Infiltration BMPs are structural measures that capture, store and infiltrate storm water runoff. Biofiltration BMPs are shallow basins filled with treatment media and drainage rock that treat storm water runoff by capturing and detaining inflows prior to controlled release through minimal incidental infiltration, evapotranspiration, or discharge via underdrain or surface outlet structure. Treatment would be achieved through filtration, sedimentation, adsorption, biochemical processes and/or vegetative uptake. Biofiltration BMPs can be designed with or without vegetation, provided that biological treatment processes are present throughout the life of the BMP through maintenance of plants, media base flow, or other biota-supporting elements.

Compliance with storm water regulations in addition to installation of infiltration and biofiltration basins would prevent indirect impacts to water quality. Therefore, water quality impacts to biological resources on and downstream of the Hillcrest Campus would be less than significant.

Fugitive Dust

Fugitive dust produced by building demolition and construction during Phases 1A, 1B, 2A, 2B, 3, 4, and 5 may disperse onto sensitive vegetation adjacent to 2019 LRDP construction sites. The resulting dust covering may reduce native plant productivity, in turn displacing native vegetation, reducing diversity, and affecting wildlife dependent on the vegetation.

The project shall avoid indirect impacts to plants and wildlife from fugitive dust by implementing standard air quality control measures and NPDES regulations required by the UC San Diego construction specifications to effectively reduce fugitive dust during construction. The control measures may include, but are not limited to, application of soil stabilizers (water) to disturbed areas, termination of soil disturbance during high wind events, and covering material stockpiles. Therefore, fugitive dust impacts would be less than significant.

Invasive Plant Species

Non-native plants may colonize sites disturbed by demolition and construction and may spread into adjacent native vegetation communities. Some non-native plants are highly invasive and can disrupt native habitats by reducing native species diversity, potentially increase flammability and fire frequency; change ground and surface water levels; and potentially adversely affect native wildlife that is dependent on native plant species.

Colonization by non-native plant species in the steep slope canyon areas would be a potentially significant impact. Colonization by non-native plant species in other portions of the Hillcrest Campus, while unlikely, is not considered a significant impact as these areas tend to be small and isolated from native habitat. Therefore, invasive plant species impacts would be less than significant.

Edge Effects

Edge effects occur when blocks of habitat are fragmented, resulting in a higher ratio of development edge to native vegetation communities (i.e., an increase in the urban/wildland interface). These edges increase the potential for non-native plant species to invade native vegetation communities and for native and non-native predators to access prey that may have otherwise have been protected within large, contiguous blocks of habitat. Edge effects can be particularly significant, for example, when nest parasites, such as the brown-headed cowbird, expand their population and are allowed easier access to bird nests. Impacts to native vegetation communities and wildlife from edge effects may occur along the edges of the canyon areas.

The 2019 LRDP would propose circulation improvements and a new road within sensitive habitat areas, specifically the Bachman Place widening and the new north access driveway. Impacts from increased human activity along these roadways, which are adjacent to sensitive habitat areas, would be potentially significant.

Noise

Construction-related noise from such sources as clearing, grubbing, and grading may impact wildlife. Breeding birds and mammals may temporarily or permanently leave their territories to avoid disturbances from construction activities, which may lead to reduced reproductive success and increased mortality. These indirect impacts would be considered significant for state or federally listed species, or for nesting raptors and birds protected by the CFG Code and MBTA.

Nesting raptors may also be susceptible to disturbance from construction activity, and construction activity that commences during the breeding season within 500 feet of an active raptor nest would result in a significant impact.

Wildlife Mortality

Increased wildlife mortality from animals being hit by vehicles (roadkill) can occur as vehicles travel on roads along habitat areas. The 2019 LRDP would propose circulation improvements within areas of sensitive vegetation communities, including the widening of Bachman Place and construction of the north access driveway originating at the northerly part of Bachman Place just inside of the Hillcrest Campus property boundary. The 2019 LRDP would propose circulation improvements and a new road within sensitive habitat areas, specifically Bachman Place widening and the new north access driveway. Therefore, increased wildlife mortality from vehicles would be potentially significant.

Lighting

Nighttime lighting during construction has potential to spill over into native vegetation communities, exposing wildlife species to an unnatural light regime and potentially altering their behavior patterns, which can result in lower reproductive success, therefore, reducing species diversity. In addition, nighttime lighting may provide nocturnal predators with an unnatural advantage over their prey. This may cause an increased loss in native wildlife that may be significant, especially for sensitive species that may occur. Temporary construction lighting that spills into steep slope canyon areas would be potentially significant where these areas are not currently affected by night lighting from adjacent Hillcrest Campus development, such as along the proposed north access driveway.

As discussed in Section 3.1, Aesthetics, lighting for operation of the project would be designed, as part of the Hillcrest Campus design review process, to comply with the UC San Diego Outdoor Lighting Policy and the UC San Diego Design Guidelines. Compliance with these policies would require fixtures and design that would minimize light spillover into adjacent natural areas. In addition, substantial nighttime lighting is currently present on campus, as well as in much of the area surrounding the Hillcrest Campus. Major campus roadways and walkways are well lit for the safety of students, faculty, staff, and the public who may be driving or walking through the campus after dark. Therefore, the potential for the implementation of the 2019 LRDP to create a permanent new source of substantial light that would adversely affect natural areas surrounding the Hillcrest Campus during project operation would be less than significant as projects are required to comply with the UC San Diego Outdoor Lighting Policy and the UC San Diego Design Guidelines.

Inadvertent Encroachments

Implementation of the 2019 LRDP could result in inadvertent impacts outside the conceptual development limits identified in the 2019 LRDP when final design of each project phase is available. Impacts to sensitive vegetation communities occurring outside the development limits of the 2019 LRDP would be potentially significant.

Non-Native Insects

Invasive, non-native insects may result in weakening and eventual death of native plant species that are used as host species by these insects. Since 2015, concern has grown for the invasion into Southern California of the polyphagous and Kuroshio shot hole borers (SHBs) (*Euwallacea* sp.). The SHBs are invasive ambrosia beetles that introduce fungi and other pathogens into host trees. The fungi cause fusarium dieback disease, which can lead to the death of individual branches, or in severe cases, the entire tree. Numerous native and ornamental tree species have been documented as host species used by these SHBs. Currently, SHBs have not been observed on the Hillcrest Campus, and the nearest recorded occurrences are 2015 observations of Kuroshio SHB near the San Diego Zoo, approximately 2 miles south of the project area (UC Riverside 2018a). Prior to 2017, all occurrences recorded in the County had been the Kuroshio SHB. The polyphagous SHB was documented in Carlsbad in 2017 (UC Riverside 2018a, 2018b; UC 2018).

Future development phases implemented as part the 2019 LRDP may introduce SHBs into native vegetation communities on the Hillcrest Campus if infected ornamental or native trees are accidentally planted as part of a landscaping or habitat mitigation effort; this is a potentially significant impact. Given the known host species for SHBs, the vegetation community on the Hillcrest Campus at greatest risk of infection is the southern willow scrub-disturbed community.

Fuel Management Zone 2

As discussed previously in this section under Fuel Management Zone 1, fuel management on the Hillcrest Campus generally follows the City's brush management guidelines. Zone 2 is where selective thinning and pruning of plants is required to reduce fuel load (Figure 3.3-4). No grading or grubbing is allowed in Zone 2, and non-native plants are identified as priority for removal ahead of native plants. Thinning of vegetation within Zone 2 would only occur from September 1 through February 14 (i.e., outside of the general avian breeding season), thereby avoiding potential indirect impacts to nesting birds. The thinning and management of vegetation involved in Fuel Management Zone 2 would be impact neutral, and therefore would not result in indirect impacts to biological resources.

Mitigation Measures

Direct Impacts to Vegetation Communities

Survey Requirements

As described in Section 3.3.1.2 of this 2019 LRDP EIR, updated vegetation mapping of the Hillcrest Campus was conducted in 2018. For those areas currently mapped as not containing sensitive vegetation communities, no further project-specific mapping would be required. Furthermore, no project-specific mapping would be required for any projects beginning construction within 5 years of the most recent vegetation mapping. In these cases, project implementation would rely on the most recent previous survey effort. The majority of grading impacts to native and non-native vegetation communities would occur in Phases 1A (2019–2022), 1B (2021–2023), 2A (2022–2025), and 2B (2022–2025).

For projects that would potentially impact sensitive vegetation communities where vegetation mapping has not been conducted within the preceding 5 years, the following mitigation measure shall apply:

> **BIO-3A: Vegetation Mapping.** In areas proposed for construction that are mapped as supporting a sensitive vegetation community and vegetation community mapping has not been conducted on the site in the preceding 5 years, updated vegetation mapping shall be conducted by a qualified Biologist as part of the project planning and environmental review process.

Habitat Mitigation Requirements

Permanent Impacts

Table 3.3-4, Mitigation Acreage for Permanent Impacts to Sensitive Vegetation Communities, presents the recommended mitigation ratios and acreage for each sensitive vegetation community anticipated to be permanently impacted by implementation of the 2019 LRDP. The proposed mitigation ratios generally follow accepted ratios established by the wildlife agencies for regional conservation plans and other projects.

Impacts to sensitive upland vegetation communities totaling less than 0.10 acre per construction phase would not be considered significant and would not require mitigation. Per construction phase, impacts to wetland vegetation communities totaling less than 0.01 acre would not be considered significant under CEQA and would not require mitigation unless dictated by the regulating agencies (e.g., ACOE, SDRWQCB, and CDFW). Exceptions to the above described thresholds would be for projects impacting habitat occupied by federal or state listed endangered or threatened species, which would be considered significant regardless of the acreage impacted.

Table 3.3-4. Mitigation Acreage for Permanent Impacts to Sensitive Vegetation Communities

Vegetation Community	Anticipated Impacts	Mitigation Ratio	Recommended Mitigation Acreage
Wetland Vegetation Community			
Southern Willow Scrub Disturbed[1]	0.06	3:1	0.18
Non-Vegetated Channel[2]	0.03	2:1	0.06
Wetlands Subtotal	*0.09*	—	*0.24*
Upland Vegetation Community			
Diegan Coastal Sage Scrub (including disturbed)[1]	3.38	2:1	6.76
Non-Native Grassland[1]	0.19	0.5:1	0.10
Uplands Subtotal	*3.57*	—	*6.86*
Total	**3.66**	—	**7.10**

Sources: City of San Diego 2012; TRC 2017; Harris 2019.

Notes:

[1] Considered a sensitive vegetation community.

[2] Jurisdictional delineation needed first to determine the presence of regulated waters under CWA.

Mitigation is expected to occur by phase, although it could also occur at the individual development project level or the entire 2019 LRDP level. In general, impacts would be mitigated prior to the completion of each phase, unless the mitigated areas would be further disturbed in a future phase, then the mitigation would be implemented prior to the completion of the future phase. Some phases may be mitigated prior to impacts occurring, such as the pre-purchase of credits from a mitigation bank. All impacts would be mitigated prior to completion of the final phase of the 2019 LRDP. All permanent impacts to sensitive vegetation communities shall be mitigated in accordance with the ratios listed in Table 3.3-4.

Permanent impacts to Diegan coastal sage scrub and non-native grassland shall be mitigated as described in Mitigation Measure BIO-3B. Permanent impacts to wetland vegetation communities and non-vegetated channels (if found to be jurisdictional) shall be mitigated as described in Mitigation Measure BIO-3C:

> **BIO-3B: Permanent Impacts to Upland Habitats.** Permanent impacts to sensitive upland vegetation communities shall be mitigated through the preservation of habitat, habitat creation, and/or enhancement, or combination thereof on the Hillcrest Campus or off campus through habitat acquisition and preservation or purchase of credits from an approved conservation bank. Mitigation for impacts to upland communities shall be in-kind. Permanent impacts to sensitive Diegan coastal sage scrub shall be mitigated at a ratio of 2:1. Permanent impacts to sensitive non-native grassland shall be mitigated at a ratio of 0.5:1.
>
> **BIO-3C: Permanent Impacts to Riparian Habitats.** Impacts to sensitive riparian vegetation communities shall be mitigated on or off campus through habitat enhancement or

preservation or purchase of credits from an approved conservation bank. Permanent impacts to southern willow scrub-disturbed shall be mitigated at a ratio of 3:1. Permanent impacts to non-vegetated channel shall be mitigated at a ratio of 2:1. If the impacted non-vegetated channel and southern willow scrub–disturbed habitat within the Hillcrest Campus is under the jurisdiction of the ACOE, RWQCB, and/or CDFW then the applicable wetland permit conditions shall be implemented.

Temporary Impacts

As discussed in Section 3.3.3.3, Direct Impacts to Vegetation Communities, impacts to wetland vegetation communities less than 0.01 acre would not be considered significant and would not require mitigation under CEQA. However, because Phase 2A construction activities would potentially temporarily impact less than 0.01 acre of wetland vegetation community, specific mitigation may be required by the regulating agencies (e.g., ACOE, RWQCB, and CDFW).

Mitigation for temporary impacts to Diegan coastal sage scrub and non-native grassland shall be mitigated as described in Mitigation Measure BIO-3D:

BIO-3D: Temporary Impacts to Sensitive Vegetation Communities. Temporary impacts to sensitive vegetation communities including Diegan coastal sage scrub and non-native grassland shall be restored in place at a 1:1 ratio. Restoration shall be implemented in the final phase of construction or during an earlier phase if no additional impacts from future construction phases would occur.

A Revegetation Plan including development of reasonable success criteria and appropriate monitoring protocols and timelines shall be developed for restoration of temporarily impacted areas. UC San Diego Campus Planning shall provide guidance for and oversight of the Restoration Plan and implementation respectively.

The process for establishing and sampling a representative Diegan coastal sage scrub and non-native grassland reference site within the Hillcrest Campus shall be described in the Restoration Plan. The Restoration Plan shall include a criterion for removing and minimizing non-native plant species listed as invasive by the California Invasive Plant Council.

In the event that Diegan coastal sage scrub and non-native grassland cannot be restored in place after construction, these impacts would be considered permanent and would be mitigated at the applicable ratio outlined in Mitigation Measure BIO-3B (2:1 for Diegan coastal sage scrub and 0.5:1 for non-native grassland).

Table 3.3-5, Mitigation Acreage for Temporary Impacts to Sensitive Vegetation Communities, presents the recommended mitigation ratios and acreage for each sensitive vegetation community anticipated to be temporarily impacted by implementation of the 2019 LRDP. The proposed

mitigation ratios generally follow accepted ratios established by the wildlife agencies for regional conservation plans and other projects to reduce potentially significant impacts to sensitive vegetation communities to below a level of significance.

Table 3.3-5. Mitigation Acreage for Temporary Impacts to Sensitive Vegetation Communities

Vegetation Community	Anticipated Impacts	Mitigation Ratio	Recommended Mitigation Acreage
Wetland Vegetation Community			
Southern Willow Scrub Disturbed[1]	<0.01	—	—
Wetlands Subtotal	*<0.01*	—	—
Upland Vegetation Community			
Diegan Coastal Sage Scrub (including disturbed)[1]	2.32	2:1	4.64
Non-Native Grassland[1]	0.08	0.5:1	0.04
Uplands Subtotal	*2.40*	—	*4.68*
Total	**2.40**	**—**	**4.68**

Sources: City of San Diego 2012; TRC 2017; Harris 2019.

Note:

[1] Considered a sensitive vegetation community.

Direct Impacts to Riparian Habitats

Potential regulated waters and/or riparian habitats may occur within the project area. In conjunction with implementation of Mitigation Measure BIO-3C to reduce permanent impacts to riparian habitats, impacts to wetlands and waters would be reduced through implementation of Mitigation Measure BIO-3E:

> **BIO-3E: Jurisdictional Delineation.** During the project planning process, if the area of disturbance is within a storm drain outlet; mapped as a potential drainage or wetland; or the project area contains or is located immediately adjacent to a natural drainage course, a qualified Biologist shall conduct a jurisdictional delineation. The jurisdictional delineation shall use current regulatory guidance from ACOE, RWQCB, and CDFW to identify the presence of potential regulated wetlands, waters, and habitats in the project vicinity.
>
> If there is potential for the project to adversely affect wetlands or waters, impacts shall be avoided and minimized during the final design phase, to the extent practicable. Unavoidable impacts shall be mitigated through implementation of Mitigation Measure BIO-3C, as applicable, and conformance with applicable wetland permit conditions.

General Construction Impact Measures

All projects proposed adjacent to lands supporting sensitive biological resources shall be required to comply with the following minimization measures described below (or alternative measures that

provide equivalent or superior protection of resources), as well as any required regulatory measures to control dust and protect water quality.

The following mitigation measures shall be required for construction activities that are proposed adjacent to the open space canyon areas (lands that support sensitive biological resources):

BIO-3F: Pre-Construction Meeting. Prior to construction, a pre-construction meeting shall be held between the qualified Biologist, UC San Diego Project Manager and Campus Planning staff, and Construction Manager and/or Grading Contractor to ensure the appropriate personnel are informed of the sensitivity of habitats in the open space canyon areas:

1. Prior to commencement of clearing or grading activities, fencing (e.g., silt fencing, orange construction fencing, and/or chain-link fencing as determined by UC San Diego Campus Planning) shall be installed around the approved limits of disturbance to prevent errant disturbance of sensitive biological resources by construction vehicles or personnel. Installation of fencing to demarcate the approved limits of disturbance shall be verified by a qualified Biologist prior to initiation of clearing or grading activities. All movement of construction vehicles, including ingress and egress of equipment and personnel, shall be limited to designated construction zones. The fencing shall be removed upon completion of all construction activities.
2. No temporary storage or stockpiling of construction materials shall be allowed within the open space canyon areas. This prohibition shall not be applied to facilities that are planned to traverse the open space canyon areas (e.g., driveways, roads, utilities corridors). Staging areas and construction sites in proximity to the open space canyon areas shall be kept free of trash, refuse, and other waste; no waste dirt, rubble, or trash shall be deposited in these areas.

BIO-3G: Errant Construction Activities. If errant construction activities result in inadvertent impacts to biological resources outside of the approved limits of disturbance, such impacted areas shall be evaluated and quantified by a qualified Biologist and revegetation options coordinated with UC San Diego Campus Planning staff. Errant construction impacts to non-sensitive vegetation communities and non-native grassland shall be revegetated with an appropriate native erosion control seed mix. Errant construction impacts to wetland vegetation communities and native upland vegetation communities shall be restored to the pre-impact vegetation community.

BIO-3H: Fire Prevention during Construction. Equipment to extinguish small brush fires (e.g., from trucks or other vehicles) shall be present on site during all phases of project construction, along with personnel trained in the use of such equipment. Smoking shall be prohibited in construction areas adjacent to flammable vegetation.

BIO-3I: Construction Monitoring. During project construction, a qualified Biologist shall visit the site at the start of each construction project to conduct a pre-construction environmental meeting with the construction contractor's Construction Manager and other appropriate personnel. The monitor shall conduct regular visits during site preparation, vegetation removal, and grading activities within or adjacent to native vegetation and during the raptor and general avian breeding season (refer to BIO-2C and 2D). During site visits, the monitor shall be responsible for ensuring that the construction activities and staging areas are restricted to the approved limits of work, and protective fencing is adequately maintained.

The biological monitor shall be responsible for ensuring that the contractor adheres to the other provisions described in Mitigation Measures BIO-3F through BIO-3J. The monitor, in cooperation within the construction project manager, shall have the authority to halt construction activities in the event that these provisions are not met. The biological monitor shall submit regular reports to UC San Diego Campus Planning during construction documenting the implementation of all grading and construction minimization measures.

Lighting

Construction is expected is occur primarily during the daylight hours. However, if night work is needed near the steep slopes, then the following mitigation measure shall be implemented:

BIO-3J Night Lighting: If temporary night lighting is necessary during construction, lights shall be directed away from sensitive vegetation communities and shielded to minimize temporary lighting of the surrounding habitat.

Operational (Post-Construction) Measures

This section describes the measures to be implemented for project areas located in or adjacent to the open space canyon areas to minimize indirect impacts that may occur following the construction phase.

Runoff and Water Quality

The following mitigation measure shall be implemented along project areas that interface with the steep slope canyon areas to address runoff/water quality impacts from landscaping:

BIO-3K: Runoff and Water Quality. Irrigation and pest management for the Hillcrest Campus shall be implemented as described below to minimize runoff and impacts to water quality:

- Irrigation for project landscaping shall be minimized and controlled in areas in and adjacent to the steep slope canyon areas through efforts such as designing irrigation systems to match landscaping water needs, using sensor devices to prevent irrigation

during and after precipitation, and using automatic flow reducers/shut-off valves that are triggered by a decrease in water pressure from broken sprinkler heads or pipes.

- Integrated Pest Management principles pursuant to the UC Integrated Pest Management Program shall be implemented to the extent practicable for areas in and adjacent to the steep slope canyon areas for chemical pesticides, herbicides, and fertilizers. Examples of such measures may include, but are not limited to, alternative weed/pest control measures (e.g., hand removal) and proper application techniques (e.g., conformance to manufacturer specifications and legal requirements).

Invasive Plant Species

The following mitigation measure would minimize the spread of invasive non-native plant species during the implementation of the 2019 LRDP:

BIO-3L: Invasive Plant Species Prevention. During construction and landscaping within the Hillcrest Campus the following measures shall be implemented to minimize the spread of invasive plant species:

- Construction equipment shall be cleaned before coming to the Hillcrest Campus.
- Weed-free straw wattles shall be used for erosion control.
- Appropriate landscaping species shall be selected based on the vegetation communities within the steep slope canyon areas adjacent to the project. In areas supporting native (or disturbed native) vegetation communities, revegetation of impacted slopes shall be with appropriate native plant materials.
- Landscaping adjacent to the steep slope canyon areas shall comply with the following requirements to prevent the introduction of invasive species:
  - Appropriate landscaping shall be selected based on the vegetation communities within the portion of the steep slope canyon areas adjacent to the project. In areas supporting native (or disturbed native) vegetation communities, revegetation of impacted slopes shall be with appropriate native plant materials. In particular, where the steep slope canyon areas are disturbed by construction, installation of native plants, including but not limited to California sagebrush, California buckwheat, lemonadeberry, deerweed (*Acmispon glaber*), monkey flower (*Diplacus aurantiacus*), and black sage (*Salvia mellifera*), is recommended to make the steep slope canyon areas more impenetrable to people while reinforcing the boundaries and edges of canyon areas.
  - Only non-invasive plant species shall be included in the landscape plans for projects within Fuel Management Zone 1 (species not listed on the California Invasive Plant Inventory prepared by the California Invasive Plant Council). A qualified landscape architect and/or qualified Biologist shall review

landscape plant palettes prior to implementation to ensure that no invasive species are included.

- Any planting stock brought onto a project site adjacent to the open space canyon areas for landscaping or habitat restoration shall be inspected to ensure it is free of pest species that may invade natural areas, including but not limited to Argentine ants (*Linepithema humile*) and South American fire ants (*Solenopsis* spp.). Inspections of planting stock for habitat restoration shall be by a qualified Biologist, and inspections of planting stock for landscaping shall be the responsibility of a qualified UC San Diego project manager or their designated assignee. Any planting stock found to be infested with such pests shall be quarantined, treated, or disposed of according to best management practices by qualified personnel, in a manner that precludes invasions into natural habitats.

Wildlife Mortality

The proposed north access driveway is likely to increase wildlife mortality on the Hillcrest Campus. Mitigation Measure BIO-3M would reduce the impacts to wildlife mortality to less than significant:

> **BIO-3M: Wildlife Mortality Avoidance**. Roads and driveways along the steep slope canyon areas shall have barriers to discourage wildlife from entering the roads.

Edge Effects

The following mitigation measure would be implemented upon completion of the 2019 LRDP to minimize indirect impacts to sensitive vegetation communities and wildlife from increased human activity along the edges of the Hillcrest Campus:

> **BIO-3N: Edge Effects Avoidance.** Projects adjacent to the open space canyon areas shall install permanent signage along the boundary, indicating the presence of lands supporting sensitive habitat to discourage access outside of established trails.
>
> Projects adjacent to the open space canyon areas shall install other visual/physical barriers (such as appropriate landscaping) to discourage human encroachment into the canyon areas where trespass is likely to occur (gradual slopes, areas of low, open vegetation, areas of previous disturbance).
>
> Maintenance of storm water facilities shall be conducted in a manner to minimize impacts to adjacent sensitive habitats. Maintenance shall be overseen by a qualified Biologist and would occur outside the general bird-breeding season, which extends from January 15 through August 31.

Non-Native Insects

The following mitigation measure shall be implemented on a project and programmatic basis to reduce indirect impacts associated with non-native insects to sensitive vegetation communities to less than significant:

BIO-3O: Non-Native Insects Avoidance. The following measures shall be implemented for each project or construction phase that would remove or install tree species on the Hillcrest Campus that may be used as host trees by SHBs:

- Trees to be planted on the Hillcrest Campus shall be obtained from a reliable source and be free of sign of SHB infestation.
- An education program for on-site workers responsible for tree installation shall be implemented. The program shall describe the signs of SHB infestation (e.g., sugary exudate on trunks or branches, and SHB entry/exit holes [approximately the size of the tip of a ballpoint pen]).
- Sign of SHB infestation shall be reported to CDFW and UC's Eskalen Lab (https://ucanr.edu/sites/eskalenlab/) by the UC San Diego project manager and/or the project Biologist.
- Trees with sign of SHB infestation shall be pruned or removed, as appropriate, and potential host materials shall be chipped to less than one inch prior to composting on site or transfer to a landfill.
- Equipment that is used to prune or remove SHB-infected trees shall be disinfected prior to additional use.
- Biologists monitoring mitigation sites shall be knowledgeable regarding sign of SHB infestation.

3.3.3.4 Issue 4: Wetlands

Biological Resources Issue 4 Summary

Would implementation of the 2019 LRDP have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means?

Impact: Implementation of the 2019 LRDP would have the potential to impact federal jurisdictional wetlands.

Mitigation: Wetland Delineation and Permitting (BIO-3E); Compensatory Mitigation and Reduction of Indirect Impacts (BIO-3C and BIO-3E through BIO-3O)

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would result in a substantial adverse effect on state or federally protected wetlands (including but not limited to marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means.

Impact Analysis

Direct Impacts

Impacts to wetland communities are described in the previous section (see Section 3.3.3.3) and anticipated direct impacts are shown in Tables 3.3-2 and 3.3-3. Impacts to federal jurisdictional areas would be considered significant and would require permits from ACOE and RWQCB. Jurisdictional delineations would be required for future construction phases impacting potential jurisdictional areas.

Mitigation Measures

Implementation of Mitigation Measures BIO-3C and BIO-3E, which include on-site riparian habitat enhancement or preservation, or purchase of credits from an approved conservation bank, a jurisdictional delineation by a qualified Biologist, and compliance with applicable permit conditions would reduce potential impacts to wetlands to a less than significant level.

3.3.3.5 Conclusion

All potentially significant impacts related to candidate, sensitive, or special-status plant and animal species, riparian habitats, and wetlands would be mitigated to less than significant with implementation of the Mitigation Measures BIO-1A through BIO-3O listed in Sections 3.3.3.1 through 3.3.3.4.

3.3.4 Cumulative Impacts and Mitigation

Biological Resources Cumulative Issue Summary

Would implementation of the 2019 LRDP have a cumulatively considerable contribution to a cumulative biological resources impact considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Issue 1: Regional loss of sensitive plants and vegetation communities	Potentially significant	Not cumulatively considerable
Issue 2: Regional loss of sensitive animals	Potentially significant	Not cumulatively considerable
Issue 3: Regional loss of riparian or other sensitive natural communities	Potentially significant	Not cumulatively considerable
Issue 4: Federally protected wetlands	Potentially significant	Not cumulatively considerable

3.3.4.1 Cumulative Issues 1, 2, 3, and 4: Sensitive Plants, Animals, Natural Communities, and Federally Protected Wetlands

The CEQA Guidelines (Section 15355) state that a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in this 2019 LRDP EIR together with other projects causing related impacts. Section 15130 of the CEQA Guidelines requires that an EIR address cumulative impacts of a project when the project's incremental effect would be cumulatively considerable. The term "cumulatively considerable" means that the incremental effects of the individual project are considerable when viewed in connection with the effects of past projects, other current projects, and probable future projects. This section of the 2019 LRDP EIR addresses the cumulative impacts of implementing the 2019 LRDP with respect to both the Hillcrest Campus and the San Diego region as a whole.

In 1991, the State of California passed the NCCP Act, providing for the long-term, regional conservation of natural vegetation and wildlife diversity. The City of San Diego MSCP Subarea Plan is the framework of NCCP plan for southwestern San Diego County. The USFWS and CDFW jointly adopted the MSCP Subarea Plan in 1997. As part of that approval process, a Joint EIR/Environmental Impact Statement (EIS) was prepared, which addresses the cumulative impacts to biological resources from growth in the San Diego region. The Final MSCP Subarea Plan (City of San Diego 1998) and its associated Joint EIR/EIS (City of San Diego and USFWS 1996) are summarized herein and are incorporated by reference for the purposes of this cumulative analysis. Geographically, the MSCP Subarea Plan study area covers approximately 582, 243 acres in southwestern San Diego County, including the cities of San Diego, Chula Vista, Coronado, Del

Mar, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, and Santee, as well as a large portion of the unincorporated area of southwestern San Diego County. The Hillcrest Campus is not part of the MSCP planning effort or a formal part of the MSCP study area. As a part of the MSCP planning process, lands were identified for assembly into a comprehensive preserve for the conservation of biological resources. That preserve is referred to as the MHPA and was cooperatively designed by the participating jurisdictions and special districts in the MSCP study area in partnership with the wildlife agencies (i.e., CDFW and USFWS), property owners, and representatives from private industry and environmental groups. The MHPA conserves 171,917 acres of vacant land, including 167,667 acres of habitat and 4,250 acres of other vacant lands that contribute to the preserve design. Approximately 62 percent of the Diegan coastal sage scrub in the MSCP study area is contained in the MHPA. Table 3.3-6, Vegetation Communities Impacted and Conserved by the Multiple Species Conservation Program, summarizes the habitat conservation anticipated within the MSCP study area for vegetation communities found on the Hillcrest Campus.

Table 3.3-6. Vegetation Communities Impacted and Conserved by the Multiple Species Conservation Program

Vegetation Community[1]	Acreage Outside of MHPA or Assumed Impacted in the MHPA	MHPA Acreage Conserved[2]	Percent of MSCP Vegetation Conserved
Riparian Scrub (including Southern Willow Scrub, Mulefat Scrub, and disturbed associations)	1,088	4,286	80
Southern Mixed Chaparral	56,390	54,845	49
Coastal Sage Scrub (including disturbed associations)	44,230	71,274	62
Eucalyptus Woodland	1,307	326	20
Grassland (native and non-native)	18,603	9,770	62
Disturbed Habitat	20,797	2,447	20

Notes: MHPA = Multi-habitat Planning Area; MSCP = Multiple Species Conservation Program

[1] Includes only those vegetation communities found on the Hillcrest Campus.

[2] Based on average conservation factors, as targeted in the regional MSCP (City of San Diego 1998).

The biological conservation offered by the MSCP Subarea Plan provides sufficient habitat area, diversity, and linkages to allow the participating local jurisdictions to directly impact or "take" up to 85 sensitive plant and animal species in the region. Those "covered species" identified in the plan consist of species listed as endangered or threatened by the federal or state Endangered Species Acts, as well as currently unlisted sensitive species.

In addition to the direct and indirect impacts of the MSCP Subarea Plan, the cumulative analysis for the Joint EIR/EIS also takes into consideration other NCCP conservation planning efforts by nine other jurisdictions in the northern and eastern portions of the County. Together with the MSCP Subarea Plan, these other plans would help form a 4,200-square-mile habitat preserve

system within the County. Although the NCCP plans are in various stages of planning, all have been or are being designed to be consistent with the NCCP conservation guidelines. Implementation of the MSCP Subarea Plan would result in cumulatively significant direct impacts to the 85-covered species (City of San Diego and USFWS 1996). Assembly and management of the MHPA as part of the MSCP Subarea Plan and other NCCP plans would reduce these cumulative impacts to less than significant levels. Cumulative indirect impacts to native vegetation communities associated with edge effects and increased development pressure outside the MHPA were not considered significant due to the measures in the plans that address these effects.

Implementation of the 2019 LRDP would incrementally contribute to the loss of native vegetation communities, direct and indirect impacts to covered species, and the conservation of vegetation communities in the San Diego region. Based on the impact analysis contained in Section 3.3.3 of this section, 2019 LRDP implementation would increase impacts to native vegetation communities anticipated within the MSCP study area by less than 0.01 percent (refer to Section 3.3.3.1).

Cumulative impacts to biological resources would include projects affecting sensitive vegetation communities like Diegan coastal sage scrub, southern mixed chaparral and non-native grassland. For example, the Legacy International Center project (SCH No. 2014081053, 2017), located on Hotel Circle South and immediately to the north of the Hillcrest Campus, would result in impacts to sensitive vegetation communities of southern mixed chaparral (and disturbed) and non-native grassland. While impacts to sensitive vegetation communities from the Legacy International Center project would be mitigated to less than significant, the impacts to these vegetation communities from implementation of the 2019 LRDP would be cumulatively considerable if not mitigated. Mitigation Measures BIO-3A through BIO-3D would reduce temporary and permanent impacts to sensitive vegetation communities to less than significant and would therefore not contribute to cumulative impacts. Despite the Bachman Place widening impacts to 0.04 acre of non-native grassland within the MSCP area immediate north of the Hillcrest Campus, the existing road improvements would adhere to the MSCP Subarea Plan guidelines. Therefore, the relatively minor impact to low-quality non-native grassland habitat, in addition to adhering to the MSCP Subarea Plan guidelines, the 2019 LRDP would not conflict with the City's MSCP Subarea Plan or contribute to a cumulatively considerable impact to regional conservation planning. Further, the Legacy International Center project and other cumulative projects in the region that comply with the MSCP as specified by the City's Subarea Plan and its implementing ordinances are not expected to result in a significant cumulative impact for those biological resources adequately covered by the MSCP Subarea Plan, including sensitive vegetation communities.

Biological surveys conducted on the Hillcrest Campus, including focused surveys for sensitive species, found two MSCP-covered species on the Hillcrest Campus (San Diego barrel cactus and wart-stemmed ceanothus). An additional MSCP-covered species is considered to have high potential to occur on the Hillcrest Campus (Cooper's hawk). Of the 85 species covered in the

MSCP Subarea Plan, the 2019 LRDP would potentially contribute to impacts to three of those species (San Diego barrel cactus, wart-stemmed ceanothus, and Cooper's hawk). However, Mitigation Measures BIO-3B, BIO-3C, BIO-3D, BIO-1A, BIO-1B, BIO-2C, and BIO-2D would reduce impacts to sensitive plant and animal species to less than significant on campus and would therefore not contribute to cumulative impacts. With implementation of these mitigation measures along with approved regional habitat conservation plans, incremental impacts to biological resources associated with the 2019 LRDP in conjunction with regional growth would not be considered cumulatively significant.

3.3.5 CEQA Issues Where There Is No Potential for a Significant Effect

The following section discusses the other Standards of Significance related to Biological Resources contained in Appendix G of the CEQA Guidelines wherein the proposed 2019 LRDP was determined to not cause a significant effect.

Would implementation of the 2019 LRDP 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?

As discussed in Section 3.3.1.5, Wildlife Corridors and Linkages, there are two main areas that support the majority of wildlife habitat on the Hillcrest Campus: the steep slope canyon areas located east and west of Bachman Place. These steep slope canyon areas on the Hillcrest Campus are part of a system of canyons sporadically connected along the southern slopes of Mission Valley that continue to the west to Presidio Park where they end at the I-8 and I-5 interchange. Construction of the north access driveway during Phase 2A would add another physical barrier to the already segmented canyon system. The Hillcrest Campus wildlife habitat is live-in habitat and separated from other wildlife habitat by State Route 163, I-8, I-5, and surrounding development. Therefore, no corridors or linkages are present on the Hillcrest Campus to connect these lands to larger regional wildlife corridors currently and impacts would be less than significant.

Would implementation of the 2019 LRDP conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?

In regards to local biological resources policies and ordinances, UC San Diego is a part of the UC, a constitutionally created unit of the State of California. As a state entity, UC is not subject to municipal plans, policies, and regulations, such as County and City General Plans or local ordinances. The 2019 LRDP would be the guiding land use document for the Hillcrest Campus (replacing the 1995 LRDP) and it proposes development in accordance with environmental sustainability and stewardship principles identified in the plan. During preparation of this 2019 LRDP EIR, UC San Diego voluntarily reviewed the proposed 2019 LRDP for consistency with local policies and ordinances found in the City's Land Development Code (2018), including the Environmentally Sensitive Lands regulations

and the City's Biology Guidelines (2012), and determined that no local policy conflicts would arise with implementation of the 2019 LRDP, and no significant impact would occur.

Would implementation of the 2019 LRDP conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

In regards to local, regional, and state habitat conservation plans, the Hillcrest Campus is not included within the City's MSCP Subarea Plan nor is UC San Diego an enrolled agency in the NCCP Program. Therefore, the MSCP Subarea Plan is not applicable to UC San Diego-owned property. However, the MSCP Subarea Plan was taken into account during the preparation of the 2019 LRDP biological resources analysis due to its applicability to the surrounding region. Preserve areas designated by the City's MSCP Subarea Plan (i.e., in the MHPA) are not located on UC San Diego lands; however, designated MHPA areas occur to the north and west of the Hillcrest Campus (Figure 3.3-2). A portion of the undeveloped canyon areas on the Hillcrest Campus appears to have been accidentally mapped as being within the City's MHPA. UC San Diego plans to pursue an MHPA map revision with the City to correct this error. Where appropriate, UC San Diego's analysis of biological impacts reflects many of the standards established by the MSCP Subarea Plan, including species and vegetation community sensitivities and mitigation ratios.

While impacts on the Hillcrest Campus would not affect any applicable regional conservation plans, the 2019 LRDP would require off-site traffic mitigation consisting of the widening of Bachman Place to three lanes from the Hillcrest Campus Boundary to Hotel Circle South during Phase 2B. The off-site traffic mitigation improvements would permanently impact approximately 0.04 acre of non-native grassland habitat located within the City's MHPA. According to the City's MSCP Subarea Plan, roads that are in compliance with the City's general planning policies and design guidelines would be permitted (City of San Diego 1997). The widening of Bachman Place would adhere to the design guidelines outlined in the MSCP Subarea Plan, including locating roads in lower quality habitat or disturbed areas. In addition, existing roads are considered a compatible use within the MHPA and maintenance is permitted under the MSCP Subarea Plan (City of San Diego 1997). In coordination with the City, UC San Diego would submit the applicable permits to secure the approvals required to construct the off-campus portion of the City-planned Bachman Place widening project during Phase 2B. Due to the relatively minor impact to 0.04 acre of low-quality non-native grassland habitat, in addition to adhering to the MSCP Subarea Plan design guidelines, the 2019 LRDP would not result in a significant impact to local, regional, or state conservation planning.

3.3.6 References

ACOE (U.S. Army Corps of Engineers). 1987. Corps of Engineers Wetlands Delineation Manual. Final report. Wetlands Research Program Technical Report Y-87-1 (online edition). Prepared by Environmental Laboratory, U.S. Army Waterways Experiment Station. Wetlands Research Program. January 1987. Accessed December 2018. http://www.cpe.rutgers.edu/Wetlands/1987-Army-Corps-Wetlands-Delineation-Manual.pdf.

ACOE. 2019. Regulatory Permit Program. U.S. Army Corps of Engineers, Los Angeles District. Accessed February 2019. https://www.spl.usace.army.mil/Missions/Regulatory/Permit-Process/Permit-Program/.

American Ornithological Society. 2018. Fifty-Ninth Supplement to the American Ornithological Society's Check-list of North American Birds. The Auk. Ornithology Advances. American Ornithologists' Union. Accessed December 2018. http://www.americanornithologypubs .org/doi/pdf/10.1642/AUK-18-62.1?code=coop-site.

Audubon v. Dept. of the Interior (New York Southern District Court, May 24, 2018).

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken. 2012. The Jepson Manual: Higher Plants of California. 2nd ed. University of California Press. Berkeley, California. January 2012.

Bowler, P.A. 1990. "Riparian Woodland: An Endangered Habitat in Southern California." In Endangered Plant Communities of Southern California, edited by A.A. Schoenherr. Southern California Botanists Special Publication No. 3, 80–97.

Bradley, R.D., L.K. Ammerman, R.J. Baker, L.C. Bradley, J.A. Cook, R.D. Dowler, C. Jones, D.J. Schmidly, F.B. Stangi, R.A.Van De Bussche, and B. Wursig. 2014. Revised Checklist of North American Mammals North of Mexico, 2014. Texas Tech University Natural Science Research Laboratory. October 2014.

California Legislature. 2018. Assembly Bill 2627 Migratory Nongame Birds: Migratory Bird Treaty Act: Authorized Take. February 15, 2018.

CaliforniaHerps.com. 2018. California Herps. A Guide to Reptiles and Amphibians of California. Accessed December 2018. https://CaliforniaHerps.com.

CDFG (California Department of Fish and Game). 1965. California Fish and Game Plan. The Resources Agency, Volume 3(c):908.

CDFG and California Resources Agency. 1993. Southern California Coastal Sage Scrub Natural Community Conservation Planning Process Guidelines. November 1993.

CDFW (California Department of Fish and Wildlife). 2014. Guidance Document for Fine-Scale Wildlife Connectivity Analysis. California Department of Fish and Wildlife, Biogeographic Data Branch, Conservation Analysis Unit. December 2014.

CDFW. 2017. California Natural Diversity Database (CNDDB) 2017. RareFind Version 5.1.1. Database Query for the La Jolla, California, USGS 7.5-minute quadrangle. Wildlife and Habitat Data Analysis Branch. Version dated May 1, 2017.

CDFW. 2018a. California Natural Diversity Database (CNDDB) 2018. Commercial Version. Database Query for the La Jolla, California, USGS 7.5-minute quadrangle. Wildlife and Habitat Data Analysis Branch. Version dated May 1, 2018.

CDFW. 2018b. State and Federally Listed, Endangered, Threatened, and Rare Plants of California. Biogeographic Data Branch California Natural Diversity Database (CNDDB). Updated August 2018.

CDFW. 2018c. Special Animals List. California Department of Fish and Wildlife California Natural Diversity Database (CNDDB). Updated November 2018.

CDFW. 2019. Sensitive Natural Communities. Accessed April 2019. https://www.wildlife .ca.gov/data/vegcamp/natural-communities#sensitive%20natural%20communities.

City of San Diego and USFWS (U.S. Fish and Wildlife Service). 1996. Multiple Species Conservation Program (MSCP) Plan Joint Draft EIR/EIS. August 30, 1996.

City of San Diego. 1997. Multiple Species Conservation Program. City of San Diego MSCP Subarea Plan. March 1997.

City of San Diego. 1998. Final Multiple Species Conservation Program, MSCP Plan (Regional). August 1998.

City of San Diego. 2012. Land Development Code Biology Guidelines, as amended by Resolution No. R-307376. June 2012.

City of San Diego. 2018. Land Development Code. 11th Update. April 21, 2018. Accessed December 2018. https://www.sandiego.gov/planning/programs/land-development-code/updates.

CNPS (California Native Plant Society). 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-02). California Native Plant Society, Rare Plant Program, Sacramento, CA. Accessed December 2018. http:www.rareplants.cnps.org/.

CNPS. 2018. Inventory of Rare and Endangered Plants of California. California Native Plant Society, Rare Plant Program, Sacramento, CA. Accessed December 2018. http:www.rareplants.cnps.org/.

Collins, J. T., and T. W. Taggart. 2009. Standard Common and Current Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodilians. Sixth edition. Center for North American Herpetology. Lawrence, Kansas.

Crother, Brian I. 2017. Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding, 8th ed.

Google Earth. 2017. Accessed December 2018. https://www.google.com/earth/.

Harris (Harris & Associates). 2018. Geographical Information Systems Data Collected during 2018 Surveys.

Harris. 2019. Biological Resources Technical Report for the UC San Diego Hillcrest 2019 Long Range Development Plan.

HELIX (HELIX Environmental Planning, Inc.). 2015. Coastal California Gnatcatcher Survey Report for the UC San Diego Central Plant and Cooling Tower Expansion Project. July 2015.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Sacramento, California: State of California, the Resources Agency, Department of Fish and Wildlife, Natural Heritage Division. October 1986.

Jepson Flora Project. 2018. Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California. 2018. Accessed December 2018. http://ucjeps.berkeley.edu/interchange/.

Oberbauer, T., and J. Vanderwier. 1991. "The Vegetation and Geologic Substrate Association and Its Effect on Development in San Diego County." In Environmental Perils, San Diego Region. Eds. P.L. Abbott and W.J. Elliott. San Diego Association of Geologists. October 20, 1991.

Oberbauer, Thomas, Meghan Kelly, and Jeremy Buegge. 2008. Draft Vegetation Communities of San Diego County. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California," Robert F. Holland, PhD. October 1986.

Rebman, Jon P., and Michael G. Simpson. 2014. Checklist of the Vascular Plants of San Diego County, 5th ed. San Diego Natural History Museum and San Diego State University.

RECON. 2015. 2015 Results of the Biological Survey for the 101 Dickinson Project, Letter Report. November 30, 2015.

TRC. 2017. "UC San Diego Medical Center – Hillcrest Campus LRDP Project Biological Constraints Memorandum." May 2017.

U.S. Department of the Interior. 2017. "The Migratory Bird Treaty Act Does Not Prohibit Incidental Take." Memorandum. December 22, 2017.

U.S. House of Representatives. 2017. Amendment to the 115th Congress 1st Session, H.R. 4239: "Strengthening the Economy with Critical Untapped Resources to Expand American Energy Act." November 3, 2017.

UC (University of California). 2018. "University of California Eskalen Lab." Accessed January 2019. https://ucanr.edu/sites/eskalenlab/.

UC Riverside (University of California, Riverside). 2018a. "Shot Hole Borer (SHB)/Fusarium dieback disease Distribution Map." Division of Agriculture and Natural Resources. Accessed December 2018. http://ucanr.maps.arcgis.com/apps/Viewer/index.html ?appid=3446e311c5bd434eabae98937f085c80.

UC Riverside. 2018b. "Distribution of Polyphagous Shot Hole Borer/Fusarium Dieback and Kuroshio Shot Hole Borer/Fusarium Dieback in California." Division of Agriculture and Natural Resources. Accessed December 2018. http://ucanr.edu/sites/pshb/Map/.

UC San Diego (University of California, San Diego). 1995. UC San Diego Hillcrest-Medical Center LRDP.

USFWS (U.S. Fish and Wildlife Service). 1997. Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey Protocol.

USFWS. 2018a. IPaC. Accessed December 2018. https://ecos.fws.gov/ipac/.

USFWS. 2018b. Environmental Conservation Online System (ECOS). USFWS Threatened & Endangered Species Active Critical Habitat Report. Accessed December 2018. https://ecos.fws.gov/ecp/report/table/critical-habitat.html.

USFWS. 2018c. "U.S. Fish and Wildlife Service: Endangered Species. ESA Implementation – Regulation Revisions." Accessed December 2018. https://www.fws.gov/endangered /improving_ESA/regulation-revisions.html.

USFWS. 2018d. "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities." March 20, 2018.

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Source: ESRI 2018

Figure 3.3-1
Biological Resources

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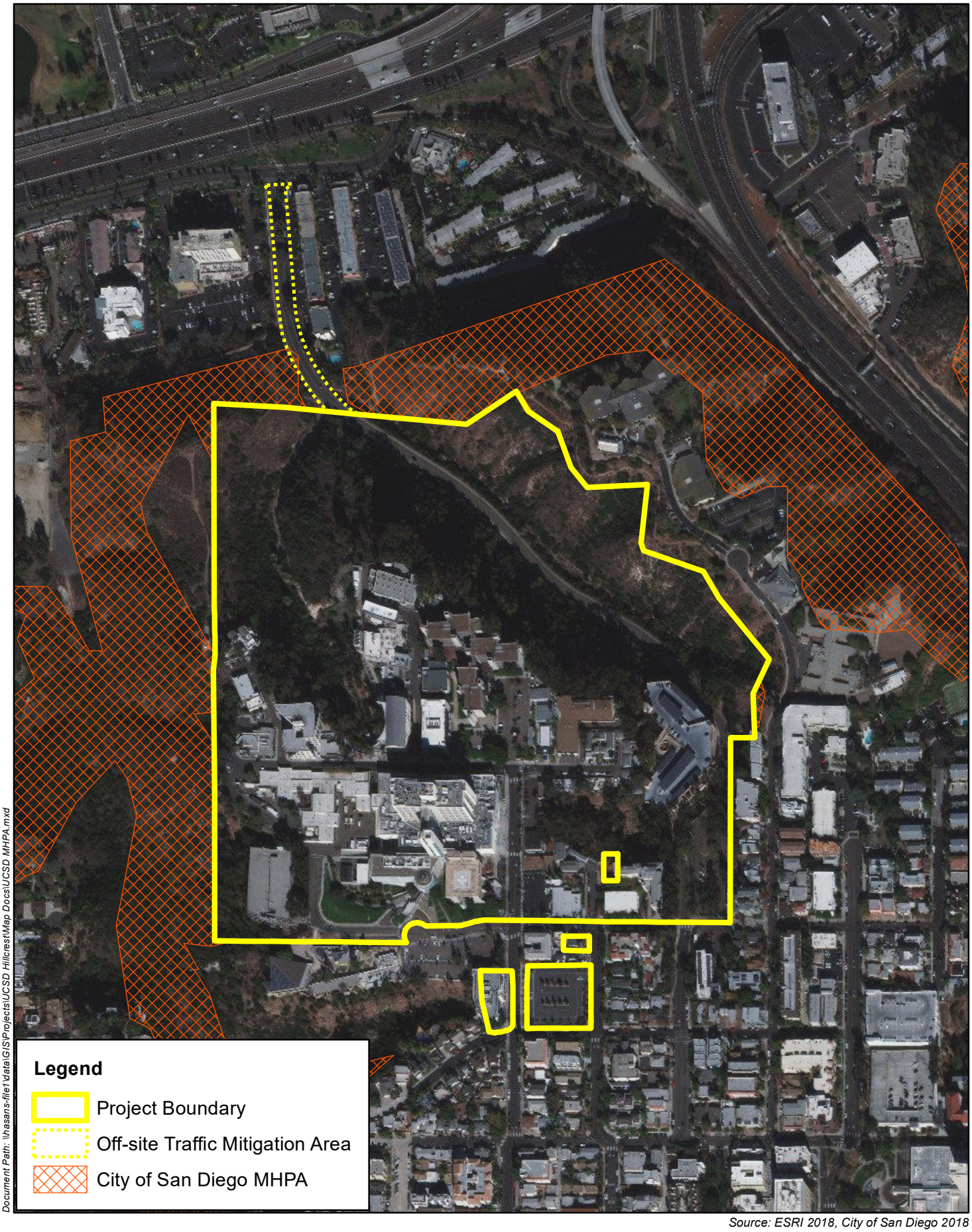

Source: ESRI 2018, City of San Diego 2018

Figure 3.3-2
City of San Diego MHPA

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Source: ESRI 2018

Figure 3.3-3
Biological Resources Impacts

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Source: ESRI 2018

Figure 3.3-4
Fuel Management Zones

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3.4 Cultural and Tribal Cultural Resources

This section of this 2019 LRDP EIR evaluates the potential for impacts to cultural and tribal cultural resources (TCRs) resulting from implementation of the 2019 LRDP. It identifies known and potential cultural resources within the project area. The majority of the information provided in this section is summarized from the University of California, San Diego Medical Center Hillcrest Campus Historic Resources Survey Report prepared by Architectural Resources Group (ARG) (2019) (Appendix G), the UC San Diego Hillcrest Campus Cultural Resource Study prepared by TRC Solutions, Inc. (2017) (Confidential Appendix C), the Cultural Resources Study for the University of California at San Diego Hillcrest Long Range Development Plan: Bachman Place Off-Site Traffic Mitigation Area Project, San Diego, California prepared by Red Tail Environmental (2019) (Confidential Appendix C), relevant elements that would be included in the proposed 2019 LRDP, and coordination with the Native American tribes pursuant to AB 52.

3.4.1 Environmental Setting

3.4.1.1 Prehistory

Within the County, two major cultural traditions are commonly recognized: the Early Period – Archaic (9,000 to 1,300 years ago) and Late Prehistoric (1,300 years ago to Spanish contact). These periods have been divided and reclassified by archaeologists; however, the traditional division of Early Period and Late Period will be retained for the following discussions.

Early Period – Archaic

The Early Period generally includes the San Dieguito people, an inland hunting complex, and the La Jolla/Pauma people, a coastal complex, which are (to date) poorly defined. The San Dieguito were initially believed to be big game hunters; however, continued research has identified these people as a hunting and gathering society. This research has shown that the San Dieguito were mobile bands with a diverse, non-specialized economy that used a wide range of plant, animal, and lithic resources. These early groups may have moved into the County during the gradual desiccation of the pluvial lake system in inland basins and valleys during the early Holocene. A number of researchers have put forward this hypothesis based on the regional similarity between Great Basin assemblages and those of Early Archaic sites in the County. A debate between local researchers continues regarding the origin of and subsequent interaction between the coastal populations and the Great Basin/desert group. Cultural material associated with Early Period occupation includes dart points, obsidian from the Coso Range or sources in Mexico, a lack of ceramics, and burial of the dead.

The first coastal occupants in the County lived off coastal and inland resources of plants, animals, shellfish, and fish. The earliest dated sites are found in the northern portion of the County and in

the Otay Mesa region of southern San Diego County. The northern San Diego County coastal lagoons and the Otay Mesa area supported large populations circa 6,000 years ago as shown by numerous radiocarbon dates from these sites. The north coastal area includes the Harris Site (CA-SDI-149) and Agua Hedionda sites (CA-SDI-210 and CA-SDI-11079) dating 8,000 to over 9,000 years before present.

The period from 9,000 to 1,300 years ago within the County may have been a time of stable climate and resources. Sites identified include coastal habitation sites, inland hunting camps, milling camps, and lithic quarry sites. The artifact assemblages from these sites remained relatively stable during this time frame.

There appears to have been a reduction of sites after 3,000 years ago to approximately 1,500 years ago. This reduction, if real, may be attributed to the gradual silting of the coastal lagoons, which depleted the major food source of shellfish, and to climatic changes that reduced resources in some areas. Archaeological sites dated to circa 2,000 years ago are found closer to San Diego Bay, where shellfish were still abundant and may well represent what can be considered the end of the Early Period. Between 1,200 and 800 years ago, ceramic technology and small arrow points were introduced in the County, probably from the eastern deserts, identifying the Late Prehistoric Period.

3.4.1.2 Late Prehistoric

Prior to the mid-eighteenth century, what is now the site of the Hillcrest Campus was a part of the greater Kumeyaay nation. Also known by the Spanish name "Diegueño," the Kumeyaay occupied a swath of land that occupied much of what is now San Diego and Imperial counties and the northern reaches of Baja California. This area included oceanfront, bays and estuaries, foothills, mountains, and a wide range of other environmental zones. The economic pattern during the Late Prehistoric, as evidenced by the archaeological record, appears one of intensive and efficient use of local resources. The large number of Kumeyaay/Diegueño (in southern San Diego County) and Luiseño (in northern San Diego County) suggests that County resources were plentiful enough to support a large population. Artifacts that identify the Late Prehistoric include small projectile or arrow points, pottery, obsidian from Obsidian Butte in the Salton Sea, human cremations, and a proliferation of acorn milling sites in the hills and mountains.

The Diegueño and the Luiseño, who spoke different languages, appear to have shared and adopted a number of cultural traits, making identification of these cultural groups through archaeological means very difficult. Archaeologists rely on ethnographic accounts to define boundaries between the Diegueño and Luiseño, although it is unclear how long these boundaries have been in place and whether these boundaries changed through time. The Kumeyaay/Diegueño were hunter-gatherers who subsided on small fish and game as well as the berries, seeds, roots, and nuts of native plants that were in abundant supply. Like most subsistence-based societies, they moved seasonally and resided in a loosely associated network of small, ephemeral camps, including

several that are believed to have been located in the area that would later become Hillcrest. Within each camp was a smattering of modest shelters that were constructed of manzanita, willow, and other organic materials.

3.4.1.3 Ethnohistory

The Hillcrest area became a part of the Spanish empire when explorers arrived in California in the mid-eighteenth century. In 1769, Spanish colonists founded the Mission San Diego de Alcalá along the banks of the San Diego River. San Diego de Alcalá was the first of 21 Franciscan missions that were used to solidify and advance Spain's colonial frontiers. Consistent with Spain's tripartite system of land uses, a *presidio* (military garrison) and *pueblo* (civilian settlement) were established near the mission. The actions of the Spanish, however well-intentioned they may have been, dealt a devastating blow to the Kumeyaay and other native populations. Generations of indigenous settlement patterns were swiftly uprooted as the native people were relocated to the missions. Once-thriving Kumeyaay camps were left abandoned, and scores of Kumeyaay succumbed to smallpox, influenza, dysentery, measles, syphilis, and other communicable diseases introduced by the Spanish, for which no immunity had been developed.

What would later become Hillcrest was located just a few miles from the mission, presidio, and pueblo. However, Hillcrest lacked the fertile soil or natural water supply to be of use to their day-to-day operations and remained undeveloped for the duration of the Spanish era of California history (1769–1821). Little changed once California became a part of Mexico in 1821, or after it was ceded to the United States in 1848. The first semblance of development activity in the area did not occur until the late nineteenth century. Since San Diego was characterized by dramatic periods of boom and bust at this time, portions of the chaparral-covered mesa were acquired by speculators eager to turn a quick profit when the real estate market was favorable. However, given its location some 3 miles from the center of the City, as well as the lack of reliable public transportation at the time, no new construction actually took place.

3.4.1.4 History

The County lacked a true public hospital prior to about 1880. Rather, for much of the nineteenth century, medical care, social services, shelter, and other programs geared toward the indigent sick were provided by private citizens who worked on a contractual basis with the County government. However, this contractual system became strained as San Diego's population grew. Public officials acknowledged the growing need to devise a more formal, permanent solution to caring for those in need of medical care. In 1878, the County Board of Supervisors issued a public notice seeking land on which to build an institution expressly for this purpose and settled on a site at the foot of the grade to Mission Valley, downslope from where the Hillcrest Campus is located currently. On this site they built a facility known as the County Hospital and Poor Farm (no longer in existence),

which opened circa 1880 and provided shelter, medical care, and other essential services to those who needed assistance but had no family or other viable means of support.

By the turn-of-the-twentieth century, the Poor Farm model had unequivocally fallen out of favor in the public eye. In 1902, the County Board of Supervisors authorized the construction of a new public hospital on a mesa overlooking the Poor Farm. Construction of the new County Hospital was completed in 1904. The facility consisted of a large, three-story brick building (no longer in existence) that could accommodate more patients than the makeshift facilities at the Poor Farm. The new hospital differed somewhat from the Poor Farm in that it was purposely built as a full service, general care facility. As such, it provided a much broader array of medical care and services to those in need of public assistance.

County Hospital was one of the first major construction projects in the Hillcrest vicinity. When it was built at the turn of the twentieth century, the surrounding area was almost entirely undeveloped and consisted of little more than barren chaparral. While it technically fell within the City limits of San Diego, this area lacked a formal name or discernible identity at this time. It was sometimes referred to as a part of University Heights, though that community was located some distance to the east and had a somewhat different development context. The two communities were also physically divided by a deep gorge, which now serves as the right-of-way for the Cabrillo Parkway/California State Route 163. It was not until 1906 that the name "Hillcrest" was introduced into the local vernacular. The Hillcrest area began to take shape in the 1910s and 1920s and assumed a character that was typical of early twentieth century streetcar suburbs. Growth in the area occurred radially and was oriented around streetcar lines. Parcels were small and dense as to maximize the amount of development near streetcar stops, and buildings were scaled accordingly to fit on these dense urban lots. Development tended to be predominantly residential in nature, but a handful of small commercial buildings were also constructed alongside the area's most heavily traveled streetcar routes.

As the Hillcrest Community grew and evolved in the early decades of the twentieth century, so too did County Hospital. Several large additions were made to the hospital campus as the area's population grew and the demand for medical services was on the rise. A fourth story was added to the hospital building in 1910, and a five-story wing was appended to its east facade in 1926. A two-story addition was appended to the adjacent Nurses' Home, also in 1926. Several ancillary and support buildings were erected adjacent to the hospital to house electrical panels, boiler rooms, incinerators, a morgue, laundry facilities, and other important auxiliary functions. Circa 1940, a multi-wing annex was constructed on the south side of Dickinson Street, where the present-day hospital building is located, and included space for additional beds and inpatient facilities. By World War II, County Hospital had evolved from a nascent, one-building operation into a dynamic institutional campus.

In 1956, an engineering study concluded that the main hospital was unsafe. Citing structural deficiencies and ongoing issues with contaminated plumbing, the study opined that it was infeasible to rehabilitate the existing building, and recommended that it be demolished and replaced. The new County General Hospital was completed in 1963, and remains in current operation on the Hillcrest Campus. Engineered to be much larger than its predecessor, the new County Hospital building contained 623 beds and numerous support facilities including its adjacent one-story annex (now known as the West Wing). The building rose 11 stories and towered over adjacent development in the neighborhood, which consisted primarily of single-family houses and low-scale commercial buildings. At the same time the new County Hospital was under construction, plans were underway to establish a new UC campus in the greater San Diego area. The need for a new campus had been emphasized in a 1956 report that evaluated the vitality of California's public university system amid rapid population growth in the post-World War II era. UC San Diego was founded in 1960 in La Jolla in order to serve those living in the southernmost part of California. Discussion soon arose over the location of the UC's third public medical center established for the purpose of keeping pace with the state's doctor-population ratio.

In 1965, an operating agreement was reached between the UC and the County under which "the County would retain ownership of the hospital in uptown San Diego, while university personnel would administer it in conjunction with the medical school." The UC agreed to pay to lease the hospital, but the County would reimburse the UC for all costs associated with the care of indigent patients who continued to be treated there. This arrangement meant that when it opened, the UC San Diego School of Medicine would be divided between two disparate, yet symbiotic sites. Its main campus in La Jolla would function as its academic arm and would house classrooms, offices, and laboratories. The County Hospital in Hillcrest would be used as a venue for clinical training. UC San Diego assumed operation of the hospital in 1966 and re-named it County-University Hospital.

In 1967, the university announced a major capital spending plan to address the things it needed to carry out its mission as a research and clinical training center, which called for millions of dollars to be invested toward upgrading the hospital building. These funds were used for an array of improvement projects: patient rooms were remodeled and reconfigured to make them more comfortable, large wards were remodeled into private rooms, and research units were added to existing interior spaces. The name of the hospital was changed once again, from County-University Hospital to University Hospital. Irrespective of this investment, University Hospital was not intended to be the permanent site of the medical school's clinical training and research programs. Rather, it was regarded as a "stepping stone" providing a venue at which the school could train new doctors while its new campus in La Jolla was taking shape. Once it had become clear that initial plans for the medical school were not coming to fruition, and that UC San Diego would remain at the Hillcrest hospital indefinitely, UC officials switched gears. Instead of focusing on the construction of a new hospital in La Jolla, they began exploring how existing facilities at

University Hospital in Hillcrest could be enhanced to accommodate the objectives and operations of the UC San Diego School of Medicine.

Throughout the 1970s, various construction projects on the Hillcrest Campus commenced offering much-need updates and facilities. The campus's first LRDP was adopted in 1978 in order to direct future growth and development of the site. UC San Diego purchased the hospital and its ancillary and support structures from the County in January 1981. UC San Diego agreed to continue providing inpatient and outpatient care to County residents as part of the purchase agreement. By this time, the name of the facility had been changed once again, this time from University Hospital to UC San Diego Medical Center. By the end of the decade, several improvement projects had taken place to enhance the former County hospital and convert it into a state-of-the-art academic medical center. By 1992, the main hospital had been modernized and expanded creating an 11-story wing and 144-foot elevator tower. The hospital also underwent a round a seismic upgrades and improvements to enhance the stability of the hospital. By this time, the UC San Diego School of Medicine had matured into a renowned research institution with a penchant for innovation and a reputation for clinical excellence.

In 1995, UC San Diego updated the LRDP for the Hillcrest Campus to account for the period of 1995–2010. The document carried forward many of the principles articulated in the first LRDP, but accounted for current conditions and up-to-date enrollment forecasts. Consistent with the goals of the 1995 LRDP, UC San Diego has been successful in acquiring privately owned properties in the neighborhood adjacent to the medical center in the period since 1995. In 2005, UC San Diego issued a report entitled "A New Vision for Healthcare," which spelled out a complete overhaul of its medical services and facilities, indicating that it intended to permanently close the Hillcrest hospital by 2020, and move all of its 386 inpatient beds and acute care services to Thornton Hospital in La Jolla. However, the restructuring plan was met with opposition from community members, elected officials, and social service providers. Amid these concerns, UC San Diego announced in 2010 that it intended to keep the Hillcrest hospital open, and that it planned to construct a replacement facility on site by 2030 in order to meet the stringent seismic safety requirements of SB 1953 and AB 232 and keep up with new advance in health care technology.

3.4.1.5 Cultural Resources

Cultural resources are districts, buildings, sites, structures, areas of traditional use, or objects that represent the physical evidence of human activities. Cultural resources can be divided into three categories: archaeological resources (prehistoric and historic), built environment resources (architectural), and TCRs (those of economic and/or religious significance to peoples currently). For the proposed 2019 LRDP, a cultural resources records search was conducted at the South Coastal Information Center (SCIC) on June 12, 2017, to identify previously conducted surveys and known cultural resources located in or near the Hillcrest Campus. Eight cultural resource

investigations have been conducted within 0.5 mile of the Hillcrest Campus (see Table 3.4-1). None of the investigations on the Hillcrest Campus revealed any cultural resources.

Table 3.4-1. Previous Cultural Resource Investigations within the Hillcrest Campus

Report No.	Investigation Title	Year	Author	Affiliation
SD-01138	An Environmental Impact Report (Archaeology) for Science Applications Incorporated of a Forty Acre Parcel Including University Hospital in San Diego, California	1974	Loughlin, Barbara	San Diego State University
SD-03775	Mitigation Monitoring Report for the North Annex Seismic Replacement Facility (NASRF) University of California San Diego Medical Center	1997	Clevenger, Joyce	University of California, San Diego
SD-06031	Cultural Resource Assessment Cingular Wireless Facility No. SD 515-02 San Diego County, California	2001	Duke, Curt	LSA Associates, Inc.
SD-10551	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California	2006	Arrington, Cindy	SWCA Environmental Consultants
SD-12340	Historical Assessment of the 104–118 Dickinson Street Residence San Diego, California 92103	2007	Moomjian, Scott	Scott A. Moomjian, Esq.
SD-12341	Results of Cultural Resources Survey for the Shiraz Medical Center in San Diego, California	2008	Zepeda-Herman, Carmen	Recon Environmental, Inc.
SD-12422	A Cultural Resources Inventory for the Route Realignment of the Proposed Pf. Net/AT&T Fiber Optics Conduit Oceanside to San Diego, California	2001	Ni Ghabhlain, Sinead and Drew Pallette	ASM Affiliates, Inc.
SD-12555	Cultural Resources Records Search and Site Visit Results for Verizon Wireless Candidate UC San Diego Medical Center, Located at 200 West Arbor Drive, San Diego, San Diego County, California	2008	Bonner, Wayne, Sarah Williams, and Kathleen Crawford	Michael Brandman Associates

Source: TRC 2017.

The records search revealed that no archaeological resources or historic properties have been previously identified within the Hillcrest Campus. Fifty previously identified cultural resources are located within 0.5 mile (0.8 kilometer) of the Hillcrest Campus. The 50 resources include three prehistoric sites, six historic sites, one historic district, and forty architectural resources. Prehistoric sites in the general area surrounding the Hillcrest Campus are typically small lithic scatters indicating small camp or tool maintenance sites. These sites are primarily associated with creek locations in the area. Historic archaeological sites in the area are typically early twentieth century debris scatters associated with the development of San Diego. The nearest historic resource is the Hillcrest Receiving Home School Building located approximately 450 feet east of the project area. The resource was previously evaluated as not eligible for listing on the National Register of Historic Places (NRHP).

One site was identified as potentially within the northwest corner of the project area by Dayle Cheever (1995, as cited in TRC 2017) from a site record by Brian Reeves in 1977 located at the Museum of Man. The site (SDM-W-1378) was not listed in the California Historical Resources

Information System record search because it was never submitted to the California Historical Resources Information System by UC San Diego, as the California State Historic Preservation Officer does not consider this a valid cultural site. This is one of a series of so-called "Early Man" sites identified in the San Diego area. Some people have dated these sites from 70,000 to 1 million years old, and this has been widely discredited in the professional archaeology community (Cheever 1995, 13). It is generally accepted that North America was not populated until approximately 14,000 years ago, and the San Diego area about 9,500 years ago. The "Early Man" sites are based on so-called "tools" and poor dating techniques. The Cheever site in the Hillcrest project area was identified in the 1970s by some fire-cracked rock and possible tools. The report stated that these are "controversial sites not generally accepted as valid cultural deposits." The 1995 survey reexamined the area and found no cultural material.

An additional study was conducted in January 2019 by Red Tail Environmental to determine the presence or absence of potentially significant cultural resources within an off-site roadway corridor which was identified as a traffic mitigation measure (herein referred to as the off-site traffic mitigation area). In order to mitigate traffic impacts, the 2019 LRDP would widen Bachman Place immediately north of the Hillcrest Campus Boundary to the intersection of Bachman Place and Hotel Circle South to three lanes during Phase 2B. This off-site traffic mitigation area would be widened to include an additional southbound lane along Bachman Place. Ground disturbance caused by the widening would take place along Bachman Place only and extend 5 to 10 feet along both sides of the current alignment of Bachman Place. Surface repaving would take place along Hotel Circle South but would not include ground disturbance along Hotel Circle South. An archaeological field survey was conducted on January 4, 2019. Field methods consisted of a pedestrian survey of the project area by the archaeologist, across all visible ground surface within the project area. The project area was photographed and all visible soils were examined for cultural resources. No cultural resources were identified in these areas.

The SCIC records search conducted on June 12, 2017, for the Hillcrest Campus also covered the off-site traffic mitigation area. Approximately eleven cultural resource investigations previously addressed this specific area and are summarized in Table 3.4-2. Two of these reports (SD-10551 and SD-12422) overlap with both the Hillcrest Campus and the off-site traffic mitigation area.

Table 3.4-2. Previous Cultural Resource Investigations within the Off-Site Traffic Mitigation Area

Report No.	Investigation Title	Year	Author
SD-00546	An Archeological Survey of the San Diego River Valley	1975	Cupples, Sue Ann
SD-02069	Draft Environmental Report Atlas Hotel Specific Plan	1984	City of San Diego
SD-02894	Mitigated Negative Declaration Replacement of Water and Sewer Pipes: La Jolla, Uptown, Mission Valley, Midway and Navajo Communities	1993	City of San Diego
SD-07541	Cultural Resources Inventory for the Hoffman Canyon Sewer Project San Diego	1990	Robbins-Wade, Mary
SD-10444	Uptown Historic Architectural and Cultural Landscape Reconnaissance Survey	2006	May, Vonn Marie
SD-10551	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California	2006	Arrington, Cindy
SD-12422	A Cultural Resources Inventory for the Route Realignment of the Proposed Pf. Net / AT&T Fiber Optics Conduit Oceanside to san Diego, CA	2001	Ni Ghabhlain, Sinead and Drew Pallette
SD-13461	Mission Valley Waterline Break Emergency Archeological Monitoring	2012	Robbins-Wade, Mary
SD-15043	Archeological Monitoring, Testing, and Data Recovery at Site CA-SDI-18995 (Hcn-S-10) for the Hotel Circle South Undergrounding Project, Mission Valley, City of San Diego, California	2012	Jose Pepe Aguilar, Andrew R. Pigniolo, and Carol Serr
SD-16802	Uptown Community Plan Draft Area Report	2016	NA
SD-17232	San Diego 55 Fiber Project, San Diego County, California (Bcr Consulting Project No. Syn1628)	2017	Brunzell, David

Source: Red Tail Environmental 2019.

The records search revealed that four cultural resources have been identified within the off-site traffic mitigation area. In addition, a prehistoric archaeological site was discovered during a construction monitoring project adjacent to the project disturbance area in January 2018, after the original records search was performed. A summary of these five sites is shown in Table 3.4-3.

Table 3.4-3. Previous Recorded Cultural Resources within the Off-Site Traffic Mitigation Area

Primary No.	Trinomial	Recorder, Date	Site Contents
P-37-29700	SD-18995	Laguna Mountain Environmental, Inc., 2008	Prehistoric archaeological site containing a shell scatter, lithic scatter, fire altered rock, human remains, and midden soil
P-37-030933	—	Laguna Mountain Environmental, Inc., 2008	Historic isolate
P-37-0309443	SDI-19636	Laguna Mountain Environmental, Inc., 2008	Historic trash scatter
P-37-030944	SDI-19637	Laguna Mountain Environmental, Inc., 2008	Modern trash
P-37-0376311	SDI-22463	Laguna Mountain Environmental, Inc., 2018	Prehistoric archaeological site containing a shell scatter, lithic scatter, and hearth features

Source: Red Tail Environmental 2019.

Notes:

[1] Site located adjacent to the project area.

Details relating to the cultural resource findings within these five sites are as follows:

P-37-29700/SDI-18995 is a prehistoric archaeological site that was identified during construction monitoring. Three test units were excavated within the site and the site extends at least 1.8 meters in depth. The site contains a dark midden soil with a shell scatter containing Chione (clam) and Argopecten (scallop), lithic debitage, stone tools, Olivella shell beads, faunal bone, and fire altered rock. Three human remains fragments were identified within the site and the Kumeyaay Cultural Repatriation Committee was determined to be the Most Likely Descendent. The site was recommended eligible to the California Register of Historical Resources (CRHR) and the San Diego Register of Historic Resources and determined significant under CEQA. Due to the presence of human remains, all soils within the site that were disturbed from the site were removed for water-screening in order to identify all archaeological artifacts and human remains. These items and the remaining soil were repatriated to the Most Likely Descendent. The excavations within the site were backfilled with fill soils.

P-37-030933 is an isolated piece of cut cow bone.

P-37-030944/SDI-19637 consists of small modern trash scatter, consisting of modern Budweiser cans, two bottles, pebble flooring, metal parts, and glass fragments.

P-37-030943/SDI-19636 consists of a small historic trash deposit containing a license plate, copper wire, ferrous metal fragments, broken saucers, plates, and cups, bottle glass fragments, light bulb fragments, and domestic animal bone, some of which was saw cut, and whole and fragmented brick. It was unknown if the trash scatter was located in fill soils.

P-37-037631/SDI-22463 is located adjacent to the project area. The site was first discovered during building demolition, and consists of marine shell, Argopecten (scallop) and Chione (clam) were the dominate shell species noted along with some Ostrea (oyster) and Tagelus (razor clam), charcoal, lithic debitage and tools, groundstone tools, faunal bone, and three hearth features.

3.4.1.6 Tribal Cultural Resources

TCRs are defined as "sites, features, places, cultural landscapes, sacred places, and objects" that are of cultural value to a California Native American tribe and that are either on or determined eligible for inclusion on the CRHR or a local register of historic resources. In addition, a resource determined by a lead agency, at its discretion and supported by substantial evidence, to be significant under the criteria set forth in subdivision (c) of the California Public Resource Code, Section 5024.1, is a TCR under CEQA (PRC Section 21074).

In January 2016, UC San Diego contacted California Native American tribes traditionally and culturally affiliated with the San Diego region to solicit their interest in being notified of proposed campus development projects as part of the planning process pursuant to AB 52. UC San Diego did not receive any responses as a result of this outreach attempt. However, UC San Diego was contacted independently by the San Luis Rey Band of Mission Indians, who expressed interest in receiving formal notifications of proposed projects on campus. Accordingly, UC San Diego has been sending out formal notification letters to the San Luis Rey Band of Mission Indians in compliance with AB 52 offering the opportunity for tribal consultation. Such a letter for the proposed 2019 LRDP was sent to the San Luis Rey Band of Mission Indians on April 10, 2018. This letter described the proposed 2019 LRDP and requested consultation on any Native American Sacred Lands or other TCRs in and around the Hillcrest Campus. No formal request for tribal consultation with UC San Diego for the 2019 LRDP has been received. Because no response was received within the requested 30 days, UC San Diego assumes that consultation is declined.

The 2019 LRDP EIR NOP, dated February 28, 2018, was also sent to 13 Native American tribes and the Native American Heritage Commission (NAHC) notifying them of the 2019 LRDP and soliciting input from them regarding potential environmental issues associated with the 2019 LRDP. These tribes include the Barona Group of the Capitan Grande, Ewiiaapaaya Tribal Office, La Posta Band of Mission Indians, Manzanita Band of Kumeyaay Nation, San Pasqual Band of Mission Indians, Kwaaymii Laguna Band of Mission Indians, Inaja Band of Mission Indians, Iipay Nation of Santa Ysabel, Sycuan Band of the Kumeyaay Nation, Viejas Band of Kumeyaay Indians, Campo Band of Mission Indians, Jamul Indian Village, Mesa Grande Band of Mission Indians. NOP response letters were received from the Viejas Band of Kumeyaay Indians and the NAHC. The Viejas letter stated that the project area may contain many sacred sites to the Kumeyaay people and requested that sacred sites be avoided with adequate buffer zones. The letter did not specify where the sites are located or how the proposed 2019 LRDP may impact or avoid these sites. The letter from the NAHC summarized the requirements of CEQA, AB 52 and SB 18, the latter does

not apply to the 2019 LRDP as the LRDP is not a General Plan, General Plan Amendment, Specific Plan, Specific Plan Amendment, or Open Space Element proposed for adoption. It also included NAHC recommendations for cultural resources assessments.

Past records have indicated there are TCRs within the vicinity of the proposed Hillcrest Campus. Cultural sites were identified within the unsanctioned Pueblo Lands of San Diego land grant, which are located within the Mission Valley Community just north of the Hillcrest Campus (City of San Diego 2017). However, the Hillcrest Campus is located on the mesa above Mission Valley, and no TCRs have been identified within the Hillcrest Campus Boundary.

A record search of the Sacred Lands File (SLF) held by the NAHC was requested on October 26, 2018. The NAHC responded on November 26, 2018, that the record search of the SLF was positive. The NAHC provided a list of 12 Native American contacts, which may have additional information regarding the project area. Red Tail Environmental sent an information request to the 12 Native American contacts on January 2, 2019. To date, one response was received from the Viejas Band of Kumeyaay Indians on January 28, 2019. The Viejas Band of Kumeyaay Indians has requested that a Kumeyaay Cultural Monitor be on site for all ground-disturbing activities. UC San Diego consulted with the Viejas Band of Kumeyaay Indians on April 26, 2019, to clarify that a Kumeyaay Cultural Monitor would not be required where there is evidence that the top 2 to 3 feet of soil has been disturbed/removed by previous development within the boundaries of the Hillcrest Campus. However, monitoring would be required during all ground disturbance within the off-site traffic mitigation area.

3.4.1.7 Archaeological Resources

A field survey of all known cultural and historical resources was performed in July 2017 by Donald L. Craig, MA, RPA, of TRC Solutions, Inc. He conducted a directed (limited) pedestrian cultural resources survey of the 62-acre project area focusing on areas where the potential for archaeological sites would be visible. Approximately half of the 62-acre campus consists of medical center buildings and other development areas where visibility was limited to primarily landscaped areas between buildings and along streets. These areas were carefully examined. Visibility was approximately 50 percent due to lawn, bark, and gravel cover. All areas in the developed section of the campus that could be accessed were surveyed. No cultural material was identified in this area. Areas within the Hillcrest Campus that were outside the developed areas consist of steep slopes and canyons. These areas contain thick vegetation consisting of eucalyptus, olive, and pepper trees and an understory of coastal sage scrub and various shrubs. All areas that could be safely accessed were surveyed. The slopes and canyon areas had extensive trail networks leading to several homeless campsites. There was a large amount of modern debris in the area, but no cultural material was identified. The dirt road identified by Cheever (1995) as the possible location of SDM-W-1378 was carefully examined during the pedestrian survey, as well as the adjacent road cut, but no cultural material was identified.

3.4.1.8 Built Environment Resources

A built environment resource is any above-ground building, structure, object, or district. Resources that are listed in or eligible for the NRHP and/or the CRHR, and are considered historical resources for the purposes of CEQA. Historical resources are, or may be, significant architecturally or culturally in local, state, or national history. Historical resources within the project area may fall into three broad categories: individually eligible buildings, structures, and objects; historic districts; and historic landscapes.

ARG prepared a campus-wide historic context statement and conducted a historic resource survey of all buildings, structures, sites, objects, districts, and landscapes on or near the UC San Diego Hillcrest Campus in 2017 (ARG 2019). The scope of the survey included an analysis of all resources constructed through 1985 to provide a look-ahead at all resources that may become eligible over the planning horizon of the 2019 LRDP (through 2035). ARG evaluated 19 buildings on campus that were constructed in or before 1985 and five off-campus properties that have been identified by the university as current or future acquisition targets (see Figure 3.4-1, Locations of Buildings Surveyed for Historical Eligibility). Red Tail Environmental (2019) also conducted a records search and survey of the off-site traffic mitigation area and no historic addresses have been recorded within that area.

During the survey, one building on campus, a single-family residence (101 Dickinson Street) was identified as a potentially eligible historic resource. The remaining on- and off-campus buildings surveyed are not considered to be historical resources and further discussed in the ARG 2017 survey. See Table 3.4-4 for a summary of historical resource survey findings.

Single-Family Residence within Dickinson Housing Cluster (101 Dickinson Street)

The one story single-family residence at 101 Dickinson Street is located at the eastern terminus of Dickinson Street on the eastern edge of the Hillcrest Campus. The residence was constructed circa 1920 and is designed in the Craftsman architectural style as a small, modest bungalow, which constituted the bulk of early residential development in this area of the City. These homes were historically located alongside electric streetcar lines that transported passengers to commercial and employment centers downtown and are characteristic of residential development patterns associated with early twentieth century streetcar suburbs. These modest dwellings played an important role in providing housing options for single residents, working and middle-income households, and provided these parties with opportunities to invest in real estate and reap the benefits of upward mobility.

Over time, many of these early bungalows have either been substantially altered or have been demolished to make way for contemporary development. However, the single-family residence at 101 Dickinson Street is significant because it is an increasingly rare example of this important property type. Specifically, it represents early patterns of residential development and suburbanization that shaped the Hillcrest Community in the early decades of the twentieth century. It stands out as a relatively early example of neighborhood growth and as an increasingly rare example of a largely intact residential building dating to this period. The residence is included on the City's component of the

California Historical Resources Inventory Database as individually eligible for the San Diego Historical Resources list under Criterion 1, exemplifies or reflects special elements of the City's, a community's, or a neighborhood's historical, archaeological, cultural, social, economic, political, aesthetic, engineering, landscaping, or architectural development (City of San Diego 2011).

Table 3.4-4. Summary of Historical Resource Survey Findings

Name or Description	Address	Year Built	Status Code[1]
On-Campus			
Single-Family Residence within Dickinson Housing Cluster	101 Dickinson Street	c. 1920	5S3
Arbor Parking Structure	140 West Arbor Drive	1974	6Z
Bachman Parking Structure	4202 Bachman Place	1985	6Z
Clinical Teaching Facility	210 Dickinson Street	1978	6Z
Crest Chateau	4230 First Avenue	1959	6Z
Facilities Engineering Building	326 Dickinson Street	1945	6Z
Gildred Facility	220 Dickinson Street	1983	6Z
Hillcrest Medical Center CUP	330 Dickinson Street	1959	6Z
Magnetic Resonance Imaging (MRI)	410 Dickinson Street	1945	6Z
Main Hospital	200 West Arbor Drive	1963	6Z
Medical Library	216 Dickinson Street	1981	6Z
Medical Offices North	200 West Arbor Drive	1977	6Z
Surgery Research Laboratory	130 Dickinson Street	1968	6Z
West Wing	355 Dickinson Street	1959	6Z
Single-Family Residence within Dickinson Housing Cluster	Rear of 101 Dickinson Street	c. 1925	6Z
Single-Family Residence within Dickinson Housing Cluster	102 Dickinson Street	c. 1935	6Z
Single-Family Residence within Dickinson Housing Cluster	104 Dickinson Street	c. 1935	6Z
Stone Remnants and Site Features	115 Dickinson Street (approx.)	c. 1918	6Z
Multi-Family Residence (now offices)	135 Dickinson Street	c. 1960	6Z
Off-Campus			
Single-Family Residence	4186 First Avenue	c. 1925	6Z
Single-Family Residence	4194 First Avenue	c. 1925	6Z
Multi-Family Residential Court	4185 Front Street	c. 1940	6Z
Undeveloped Parcels	West of Campus	NA	6Z
Undeveloped Parcel	North end of First Avenue	NA	6Z

Source: ARG 2019.

Notes:

[1] California Historical Resource Status Codes:
5S3 – Appears to be individually eligible for local listing or designation through survey evaluation.
6Z – Found ineligible for NRHP, CRHR, or local designation through survey evaluation.

3.4.2 Regulatory Framework

The treatment of cultural resources is governed by federal and state laws and guidelines. There are specific criteria for determining whether prehistoric and historic sites or objects are significant and/or protected by law. Federal and state significance criteria generally focus on the resource's integrity and uniqueness, its relationship to similar resources, and its potential to contribute important information to scholarly research. Some resources that do not meet federal significance criteria may be considered significant under state criteria. The laws and regulations seek to mitigate impacts on significant prehistoric or historic resources. The federal and state laws and guidelines for protecting historic resources are summarized below.

3.4.2.1 Federal

The National Historic Preservation Act of 1966

The National Historic Preservation Act of 1966 established the NRHP as the official federal list of cultural resources that have been nominated by state offices for their historical significance at the local, state, or national level. Listing in the NRHP provides recognition that a property is significant to the nation, the state, or the community and assumes that federal agencies consider historic values in the planning for federal and federally assisted projects. Properties listed in the NRHP, or "determined eligible" for listing, must meet certain criteria for historical significance and possess integrity of form, location, and setting. Structures and features must usually be at least 50 years old to be considered for listing in the NRHP, barring exceptional circumstances. Criteria for listing in the NRHP, which are set forth in Title 36, Part 63, of the Code of Federal Regulations, are significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association; and that are:

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

Eligible properties must meet at least one of the criteria and exhibit integrity, measured by the degree to which the resource retains its historical properties and conveys its historical character, the degree to which the original fabric has been retained, and the reversibility of changes to the property. The fourth criterion is typically reserved for archaeological and paleontological resources. These criteria have largely been incorporated into CEQA Guidelines as well (see Section 3.4.3.1 in reference to CEQA Guidelines, Section 15064.5).

The Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) is a federal law passed in 1990. NAGPRA provides a process for museums and federal agencies to return certain Native American cultural items—human remains, funerary objects, sacred objects, or objects of cultural patrimony–to lineal descendants, and culturally affiliated Indian tribes and Native Hawaiian organizations. NAGPRA includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on federal and tribal lands, and penalties for noncompliance and illegal trafficking. Implementation of the 2019 LRDP would be conducted in compliance with NAGPRA.

Federal curation regulations are also provided in Code of Federal Regulations, Title 36, Part 79, and apply to collections that are excavated or removed under the authority of the Antiquities Act (16 USC 431–433), the Reservoir Salvage Act (16 USC 469–469c), Section 110 of the National Historic Preservation Act (16 USC 470h-2), or the Archaeological Resources Protection Act (16 USC 470aa-mm). Such collections generally include those that are the result of a prehistoric or historic resources survey, excavation, or other study conducted in connection with a federal action, assistance, license or permit.

3.4.2.2 State

California Environmental Quality Act

State law also protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The California criteria for the CRHR are nearly identical to those for the NRHP. The State Historic Preservation Officer maintains the CRHR. Properties listed, or formally designated eligible for listing, in the NRHP are automatically listed in the CRHR, as are State Landmarks and Points of Interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

Native American Historic Cultural Sites (PRC Section 5097 et. seq.)

State law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NAHC to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the CRHR.

California Native American Graves Protection and Repatriation Act

The California NAGPRA, enacted in 2001, requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. California NAGPRA also provides a process for the identification and repatriation of these items to the appropriate tribes. Implementation of the 2019 LRDP would be conducted in compliance with the California NAGPRA.

Assembly Bill 52

Assembly Bill (AB) 52 amends CEQA to require TCRs to be considered as potentially significant cultural resources. It requires that CEQA lead agencies consult with tribes that have requested consultation at initiation of the CEQA process to identify and evaluate the significance of these resources. AB 52 applies to all CEQA environmental documents for which a Notice of Preparation was filed on or after July 1, 2015.

3.4.2.3 Local (Non-Regulatory)

As a constitutionally created state entity, the UC is not subject to municipal regulations or statutes of surrounding local governments, such as the City's General Plan or land use guidelines, for uses on property owned or controlled by the UC that are in furtherance of the UC's education purposes. However, UC San Diego may consider, for coordination purposes, aspects of local plans and policies for the communities surrounding the campus when it is appropriate and feasible, but it is not bound by those plans and policies in its planning efforts. Thus, a summary of City guidelines related to historical resources are discussed below.

City of San Diego, Historical Resources Guidelines

The Historical Resources Guidelines of the City's Land Development Manual identifies the criteria under which a resource may be historically designated. It states that any improvement, building, structure, sign, interior element and fixture, site, place, district, area, or object may be designated a historical resource by the City's Historical Resources Board if it meets one or more of the following designation criteria:

A. Exemplifies or reflects special elements of the City's, a community's, or a neighborhood's, historical, archaeological, cultural, social, economic, political, aesthetic, engineering, landscaping or architectural development;
B. Identified with persons or events significant in local, state or national history;
C. Embodies distinctive characteristics of a style, type, period, or method of construction or is a valuable example of the use of indigenous materials or craftsmanship;
D. Is representative of the notable work or a master builder, designer, architect, engineer, landscape architect, interior designer, artist, or craftsman;

E. Is listed or has been determined eligible by the National Park Service for listing on the National Register of Historic Places or is listed or has been determined eligible by the State Historical Preservation Office for listing on the State Register of Historical Resources; or
F. Is a finite group of resources related to one another in a clearly distinguishable way or is a geographically definable area or neighborhood containing improvements which have a special character, historical interest or aesthetic value or which represent one or more architectural periods or styles in the history and development of the City.

3.4.3 Project Impacts and Mitigation

The following sections address various potential impacts relating to cultural and TCRs that could result due to the implementation of the proposed 2019 LRDP.

3.4.3.1 Issue 1: Historical Resources

Cultural and Tribal Cultural Resources Issue 1 Summary

Would implementation of the 2019 LRDP cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Impact: Implementation of the 2019 LRDP would alter a historical resource causing a substantial adverse change in the significance.	**Mitigation:** HABS Documentation (CUL-1)
Significance Before Mitigation: Potentially significant	**Significance After Mitigation:** Significant and unavoidable

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5 of the CEQA Guidelines. Under CEQA, built environment and archaeological resources (both historic and prehistoric) may qualify as historical resources under CEQA; however, for clarity of this discussion, built environment resources are addressed under Issue 1, and archaeological resources are addressed under Issue 2 in Section 3.4.3.2.

The CEQA Guidelines state that a "substantial adverse change in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired." A resource is considered "materially impaired" if it:

- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibly for, inclusion in the CRHR; or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources…or its identification in a historical resources survey…unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- Demolishes or materially impairs in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.

CEQA requires a lead agency to identify measures to mitigate significant adverse impacts to historical resources. The CEQA Guidelines state that "the lead agency shall ensure that any adopted measures to mitigate or avoid significant adverse changes are fully enforceable through permit conditions, agreements, or other measures" deemed prudent and feasible.

Impact Analysis

Impacts to historical resources are evaluated by determining the potential for development to affect the integrity and character-defining features of historical resources. The Historic Resources Survey Report (ARG 2019) evaluated 19 on-site structures constructed in 1985 or earlier, including the existing hospital built in 1963. The report also evaluated three off-site structures and two off-site undeveloped parcel areas for historical resource eligibility (see Table 3.4-4). Of these resources, only one was identified as a potentially eligible historical resource (see below). The remainder of the structures and parcel areas were deemed non-eligible historical resources for a variety of reasons explained and documented in the Historical Resources Survey Report (ARG 2019). The 2019 LRDP would result in the demolition of all structures on campus except two, the Banister Family House and Medical Offices South. The demolition of non-eligible historical resources as part of the 2019 LRDP would result in a less than significant impact.

One single-family residence on the Hillcrest Campus was identified as a potentially eligible historic resource. The one-story residence is located at 101 Dickinson Street and was constructed circa 1920. The Uptown Community Plan survey (City of San Diego 2016) assigned the building a status code of 5S3, meaning that it appears to be eligible for local listing. The ARG report re-evaluated the building and concurred with this previous determination of eligibility (see Figure 3.4-2, Location and Site Photo of Eligible Listing at 101 Dickinson Street). While the residence appears to satisfy local criteria, the Historical Resources Survey Report (ARG 2019) confirmed it does not appear to meet significance thresholds for the CRHR or NRHP and, thus, does not appear eligible for state or federal listing.

Though the UC is not subject to municipal regulations or statutes of surrounding local governments, including the Uptown Community Plan (City of San Diego 2016), CEQA Guidelines, Section 15064.5 (a)(2), states that a resource included in a local register of historical resources, as defined in Section 5020.1(k) of the California Public Resources Code or identified as significant in an historical resource survey meeting the requirements of California Public Resources Code, Section 5024.1(g), shall be historically or culturally significant. Therefore, with the implementation of the 2019 LRDP, local historical resources would be considered significant under CEQA.

According to the Historic Resources Survey Report conducted by ARG (2019), the residence at 101 Dickinson Street appears to satisfy San Diego Historical Resources Criterion 1: "exemplifies or reflects special elements of the City's, a community's or a neighborhood's historical, archaeological, cultural, social, economic, political, aesthetic, engineering, landscaping or architectural development." Specifically, it represents early patterns of residential development and suburbanization that shaped the Hillcrest Community in the early decades of the twentieth century. It stands out as a relatively early example of neighborhood growth, and as an increasingly rare example of an intact residential building dating to this period. Small, modest bungalows such as this house constituted the bulk of early residential development in this area of the City, and were historically located alongside electric streetcar lines that transported passengers to commercial and employment centers downtown. Over time, many of these early bungalows have either been substantially altered or have been demolished to make way for contemporary development. This is true on the medical center campus and on surrounding blocks, which have been subject to acquisition and redevelopment activities. Demolition and alteration have rendered extant and highly intact examples of early bungalows, such as the residence at 101 Dickinson Street, increasingly rare examples of this important property type. It is among a group of extant resources that tells the story of early Hillcrest, as well as the architectural and economic influences that came together to shape the community in its formative period of growth.

The single-family residence located at 101 Dickinson Street is proposed to be demolished during Phase 1A of the 2019 LRDP. Phase 1A would take place between years 2019 and 2022. The demolition of this potentially eligible local historic resource in Phase IA would be a potentially significant impact. None of the other phases of the 2019 LRDP would result in significant impacts to historic resources.

Mitigation Measures

Phase 1A of the 2019 LRDP would result in the demolition of one potentially eligible local historical resource located at 101 Dickinson Street. The following Mitigation Measure CUL-1 would reduce the impacts to this historical resource but not to below a level of significance:

> **CUL-1: HABS Level 1 Documentation.** UC San Diego shall prepare archival Historic American Building Survey (HABS) Level 1 documentation for the single-family residence

located at 101 Dickinson Street. Documentation of the existing conditions shall be undertaken prior to demolition of the structure. If requested, copies of HABS documentation shall be provided to the Hillcrest History Guild, the San Diego History Center, and other interested parties to be identified.

HABS Level 1 documentation shall consist of the following:

- Architectural and historical narrative;
- Archival drawings;
- If adequate archival drawings are not available, measured drawings shall be produced; and
- Large-format photography.

3.4.3.2 Issue 2: Archaeological Resources

Cultural and Tribal Cultural Resources Issue 2 Summary

Would implementation of the 2019 LRDP cause substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Impact: Implementation of the 2019 LRDP could result in impacts to unrecorded subsurface archaeological resources resulting from land disturbance associated with project development.	**Mitigation:** On-Campus Review Grading Plans (CUL-2A); Construction Monitoring (CUL-2B)
Significance Before Mitigation: Potentially significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines.

For purposes of this 2019 LRDP EIR, implementation of the 2019 LRDP may have a significant adverse impact on archaeological resources if it would result in the following:

- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines; or
- Disturb any human remains, including those interred outside of formal cemeteries (e.g., at historic homesteads, as part of archaeological habitation site).

"Unique archaeological resources" are defined under CEQA through California Public Resources Code, Section 21083.2(g). A unique archaeological resource means an archaeological artifact,

object, or site about which it can be clearly demonstrated that there is a high probability that it meets one of the following criteria:

- The archaeological artifact, object, or site contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information, or
- The archaeological artifact, object or site has a special and particular quality, such as being the oldest of its type or the best available example of its type, or
- The archaeological artifact, object, or site is directly associated with a scientifically recognized important prehistoric or historic event or person.

For a resource to qualify as a unique archaeological resource, the agency must determine that there is a high probability that the resource meets one of these criteria without merely adding to the current body of knowledge (PRC Section 21083.3[g]). An archaeological artifact, object, or site that does not meet the above criteria is a non-unique archaeological resource (PRC Section 21083.2[h]). An impact on a non-unique resource is not a significant environmental impact under CEQA (14 CCR 15064.5[c][4]). If an archaeological resource qualifies as a historical resource under CRHR criteria, then the resource is treated as a historical resource for the purposes of CEQA.

Impact Analysis

Impacts to archaeological resources most often occur as the result of excavation or grading. Archaeological resources may also incur indirect impacts as the result of project activity that increases erosion or the accessibility of a surface resource, and thus increases the potential for vandalism or illicit collection. The Cultural Resource Study prepared by TRC Solutions, Inc. (2017) concluded that no archaeological sites have been previously identified within the project area; however, based on a review of known resources in areas surrounding the campus, there is still potential for known or unknown prehistoric or historic resources to occur but it is unlikely considering the extensive disturbance of the mesa throughout the decades. Prehistoric sites in the general area surrounding the Hillcrest Campus are typically small lithic scatters indicating small camp or tool maintenance sites. These sites are primarily associated with creek locations in the area. Historic archaeological sites in the area are typically early twentieth century debris scatters associated with San Diego.

An additional study was conducted in January 2019 by Red Tail Environmental to determine the presence or absence of potentially significant cultural resources within an off-site traffic mitigation area along Bachman Place north of the Hillcrest Campus Boundary. The study revealed that four cultural resources have been recorded within the project area, and one cultural resource has been recorded immediately adjacent to the project area.

Implementation of the 2019 LRDP would involve substantial grading and excavation in native soils, which may result in impacts to known or unknown archaeological resources. Depending on the sensitivity of these resources, these impacts may be potentially significant.

Potential impacts to known or unknown archaeological resources would occur from excavation or grading activities associated with 2019 LRDP implementation. Phases 1A, 1B, 2A, 2B, 3, and 5 would have a potential to reveal unknown archaeological resources because these phases would include cut into the subgrade of the site. Phases 2A and 2B include grading into native soils of the steep slope canyon and have the highest potential to uncover archaeological resources because of the assumed relatively undisturbed nature of the slopes. Phase 2A would involve the construction of three structures and a new north access driveway that cuts through the canyon. Phase 2B would include the demolition of approximately four buildings, two parking structures, and four surface parking lots and the construction of one building. This phase would also include the widening of Bachman Place to three lanes. This widening would begin at the end of the Bachman Place improvements completed in Phase 1A to the Hillcrest Campus Boundary.

In order to mitigate traffic impacts the 2019 LRDP would widen Bachman Place immediately north of the Hillcrest Campus Boundary to the intersection of Bachman Place and Hotel Circle South to three lanes during Phase 2B. This off-site traffic mitigation area would be widened to include an additional southbound lane along Bachman Place. Ground disturbance caused by the 2019 LRDP would take place along Bachman Place only and extend 5 to 10 feet along both sides of the current alignment of Bachman Place. Surface repaving would take place along Hotel Circle South but would not include ground disturbance along Hotel Circle South. One previously recorded prehistoric archaeological site, P-37-29700/SDI-18995, has been identified within the intersection of Bachman Place and Hotel Circle South. Human remains have also been identified on this site, and the site was determined to be eligible for the CRHR and the local register and significant under CEQA. Since the exact southern boundary of the site under Bachman Place is not known, there exists a potential to disturb archaeological resources under this road. No subsurface disturbance is planned within the project area containing the other remaining previously recorded cultural resources.

The potential to disturb unknown or known archaeological resources during construction of Phases 1A, 1B, 2A, 2B, 3, and 5 would be potentially significant.

Mitigation Measures

Mitigation Measures CUL-2A and CUL-2B shall be implemented to reduce potentially significant impacts within the Hillcrest Campus Boundary to unknown archaeological resources during project construction to a less than significant level. In order to mitigate for potential impacts to

cultural resources within the off-site traffic mitigation area, Mitigation Measure CUL-2B would be enforced in this area:

CUL-2A: On-Campus Review Grading Plans. To address potentially significant impacts to unknown archaeological resources on the Hillcrest Campus mesa within the campus property boundary, the following measures shall be followed prior to the start of construction:

1. Prior grading plans shall be reviewed, if available, to determine if prior grading activity has removed the top 2 or more feet of soil on mesas, cliffs, and other flat areas.
    a. If 2 or more feet have been previously removed, no further work is required.
    b. If it cannot be verified that prior grading has removed 2 or more feet of soil, a qualified Archaeologist shall monitor grading activities during the removal of the top 2 to 3 feet of soil or if bedrock is encountered.
2. A qualified Archaeologist shall monitor all grading activities within areas of natural deposition.
3. Monitoring shall cease if grading reaches underlying formational material, regardless of how shallow or in what location it is found.
4. All monitoring shall be conducted in accordance with Mitigation Measure CUL-2B.

CUL-2B: Construction Monitoring. If construction monitoring is determined to be required on the Hillcrest Campus by Mitigation Measure CUL-2A or construction occurs off campus in Mission Valley, the following measures shall be followed. The following measure shall be implemented during all ground disturbance associated with the off-site portion of Bachman Place widening within 500 feet of the Hotel Circle South intersection:

1. Prior to beginning any work that requires monitoring:
    a. A preconstruction meeting shall be held that includes the qualified Archaeologist, the UC San Diego Project Manager and Campus Planning staff, Construction Manager and/or Grading Contractor, and other appropriate personnel so the Archaeologist can make comments and/or suggestions concerning the monitoring program to the Construction Manager and/or Grading Contractor.
    b. The Archaeologist shall (at that meeting or subsequently) submit to the UC San Diego Project Manager a copy of the site/grading plan (reduced to 11 x 17 inches) that identifies areas to be monitored as well as areas that may require delineation of grading limits.
    c. The Archaeologist shall also coordinate with the UC San Diego Project Manager on the construction schedule to identify when and where monitoring is to begin, including the start date for monitoring.

2. The qualified Archaeologist and a Native American Monitor shall be present during grading/excavation and shall document such activity on a standardized form. A record of activity shall be sent to the UC San Diego Environmental Planner and Project Manager each month.
3. Discoveries
    a. Discovery Process. In the event of a discovery, and when requested by the Archaeologist or the Archaeological Principal Investigator (PI), the UC San Diego Project Manager shall be contacted and shall divert, direct, or temporarily halt ground-disturbing activities in the area of discovery to allow for preliminary evaluation of potentially significant archaeological resources. The PI shall also immediately notify UC San Diego Campus Planning of such findings at the time of discovery.
    b. Determination of Significance. The significance of the discovered resources shall be determined by the PI in consultation with UC San Diego Campus Planning and the Native American Community, as appropriate. UC San Diego Campus Planning must concur with the evaluation before grading activities will be allowed to resume. For archaeological resources considered significant by the PI, a Research Design and Data Recovery Program shall be prepared, approved by UC San Diego Campus Planning, and carried out to mitigate impacts before ground-disturbing activities in the area of discovery will be allowed to resume.
4. If human remains are discovered, work shall halt in that area and the procedures detailed in the California Health and Safety Code (Section 7050.5) and the California Public Resources Code (Section 5097.98), if applicable, will be followed.
5. Notification of Completion. The Archaeologist shall notify UC San Diego Campus Planning, as appropriate, in writing of the end date of monitoring.
6. Handling and Curation of Significant Artifacts and Letter of Acceptance
    a. The Archaeologist shall ensure that all significant cultural resources or artifacts collected are cleaned, catalogued, and permanently curated with an appropriate institution; that a letter of acceptance from the curation institution has been submitted to UC San Diego Campus Planning; that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.
    b. Curation of artifacts associated with the survey, testing, and/or data recovery for the project shall be completed in consultation with UC San Diego Campus Planning, as applicable.

7. Final Results Reports (Monitoring and Research Design and Data Recovery Program). Prior to completion of the 2019 LRDP, two copies of the Final Results Report (even if no significant resources were found) and/or evaluation report, if applicable, which describe the results, analysis, and conclusions of the Archaeological Monitoring Program (with appropriate graphics) shall be submitted to UC San Diego Campus Planning for approval. For significant archaeological resources encountered during monitoring, the Research Design and Data Recovery Program shall be included as part of the Final Results Report.
8. Recording Sites with State of California Department of Park and Recreation. The qualified Archaeologist shall record (on the appropriate State of California Department of Park and Recreation forms (DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program and submit such forms to the South Coastal Information Center with the Final Results Report.

3.4.3.3 Issue 3: Human Remains

Standards of Significance

Cultural and Tribal Cultural Resources Issue 3 Summary

Would implementation of the 2019 LRDP disturb any human remains, including those interred outside of dedicated cemeteries?

Impact: Implementation of the 2019 LRDP could result in potential impacts to human remains located in recorded and unrecorded subsurface sites.	**Mitigation:** On-Campus Review Grading Plans (CUL-2A); Construction Monitoring (CUL-2B); Compliance with California Health and Safety Code, Sections 7050.5 and 7052, and PRC Section 5097.98 for inadvertent discoveries
Significance Before Mitigation: Potentially significant	**Significance After Mitigation:** Less than significant

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would disturb any human remains, including those interred outside of dedicated cemeteries, pursuant to Section 15064.5 of the CEQA Guidelines. Sections 15064.5(d) and (e) of the CEQA Guidelines assign special importance to human remains and specify procedures to be used when Native American remains are discovered. These procedures are detailed under California Public Resources Code, Section 5097.98.

Impact Analysis

Based on the Cultural Resource Study prepared by TRC Solutions, Inc. (2017), no human remains have been identified within the Hillcrest Campus Boundary or in the immediate project area. Although

unlikely on campus given the extensive past disturbance of the mesa, unidentified human remains, whether as part of a prehistoric cemetery, an archaeological site, or an isolated occurrence, could be present below the ground surface in any location but most likely in native terrain.

The 2019 LRDP proposes new development and building improvements involving construction activities that could disturb native terrain, including excavation, grading, and soil removal; therefore, the potential exists for previously undiscovered human remains to be discovered. Project phases that result in substantial grading or excavations in native soils have the potential to impact archaeological resources that may contain human remains though unlikely due to the mesa top's long history of development. If human remains are inadvertently discovered, the impact would be considered significant unless the appropriate procedures were implemented.

An additional study was conducted in January 2019 by Red Tail Environmental to determine the presence or absence of potentially significant cultural resources within an off-site traffic mitigation area along Bachman Place north of the Hillcrest Campus Boundary. The study revealed that four cultural resources have been recorded within the vicinity of the off-site traffic mitigation area, with one cultural resource recorded immediately adjacent to the proposed area of work. Therefore, one cultural resource, P-37-29700/SDI-18995, could be impacted by implementation of the 2019 LRDP located at the intersection of Bachman Place and Hotel Circle South. It has previously been recorded as a prehistoric archaeological site and was identified with the presence of human remains. The site was evaluated for the CRHR and recommended eligible under Criterion D.

The 2019 LRDP Phases 1A, 1B, 2A, 2B, 3, and 5 would have some possibility to reveal unknown human remains because these phases would include cut into the subgrade of the site. The details of each phase including the amount of grading and excavation are described in Chapter 2, Project Description. Phases 2A and 2B would have the highest potential to uncover human remains because these phases include grading into the native soils of the steep slope canyon. Phase 2A involves the construction of a new north access driveway that begins at Bachman Place, winds up through the canyon, and terminates at the entrance to the underground residential parking. Phase 2B includes the widening of Bachman Place from the mesa top until its terminus at Hotel Circle South, requiring construction into the native canyon terrain and potential impact of cultural resource site P-37-29700/SDI-18995. Mitigation Measures CUL-2A and CUL-2B would be implemented to reduce impacts to known and unknown human remains to a less than significant level.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code, Sections 7050.5 and 7052, and California Public Resources Code, Section 5097 (summarized below). Such remains would likely be considered significant as TCRs as well and would be subject to treatments specified in Mitigation Measure CUL-2B.

If human remain are encountered during project construction, the California Health and Safety Code and CEQA Guidelines, Section 15064.5, require that work in the immediate area must halt and the remains must be protected. UC San Diego shall notify the County Coroner and the NAHC immediately if applicable, per Section 5097.98 of the California Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the NAHC to be Native American, the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. Following the coroner's findings, the archaeologist and the NAHC-designated Most Likely Descendent shall recommend the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human remains are not disturbed within 48 hours of being granted access to the site. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code, Section 5097.94.

Project impacts to known human remains during Phase 2B and unknown human remains during construction of Phases 1A, 1B, 2A, 2B, 3, and 5 would be potentially significant.

Mitigation Measures

The identification of human remains during construction activities would be addressed through implementation of Mitigation Measure CUL-2A and treatments under the California Public Resources Code and California Health and Safety Code that are specified under Mitigation Measure CUL-2B. See Section 3.4.3.2 for a description of these mitigation measures. Compliance with California Health and Safety Code, Sections 7050.5 and 7052, and California Public Resources Code, Section 5097, would provide an opportunity to avoid or minimize the disturbance of human remains, and to appropriately treat any remains that are discovered. Implementation of these measures would reduce the impacts of inadvertent discoveries of human remains to a less than significant level.

3.4.3.4 Issue 4: Tribal Cultural Resources

Standards of Significance

Cultural and Tribal Cultural Resources Issue 4 Summary

Would implementation of the 2019 LRDP cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, or 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native tribe.

Impact: Implementation of the 2019 LRDP could result in potential impacts to unknown TCRs located in unrecorded subsurface sites.	**Mitigation:** On-Campus Review Grading Plans (CUL-2A); Construction Monitoring (CUL-2B)
Significance Before Mitigation: Potentially significant	**Significance After Mitigation:** Less than significant

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would cause a substantial adverse change in the significance of a TCR, defined in California Public Resources Code, Section 21074, as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe; and that is listed or eligible for listing in the CRHR or in a local register of historical resources as defined in California Public Resources Code, Section 5020.1(k); or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of California Public Resources Code, Section 5024.1. In applying the criteria set forth in subdivision (c) of California Public Resources Code, Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Impact Analysis

The significance of a cultural resource is impaired when a project demolishes or materially alters those physical characteristics that convey significance. Impacts to TCRs, archaeological resources, or human remains most often occur as the result of excavation for the construction of buildings, installation of utilities, landscaping, and/or road construction. These resources may also be

subjected to indirect impacts as the result of project-related activities that increase erosion, compression, or accessibility. Under CEQA, an effect on nonphysical values (such as tribal values, or other spiritual or religious values) is not considered an environmental effect; however, when a project would result in a physical effect, these values may be considered in determining whether the physical effect is significant. As stated in Section 3.4.1.6, UC San Diego contacted California Native American tribes traditionally and culturally affiliated with the San Diego region to solicit their interest in being notified of proposed campus development projects as part of the planning process pursuant to AB 52. Because no response was received from the tribes contacted, UC San Diego assumes that consultation is declined.

An archaeological resources records search was conducted at SCIC as part of the Cultural Resource Study prepared by TRC Solutions, Inc. (2017). The results of the records search concluded that no archaeological or TCR sites have been previously identified within the Hillcrest Campus Boundary. On July 20, 2017, a directed pedestrian cultural resources survey was conducted within the Hillcrest Campus Boundary by a qualified archaeologist. No archaeological or TCRs were identified on site during the pedestrian survey. However, similar to unknown archaeological resources and human remains, unknown TCRs still have the potential to occur on the Hillcrest Campus. Implementation of the 2019 LRDP would involve grading and excavation, which, while unlikely, could result in impacts to unknown TCRs. Depending on the sensitivity of these resources, these impacts may be potentially significant.

As discussed in Section 3.4.1.6, in February 2018, the LRDP EIR NOP was also sent to 13 Native American tribes and the NAHC, soliciting input from all regarding potential environmental issues associated with the proposed 2019 LRDP EIR. NOP response letters were received from the Viejas Band of Kumeyaay Indians and the NAHC. The Viejas letter stated that the project area may contain many sacred sites to the Kumeyaay people and requested that sacred sites be avoided with adequate buffer zones. The letter did not specify where the sites are located or how the proposed 2019 LRDP may impact or avoid these sites. The letter from the NAHC summarized the requirements of CEQA, AB 52, and SB 18 (the latter does not apply to the 2019 LRDP). It also included NAHC recommendations for cultural resources assessments.

A record search of the SLF was requested of the NAHC on October 26, 2018. The NAHC responded on November 26, 2018, that the record search of the SLF was positive. The NAHC provided a list of 12 Native American contacts, which may have additional information regarding the project area. Red Tail Environmental sent an information request to the 12 Native American contacts on January 2, 2019. To date, one response has been received from the Viejas Band of Kumeyaay Indians on January 28, 2019. The Viejas Band of Kumeyaay Indians has requested that a Kumeyaay Cultural Monitor be on site for all ground-disturbing activities. On April 26, 2019, UC San Diego consulted with the Viejas Band of Kumeyaay Indians regarding their request, and both parties agreed that a Kumeyaay Cultural Monitor would not be required where the top 2 to 3

feet of soil has been disturbed by previous development. However, monitoring would be required during all ground disturbance within the off-site traffic mitigation area.

In addition, Red Tail Environmental performed a field survey in January 2019 to determine the presence or absence of potentially significant cultural resources within an off-site traffic mitigation area along Bachman Place north of the Hillcrest Campus Boundary. The pedestrian survey did not identify any cultural resources or TCRs. According to the records search, four cultural resources have been recorded within the vicinity of the off-site traffic mitigation area, and one cultural resource has been recorded immediately adjacent to the proposed area of work. Red Tail Environmental confirmed that one cultural resource, P-37-29700/SDI-18995, which includes the presence of human remains, would be impacted by the implementation of the 2019 LRDP.

Potential impacts to unknown TCRs may occur from excavation or grading activities associated with the proposed 2019 LRDP. Phases 1A, 1B, 2A, 2B, 3, and 5 would have the potential to reveal unknown TCRs because these phases would include cut into the subgrade of the site. The details of each phase including the amount of grading and excavation are described in Chapter 2. Phases 2A and 2B would involve grading into native soils of the steep slope canyon and have the highest potential to uncover TCRs. Therefore, project impacts to unknown TCRs during construction of Phases 1A, 1B, 2A, 2B, 3, and 5 would be potentially significant.

Mitigation Measures

Mitigation Measures CUL-2A and CUL-2B would be implemented to reduce impacts to a less than significant level. The identification of TCRs during construction activities would occur through implementation of Mitigation Measure CUL-2A, and treatments are specified under Mitigation Measure CUL-2B. See Section 3.4.3.2 for a description of these mitigation measures.

3.4.4 Cumulative Impacts and Mitigation

Cultural and Tribal Cultural Resources Cumulative Issue Summary

Would implementation of the 2019 LRDP have a cumulatively considerable contribution to a cumulative cultural or tribal cultural resources impact considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Issue 1: Loss of historical resources	Potentially significant	Cumulatively considerable and unavoidable
Issue 2: Regional loss of archaeological resources	Potentially significant	Not cumulatively considerable
Issue 3: Regional loss of human remains	Potentially significant	Not cumulatively considerable
Issue 4: Regional loss of tribal cultural resources	Potentially significant	Not cumulatively considerable

3.4.4.1 Cumulative Issue 1: Historical Resources

The geographic context for the analysis of cumulative impacts to historical resources is defined as the Uptown Community limits because historical resources were cumulatively evaluated under the Uptown Community Plan (City of San Diego 2016). Cumulative impacts to historical resources would involve projects affecting local resources with the same level or type of designation or evaluation, projects affecting other structures located within the same historic district, or projects that involve resources that are significant within the same context as resources associated with the 2019 LRDP. The Uptown Historic Preservation Element in the Uptown Community Plan (2016) contains specific goals of identifying and preserving significant historical resources as well as providing education opportunities and incentives related to historical resources in Uptown. The Uptown Community Plan identifies a number of potentially significant historical resources through its Historical Resources Reconnaissance Survey completed between 2004 and 2006. However, it is possible that adherence to these policies may not adequately avoid or reduce incremental impacts, and such projects would require additional measures to continue to occur over time leading to a cumulatively significant impact.

Implementation of the proposed 2019 LRDP would include the demolition and removal of one single-family residence on the Hillcrest Campus that is considered a potentially eligible historic resource. The Uptown Community Plan survey (City of San Diego 2016) assigned this resource a status code of 5S3 (appears eligible for local listing). The Historical Resources Survey Report prepared by ARG (2019) re-evaluated the resource and concurred with the previous determination

of local eligibility. Compliance with Mitigation Measure CUL-1 identified above would reduce project-level impacts by requiring proper treatment and documentation of the affected resources, although not to a less than significant level. Since a historic building would be demolished as a result of the proposed 2019 LRDP, it would no longer convey its historical significance. Therefore, the 2019 LRDP's contribution to a cumulative historical resource impact would be cumulatively considerable, and impacts would be significant and unavoidable.

3.4.4.2 Cumulative Issue 2: Archaeological Resources

The geographic context for the analysis of cumulative impacts to archaeological resources is considered to be the County region. Evidence of human occupation in the project area is represented by numerous archaeological sites throughout the City and overall region. These sites contain artifacts and features of value in reconstructing cultural patterns of prehistoric life. Due to the scarcity of archaeological resources and the potential for construction activities associated with future development projects in the San Diego region to impact these resources, a significant cumulative impact to archaeological resources exists.

The Cultural Resource Study (TRC 2017) concluded that no archaeological sites have been identified within the project area. An additional study conducted by Red Tail Environmental (2019) of the off-site traffic mitigation area revealed that there are five previously identified cultural resource sites located within the area. The 2019 LRDP would include grading and excavation which, while unlikely, could result in impacts to unknown archaeological resources. As discussed in Section 3.4.3.2, depending on the sensitivity of these resources, impacts may be potentially significant. To address the potential for unanticipated archaeological resources discoveries during subsurface excavation activities, Mitigation Measures CUL-2A and CUL-2B would be implemented to avoid or minimize disturbance or to ensure appropriate treatment and disposition of archaeological resources. Mitigation Measure CUL-2B, construction monitoring, would be enforced during all construction activities in the off-site traffic mitigation area. These measures would also reduce the 2019 LRDP's potential cumulative impacts to known or unknown buried archaeological resources. Therefore, by applying mitigation, the 2019 LRDP's contribution to cumulative archaeological resources impacts would not be cumulatively considerable.

3.4.4.3 Cumulative Issue 3: Human Remains

The geographic context for the analysis of cumulative impacts to human remains is considered to be the County region. The presence of numerous archaeological sites throughout the region indicates that prehistoric human occupation occurred throughout the region. Additionally, historic era occupation of the area increases the possibility that humans were interred outside of a formal cemetery. Cumulative development projects in the San Diego region would have the potential to encounter unknown, interred human remains during construction activities, which would result in a significant cumulative impact.

No human remains were identified within the Hillcrest Campus Boundary. However, an additional study conducted on an off-site traffic mitigation area along Bachman Place north of the Hillcrest Campus Boundary found that one site had been previously recorded as identifying human remains. Additionally, unidentified human remains, whether as part of a prehistoric cemetery, an archaeological site, or an isolated occurrence, could be present below the ground surface. The identification of human remains during construction activities would occur through implementation of Mitigation Measure CUL-2A and treatments under the California Public Resources Code and Health and Safety Code are specified under Mitigation Measure CUL-2B. Compliance with California Health and Safety Code, Sections 7050.5 and 7052, and California Public Resources Code, Section 5097, would provide an opportunity to minimize the disturbance of human remains, and to appropriately treat any remains that are discovered. Implementation of these measures would reduce the impacts of inadvertent discoveries of human remains to a less than significant level. Therefore, the 2019 LRDP would not make a cumulatively considerable contribution to a significant cumulative impact to human remains.

3.4.4.4 Cumulative Issue 4: Tribal Cultural Resources

Cumulative projects located in the County region have the potential to result in a cumulative impact associated with the loss of TCRs through development activities that could cause a substantial adverse change in the significance of a TCR. These sites may contain artifacts and resources associated with tribal cultural values and religious beliefs. Any cumulative projects that involve ground-disturbing activities have the potential to result in significant impacts on TCRs. Therefore, the cumulative destruction of significant TCRs from planned construction and development projects in the San Diego region would be cumulatively significant.

Although no TCRs have been identified on the Hillcrest Campus, there is potential for construction of the proposed 2019 LRDP to result in significant impacts to unknown subsurface TCRs. This potentially significant impact would be mitigated to a less than significant level with the implementation of Mitigation Measures CUL-2A and CUL-2B that require the evaluation of any feasible means of reducing disturbance to TCRs, monitoring during construction, and repatriation of materials associated with TCRs. Therefore, by applying mitigation, the 2019 LRDP's contribution to cumulative TCR impacts would not be cumulatively considerable.

3.4.5 CEQA Issues Where There Is No Potential for a Significant Impact

All checklist items in Appendix G of the CEQA Guidelines under cultural resources and TCRs are evaluated above. There are no CEQA issues where there is no potential for significant effect.

3.4.6 References

Architectural Resources Group (ARG). 2019. University of California, San Diego Medical Center Hillcrest Campus Historic Resources Survey Report. August 18, 2017. Revised March 2019.

City of San Diego. 2011. City of San Diego Historical Resources Board Guidelines for the Application of Historical Resources Board Design Criteria. February 24, 2011.

City of San Diego. 2016. "Historic Preservation Element." In Uptown Community Plan. November 14, 2016.

City of San Diego. 2017. Final Environmental Impact Report for the Legacy International Center Project. April 7, 2017.

Red Tail Environmental. 2019. Cultural Resources Study for the University of California at San Diego Hillcrest Long Range Development Plan: Bachman Place Off-Site Traffic Mitigation Area Project, San Diego, California. January 11, 2019.

TRC Solutions, Inc. 2017. UC San Diego Hillcrest Campus Cultural Resource Study. July 28, 2017.

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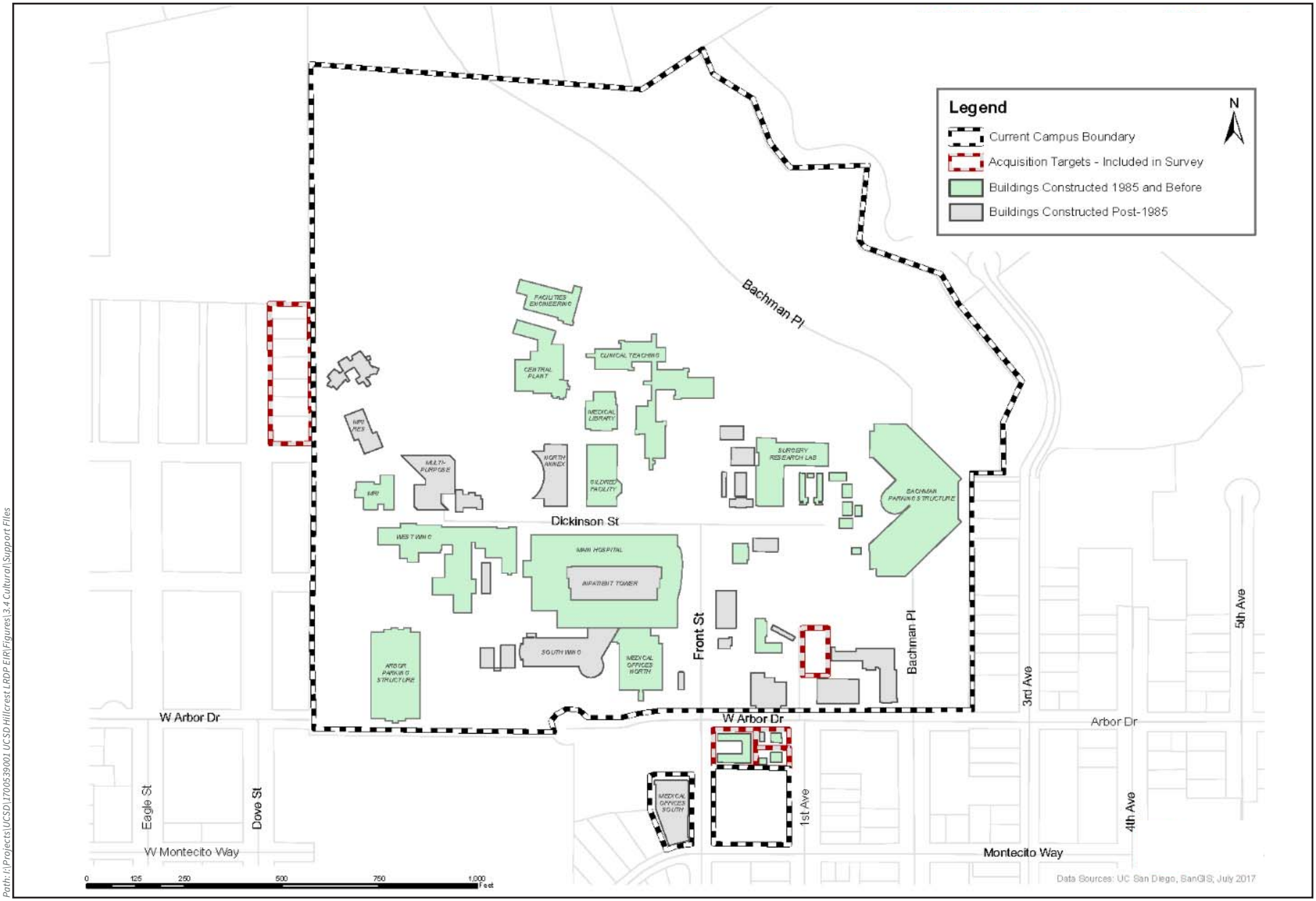

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Source: Architectural Resources Group 2017

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Figure 3.4-1
Locations of Buildings Surveyed for Historical Eligibility

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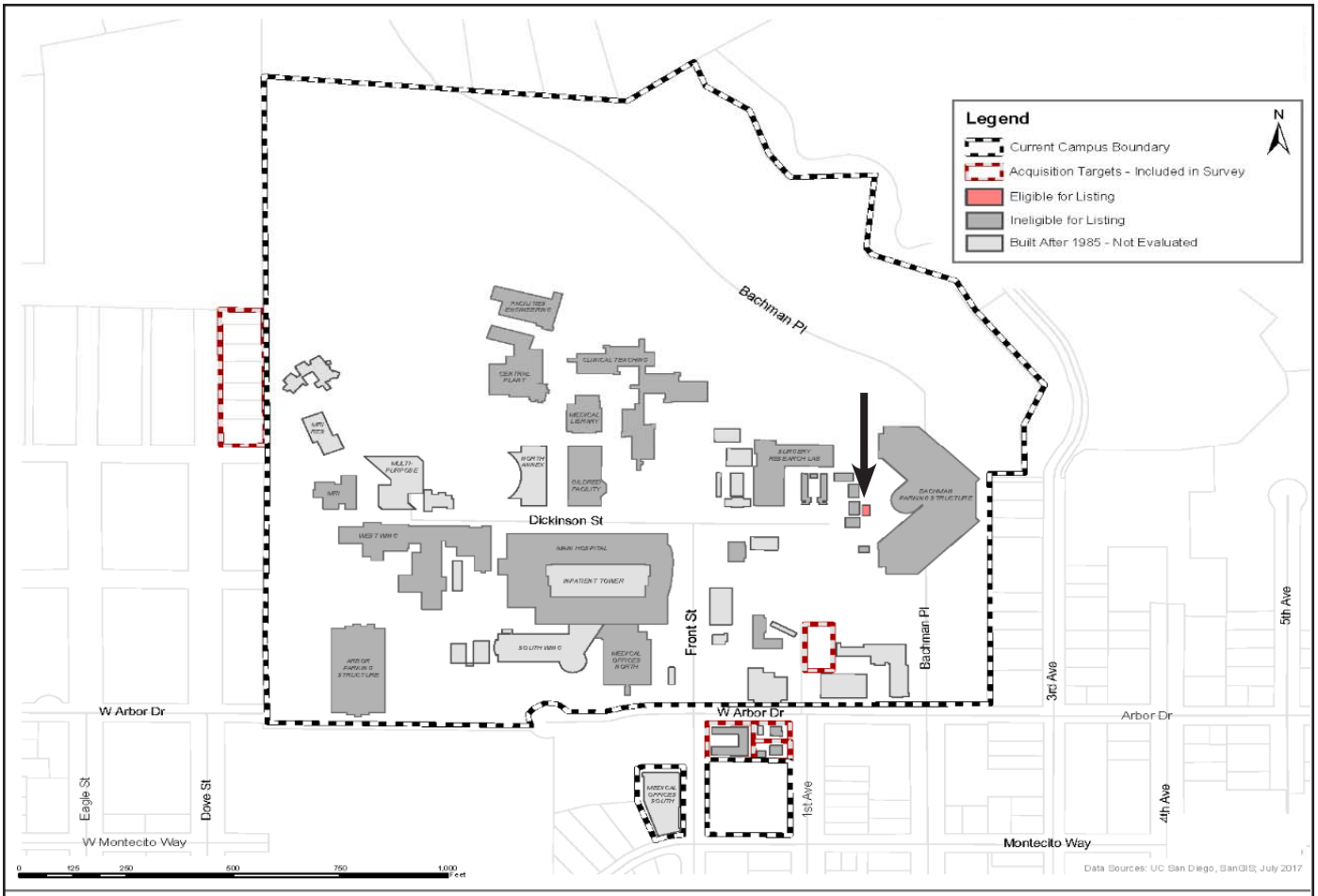

Source: Architectural Resources Group 2017

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Figure 3.4-2
Location and Site Photo of Eligible Listing at 101 Dickinson Street

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3.5 Energy

This section assesses the consumption of energy associated with implementation of the 2019 LRDP. This section also provides a background discussion of existing and proposed energy sources and a summary of applicable regulations. GHG emissions are directly correlated to the fossil fuel energy use (e.g., oil, natural gas, coal) on the campus and therefore the information provided in this section is based, in part, on the information provided in the Greenhouse Gas Emissions Reduction Strategy (GHG Reduction Strategy) prepared for the proposed 2019 LRDP by LSA Associates, Inc. (LSA 2019), which is included as Appendix E of this 2019 LRDP EIR.

3.5.1 Environmental Setting

The following discussion provides information regarding the existing energy sources and usage on the Hillcrest Campus. This includes electricity, natural gas and diesel fuel. Electricity is used for lighting and facility operational needs; electricity and natural gas are both used to operate the CUP and diesel fuel is used for emergency electrical generators. The CUP, which is located in the northwestern part of the campus mesa top, is composed of boilers, chillers, and emergency generators that provide heating and cooling for the surrounding campus buildings. The CUP uses natural gas combustion in the boilers and electricity for the chillers, and the combustion of diesel fuel by the emergency generators.

Electricity

Electricity is provided through service from the regional provider, SDG&E, and electricity purchased from the UC Regents Energy Services Unit Direct Access Program (UC Regents Direct Access Program) (100 percent carbon-free). Existing electricity use for the campus was calculated as part of preparation of the GHG Reduction Strategy (Appendix E). Electricity use includes operation of the chillers at the existing CUP. In 2017, the total existing electricity used on the Hillcrest Campus was 33,522,970 kilowatt-hours per year (kWh/yr).

Natural Gas Facilities

Natural gas service to the Hillcrest Campus is provided by SDG&E. Existing natural gas use for the campus was calculated by the engineering firm TK1SC (2018) as part of preparation of the GHG Reduction Strategy (Appendix E). The consumption of natural gas is associated with the hospital, offices, and other buildings. The existing CUP uses natural gas combustion to power its boilers. The Hillcrest Campus currently operates three natural gas-powered boilers (with diesel backup) at the CUP. Two of the boilers (Central Plant Boiler 1 and 2) are rated at 20.5 million British Thermal Units per hour (MMBTU/hr). The third boiler (Central Plant Boiler 3) is rated at 20.92 MMBTU/hr. These boilers provide steam, heat, and hot water used by buildings throughout the Hillcrest Campus. The annual boiler run hours, natural gas use, and annual diesel use are

summarized in Table 3.5-1. The total existing natural gas used on the Hillcrest Campus from all sources is 160,821 MMBTU/yr.

Table 3.5-1. Existing Boiler Energy Usage

Boiler Name	Make and Model[1]	Size (MMBTU/hr)	Annual Run Hours	Average Daily Run Hours	Annual Natural Gas Input (therms/year)[2]	Annual Diesel Input (gal/year)
CP Boiler 1	Superior Boiler 4-X-2506-S150-ICCF	20.5	3,960	11	373,022	49
CP Boiler 2	Superior Boiler 4-X-2506-S150-ICCF	20.5	6,497	18	612,002	8
CP Boiler 3	Cleaver Brooks CB200X-500-150	20.92	5,920	16	557,650	57
				Total	**1,542,674**	**114**

Source: UC San Diego 2018.

Notes: CP = Central Plant; MMBTU/hr = million British Thermal Units per hour; gal = gallons

[1] Based on San Diego Air Pollution Control District permits for each boiler.

[2] Reflects total natural gas consumption for all boilers averaged across 3 years of data (2015–2017) which is distributed proportionally by annual run hours to each boiler, assuming that natural gas is used 99 percent of the annual run time.

Diesel Fuel

The Hillcrest Campus currently operates 10 emergency diesel generators. Two of these generators are assigned to the main hospital facility; three are assigned as auxiliary back-up generators for the CUP, West Wing, and a facilities building; and five are assigned to other individual research and telecommunication facilities. The two main hospital generators are the largest, rated at 2,155 horsepower (hp) each; the three auxiliary generators are rated at 890 hp each; and the five building-specific generators are rated below 500 hp each. Annual maintenance and emergency hours for each generator along with the annual fuel usages are summarized in Table 3.5-2.

Table 3.5-2. Emergency Diesel Generator Usage

Generator Name	Powered Facility	Make and Model[1]	Size hp (kW)[1]	Engine Tier[1]	Annual Diesel Fuel Input (gal/year)	Annual Hours of Use[2]
Main 1	Hospital	CAT 3512	2155 (1500)	Tier 1	193	21.7
Main 2	Hospital	CAT 3512	2155 (1500)	Tier 1	195	22.2
Aux 1	All	CAT 3412TA	890 (660)	Unknown	103	15.6
Aux 2	All	CAT 3412TA	890 (660)	Unknown	100	15.5
Aux 3	All	CAT 3412 DITA	890 (660)	Unknown	104	15.8
CTF-A	Central Teaching Facility	Cummins NTA-855-G	425 (250)	Unknown	55	9.7
CTF-C	Central Teaching Facility	Cummins NTA-855-G	425 (250)	Unknown	53	12.4
Theodore Gildred	Theodore Gildred Facility	Kohler 125ROZ-71	200 (125)	Unknown	48	6.9
Telecom	Telecommunications	CAT 3208	192 (143)	Unknown	46	11
SRL	Surgery Research Laboratory	Cummins QSB7-G7	256 (132)	Tier 4i	143	7.7

Source: UC San Diego 2018.

Notes: hp = horsepower; kW = kilowatt; CAT = Caterpillar, Inc.; gal = gallons

[1] Based on San Diego Air Pollution Control District permits for each generator, except for the New SRL generator. New SRL generator specifications were provided by UC San Diego staff.

[2] Includes both maintenance and emergency use.

The diesel fueled emergency generators are operated when there is an electricity outage or as part of monthly generator testing that typically lasts for up to one-half hour. As a result, the amount of annual diesel fuel usage is relatively low.

Vehicle Fuel Consumption

Annual fuel consumption for existing vehicle trips associated with Hillcrest Campus operation is calculated based on the carbon dioxide equivalent (CO_2e) emissions inventoried in the GHG Reduction Strategy (Appendix E) and the kilogram (kg)/CO_2 conversion factor for motor gasoline from the USEPA (USEPA 2018). Existing operation of the campus results in the annual consumption of approximately 3.5 million gallons of motor fuel. Fuel consumption calculations are provided in Appendix O.

3.5.2 Regulatory Framework

Applicable federal, state, and UC regulations pertaining to energy usage on campus are described below. Regulations pertaining to GHG reduction, which include the reduction of energy usage are described in Section 3.7, Greenhouse Gas Emissions, of this 2019 LRDP EIR.

3.5.2.1 Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the federal Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards. In 2010, fuel economy standards were set at 27.5 miles per gallon for new passenger cars and 23.5 miles per gallon for new light-duty trucks. Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States (Dudek 2017).

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 was signed into law. In addition to setting increased Corporate Average Fuel Economy (CAFE) standards for motor vehicles, the act includes the following provisions related to energy efficiency:

- Renewable Fuel Standard (RFS) (Section 202)
- Appliance and lighting efficiency standards (Sections 301–325)
- Building energy efficiency (Sections 411–441)

This federal legislation requires ever-increasing levels of renewable fuels to replace petroleum (Section 202, RFS). The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the act, the original RFS program required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the Energy Independence and Security Act of 2007, the RFS program was expanded in several key ways that laid the foundation for achieving significant reductions of GHG emissions through the use of renewable fuels, for reducing imported petroleum, and for encouraging the development and expansion of the nation's renewable fuels sector (Dudek 2017).

USEPA and NHTSA Joint Rule for Vehicle Standards

On April 1, 2010, the USEPA and the NHTSA announced a joint final rule to establish a national program consisting of new standards for light-duty vehicles model years 2012 through 2016. The joint rule is intended to reduce GHG emissions and improve fuel economy. In August 2012, the USEPA and NHTSA approved a second round of GHG and CAFE standards for model years 2017 and beyond (USEPA and NHTSA 2012). These standards will reduce motor vehicle GHG emissions to 163 grams of CO^2 per mile, which is equivalent to 54.5 miles per gallon if this level were achieved solely through improvements in fuel efficiency, for cars and light-duty trucks by model year 2025.

The first phase of the CAFE standards (for model years 2017 to 2021) are projected to require, on an average industry fleet-wide basis, a range from 40.3 to 41.0 miles per gallon in model year 2021. The second phase of the CAFE program (for model years 2022 to 2025) is projected to require, on an average industry fleet-wide basis, a range from 48.7 to 49.7 miles per gallon in model year 2025. The second phase of standards has not been finalized due to the statutory requirement that NHTSA set average fuel economy standards not more than 5 model years at a time. The regulations also include targeted incentives to encourage early adoption and introduction into the marketplace of advanced technologies to dramatically improve vehicle performance, including incentives for electric, natural gas, and hybrid vehicles (Dudek 2017).

3.5.2.2 State

Warren-Alquist Act

The 1975 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the California Energy Commission (CEC). The Act established state policy to reduce wasteful, uneconomical, and unnecessary uses of energy by employing a range of measures. The California Public Utilities Commission (CPUC) regulates privately owned utilities in the energy, rail, telecommunications, and water fields.

Integrated Energy Policy Report

SB 1389 (Chapter 568, Statutes of 2002; PRC 25300–25323) required CEC to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop and evaluate energy policies and programs that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety" (PRC Section 25301[a]). This work culminated in the Integrated Energy Policy Report (IEPR).

CEC adopts an IEPR every 2 years and an update every other year. The 2017 IEPR is the most recent IEPR, which was adopted on April 16, 2018. The 2017 IEPR provides a summary of priority energy issues currently facing the state, outlining strategies and recommendations to further the state's goal of ensuring reliable, affordable, and environmentally responsible energy sources. Energy topics covered in the IEPR include progress toward statewide renewable energy targets, integrated resource planning, distributed energy resources, transportation electrification, solutions to increase resiliency in the electricity sector, energy efficiency, transportation electrification, barriers faced by disadvantaged communities, demand response, transmission and landscape-scale planning, the preliminary transportation energy demand forecast, renewable gas, updates on Southern California electricity reliability, natural gas outlook, and climate adaptation and resiliency.

Senate Bill 1078: California Renewables Portfolio Standard Program

SB 1078 (Chapter 516, Statutes of 2002) establishes a Renewable Portfolio Standard (RPS) for electricity supply. The RPS requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide 20 percent of their supply from renewable sources by 2017. This target date was moved forward in 2006 under SB 107 to require compliance by 2010. In addition, electricity providers subject to the RPS must increase their renewable share by at least 1 percent each year. The outcome of this legislation will impact regional transportation powered by electricity. As of 2016, the state has reported that a minimum of 25 percent of electricity has been sourced from certified renewable sources.

Senate Bill X1-2: California Renewable Energy Resources Act

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 sets a three-stage compliance period requiring all California utilities, including independently owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. SB X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California. SB X1-2 mandates that renewables from these sources make up at least 50 percent of the total renewable energy for the 2011–2013 compliance period, at least 65 percent for the 2014–2016 compliance period, and at least 75 percent for 2016 and beyond.

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) extended the RPS target and requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. This act also requires doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statues of 2005) required CEC to prepare a state plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan (SAF Plan) in partnership with CARB and in consultation with other state, federal, and local agencies. The SAF Plan presents strategies and actions California must take to increase the use of alternative nonpetroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The SAF Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel

use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Executive Order S-06-06

Executive Order (EO) S-06-06, signed on April 25, 2006, by former Governor Arnold Schwarzenegger, establishes targets for the use and production of biofuels and biopower, and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The EO establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The EO also calls for the state to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies those barriers and recommends actions to address them so that the state can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 plan and provides a more detailed action plan to achieve the following goals:

- Increase environmentally- and economically-sustainable energy production from organic waste;
- Encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications;
- Create jobs and stimulate economic development, especially in rural regions of the state; and
- Reduce fire danger, improve air and water quality, and reduce waste.

As of 2016, 2.7 percent of the total electricity system power in California was derived from biomass.

California Building Standards Code

The California Building Standards Code or Title 24 of the California Code of Regulations contains the regulations that govern the construction of buildings in California. Within the Building Standards Code, two parts pertain to the incorporation of both energy efficient and green building elements into land use development. Part 6 is California's Energy Efficiency Standards for Residential and Non-Residential Buildings and Part 11 is the California Green Building Standards, also known as CALGreen. Title 24 was established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and non-residential buildings. In 2013, CEC updated Title 24 standards with more stringent requirements, effective July 1, 2014. All buildings for which an application for a building permit is submitted on or after July 1, 2014 must follow the 2013 standards. Energy efficient buildings require less electricity. The CEC Impact Analysis for California's 2013 Building Energy Efficiency Standards estimates that the 2013 standards are 23.3 percent more efficient than the previous 2008 standards for residential construction and 21.8

percent more efficient for non-residential construction. In 2018, CEC updated Title 24 standards again. The 2019 Title 24 standards will be effective January 1, 2020. Additions include required installation of solar photovoltaic systems for new homes and include requirements that separate health care facilities from other non-residential buildings. Homes built under the 2019 standards will use about 53 percent less energy than those under the 2016 standards. Non-residential buildings will use about 30 percent less energy due mainly to lighting upgrades (CEC 2018).

Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the California Global Warming Solutions Act of 2006 (California Health and Safety Code, Sections 38500–38599), and specifically, Health and Safety Code, Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the state's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below California's dependency of fossil fuels and making land use development and transportation systems more energy efficient. In addition, SB 32 includes a cap-and-trade regulation that applies to large industrial facilities and electricity generators emitting more than 25,000 MT CO_2e per year.

Energy Action Plan II

The CEC, California Power Authority, and CPUC adopted an Energy Action Plan (EAP) to establish goals for California's energy future and a means to achieve these goals. EAP II supports and expands on the commitment of state agencies to cooperate and reflect on the energy actions since original EAP adoption. EAP II includes a coordinated implementation plan for state energy policies that have been articulated through EOs, instructions to agencies, public positions, and appointees' statements; the CEC's IEPR; CPUC and CEC processes; agencies' policy forums; and legislative direction.

Leadership in Energy and Environmental Design

The U.S. Green Building Council is committed to transforming the way buildings are designed, constructed, and operated through the LEED certification program. LEED acts as a certification program for buildings and communities to guide their design, construction, operations and maintenance toward sustainability. LEED is based on prerequisites and credits that a project meets in order to achieve a certification level or Certified, Silver, Gold, or Platinum.

University of California

The UC is a national leader in sustainability and effective actions to reduce GHG emissions to mitigate climate change, which typically involves the reduction in the usage of energy from fossil

fuels. The UC has developed the UC Sustainable Practices Policy, UC Strategic Energy Plan, and UC Carbon Neutrality Initiative. Additionally, UC San Diego has published a Climate Action Plan that identifies goals for reducing GHG emissions from operation of the campus. These policies are outlined in Section 3.7.

3.5.2.3 Local (Non-Regulatory)

City of San Diego Climate Action Plan

The City adopted a Climate Action Plan (City CAP) in December 2015 (City of San Diego 2015). The City CAP quantifies GHG emissions; establishes reduction targets for 2020 and 2035; identifies strategies and measures to reduce GHG levels; and provides guidance for monitoring progress on an annual basis. The City CAP identifies a comprehensive set of goals and actions, including ordinances, policies, resolutions, programs, and incentives, that the City can use to reduce GHG emissions. The City CAP includes strategies and actions that encourage (1) water and energy efficiency buildings, (2) clean and renewable energy, (3) bicycling, walking, transit and land use, (4) zero waste, and (5) climate resiliency. In conjunction with the City CAP, the City adopted the CAP Consistency Checklist in July 2016. The CAP Consistency Checklist contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emission targets in the City CAP are achieved.

3.5.3 Project Impacts and Mitigation

The following sections address various potential impacts relating to Energy that could result due to the implementation of the proposed 2019 LRDP.

3.5.3.1 Issue 1: Wasteful or Inefficient Energy Usage

Energy Issue 1 Summary

Would implementation of the 2019 LRDP result in the wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact: Implementation of the 2019 LRDP could result in the wasteful, inefficient, or unnecessary use of energy.	**Mitigation:** ENE-1 (Construction Fuel Use)
Significance Before Mitigation: Potentially significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix F of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would result in the wasteful, inefficient, or unnecessary use of energy. The

project would result in wasteful, inefficient, or unnecessary use of energy if it would not implement construction or operational practices that strive to reduce energy use beyond typical demand.

Impact Analysis

The following analysis incorporates by reference the natural gas, electricity, and vehicle trip demand estimated for the campus under the 2019 LRDP in the GHG Reduction Strategy (Appendix E). In addition, the construction fuel use estimate incorporates by reference the construction air quality modeling detailed in the Air Quality Technical Study prepared for this 2019 LRDP EIR by Harris (2019) (Appendix F). Diesel and gasoline use is estimated using these project-specific technical analyses and conversion factors from the USEPA (2018).

Construction Energy Demand

During construction, the 2019 LRDP would result in an increase in energy consumption through the combustion of fossil fuels in construction vehicles, worker commute vehicles, and construction equipment, and the use of electricity for temporary buildings, lighting, and other sources. Construction under the 2019 LRDP would require demolition grading, utility installation, foundation construction, building construction, paving, and landscaping installation. All construction is typical for the region and building type. The campus does not include unusual circumstances that would require unusually high energy use for construction on campus, such as helicopter delivery or highly specialized construction waste disposal requirements.

Construction of the structures proposed in the 2019 LRDP is anticipated to require typical building materials that would not require new or unusual manufacturing. Sources of building material, and exact types and quantities are unknown at this time. Additionally, the energy use associated with the manufacture of building materials is largely outside the control of UC San Diego. Individual producers would be required to meet applicable energy regulations. However, structures built under the 2019 LRDP are anticipated to achieve a minimum of LEED Silver certification; requirements include the consideration of products and materials for which life cycle information is available and that have environmentally, economically, and socially preferable life cycle impacts.

Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during all phase of construction. The types of equipment would include diesel-powered construction and transportation equipment, ranging from haul and vendor trucks, to bulldozers, front-end loaders, forklifts, and cranes. Worker vehicle trips to and from the campus would result in gasoline consumption.

Fuel consumption as a result of project construction is calculated using the annual CO_2e emissions calculated by CalEEMod, Version 2016.3.2, and kg/CO_2 conversion factors from the USEPA for diesel fuel and motor gasoline. The assumptions for the 14-year construction period are listed in detail in Section 3.2, Air Quality. Total diesel use from operation of construction equipment, haul

truck trips, and vendor truck trips is listed by phase in Table 3.5-3. Motor gasoline consumption from worker vehicle trips is listed by phase in Table 3.5-4. Detailed calculations and consumption by source is provided in Appendix O. As shown in Table 3.5-3 and Table 3.5-4, construction would require a total of approximately 2.8 million gallons of diesel fuel and 1.7 million gallons of gasoline.

For the finishing phase of building construction in each development phase, some electricity may be used (e.g., for power tools and work lighting). While this electricity use cannot be quantified at this time, it is anticipated to be relatively minor compared to normal building operations. Electricity use would likely be offset by demolition of existing structures earlier in the construction phase or previous phase because these buildings would no longer be consuming electricity. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. Natural gas is not anticipated to be used during construction.

Table 3.5-3. Construction Diesel Usage

Construction Phase	GHG Emissions (MT CO_2e)	Gallons
1A	3,664	358,854
1B	3,171	310,617
2A/2B	9,441	924,633
3	3,475	340,362
4	6,533	639,863
5	2,057	201,450
Total All Phases	**28,341**	**2,775,779**

Sources: Harris 2018 (CalEEMod output); USEPA 2018 (conversion factor).

Notes: Includes fuel use from construction equipment, haul truck trips, and vendor truck trips. Assumes a conversion factor of 10.21 kg/CO_2 for diesel fuel. Detailed calculations provided in Appendix O.

Table 3.5-4. Construction Gasoline Usage

Construction Phase	GHG Emissions (MT CO_2e)	Gallons
1A	2,827	322,016
1B	2,351	267,813
2A/2B	2,907	331,116
3	3,253	370,478
4	1,766	201,139
5	1,709	194,647
Total All Phases	**14,814**	**1,687,210**

Sources: Harris 2018 (CalEEMod output); USEPA 2018 (conversion factor).

Notes: Includes fuel use from worker vehicle trips. Assumes a conversion factor of 8.78 kg/CO_2 for motor gasoline. Detailed calculations provided in Appendix O.

As described previously, construction under the 2019 LRDP is not anticipated to require construction practices that would result in unusually high energy use. Limitations on idling of vehicles and equipment and requirements that equipment be properly maintained would result in fuel savings. California regulations (13 CCR 2449(d)(3), 2485) limit idling from both on-road and off-road diesel-

powered equipment and are enforced by CARB. Also, given the high cost of fuel, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction. UC San Diego anticipates achievement of LEED Silver certification standards or higher for new structures, which would involve consideration of local or lower life cycle cost building materials that would result in less than typical energy use for construction materials. However, the 2019 LRDP would not include construction practice requirements that strive to reduce diesel and gasoline use beyond typical demand. This impact would be potentially significant. Mitigation Measure ENE-1 would be required to reduce fossil fuel use during construction beyond typical demand to reduce this impact to less than significant.

Operational Energy Usage

Electricity, natural gas, fossil fuel consumption, and demand for water treatment and transport that would result from operation of the 2019 LRDP are addressed below.

Electricity

Operation of the 2019 LRDP would consume electrical energy for several purposes including but not limited to lighting and operation of commercial equipment. The campus would use electricity from the following two sources: (1) electricity generated on campus at the proposed new CUP's cogeneration facility and (2) 100 percent carbon-free electricity purchased from the UC Regents Direct Access Program and delivered by SDG&E.

In addition to purchased electricity, the 2019 LRDP would rely in part on a cogeneration system to provide electricity for non-residential uses on the campus. Heat generated as a result of the cogeneration plant's natural gas combustion would be used for other purposes, such as hot water to heat buildings on campus and/or a steam cooler to provide cold water, which would reduce energy demand compared to structures with only traditional energy service. Cooling would be provided by a steam chiller and standard water-cooled electric chillers with heat rejected to a cooling tower plant powered by electricity produced by the generator. The plant would use thermal energy storage to reduce peak cooling loads. Thermal energy storage would charge during off-peak hours and discharge during peak hours in accordance with the campus utility rate schedule.

Parking structures and lighting along the new north access driveway would use electricity from the UC Regents Direct Access Program, which is 100 percent carbon-free energy. Emergency generators would be installed within the future Outpatient Pavilion, the Multi-Use Building, the Replacement Hospital, and the various parking structures around campus for use in case of a power outage. Once the hospital and CUP are constructed in Phase 3, all new medical center buildings and parking facilities would be hooked into and powered by the proposed CUP. Prior to construction of the CUP, these buildings and facilities would be powered with energy purchased through the UC Regents Direct Access Program. The proposed residential structures would use 100 percent carbon-free energy from the UC Regents Direct Access Program and would not be

connected to the new CUP. Diesel-fueled emergency generators would provide backup electrical power to nonresidential uses on the campus.

In addition to the CUP, overall building energy conservation characteristics would play a critical role in the campus's energy use. The approach to building energy performance would be based on achieving various efficiency levels as defined by program-specific energy use intensities. In accordance with the UC Sustainable Practices Policy, new buildings would be required to exceed Title 24 standards by at least 20 percent. The energy use goals set by the UC Sustainable Practices Policy (UCOP 2018) state that "acute care/hospital facilities and medical office buildings shall be designed, constructed, and commissioned to outperform ASHRAE 90.1 – 2010 (Advanced Energy Design Guidelines for Large Hospitals) by at least 30% or meet the whole-building energy performance targets listed in Table 2 in Section V.A.3." Overall, the energy use intensities approach would allow for flexibility in system selection by future design teams while achieving a 20 to 30 percent improvement over Title 24 business-as-usual energy performance thresholds. Further, large-scale battery systems would provide high levels of overall on-site energy storage and would lower overall energy use on the campus.

With implementation of the 2019 LRDP, including the energy mix described previously, total electricity consumption is anticipated to decrease compared to existing conditions. The calculated electricity that would be used with implementation of the 2019 LRDP without the 2019 LRDP Greenhouse Reduction Strategy would be 18.2 million kWh/yr, including energy provided by the CUP, which is approximately 54 percent less than the existing demand of 33.5 million kWh/yr. With implementation of the Greenhouse Gas Reduction Strategy, electricity consumption would be further reduced to 17.1 million kWh/yr. The University of California Office of the President (UCOP) and UC San Diego requirements for energy efficiency, and how these requirements would be implemented through the GHG Reduction Strategy, are outlined in detail in Section 3.7 and Appendix E. Generally, the Greenhouse Gas Reduction Strategy includes reduction measures to require energy-efficient lighting, appliances, and building envelopes. With implementation of the GHG Reduction Strategy, future electricity use would be reduced by approximately 57 percent compared to operation of the existing campus by improving energy efficiency of buildings. Therefore, implementation of the 2019 LRDP would include practices that would reduce electricity use beyond typical demand and considerably below the existing Hillcrest Campus. As a result, the 2019 LRDP would not result in wasteful, inefficient, or unnecessary use of electricity.

Natural Gas

Operation of the 2019 LRDP would consume natural gas for several purposes, including but not limited to heating buildings. Without implementation of the GHG Reduction Strategy, natural gas consumption would increase compared to existing conditions from 160,821 MMBTU/yr to 424,473 MMBTU/yr as part of the increase in building square footage primarily associated with the proposed residential buildings and operation of the new cogeneration facility. However, with

implementation of the GHG Reduction Strategy, which includes energy-efficiency and biogas use requirements, under the maximum feasible scenario of a cogeneration plant using 40 percent directed biogas, the natural gas consumption would be reduced to 254,684 MMBTU/yr. Operation of the 2019 LRDP, with GHG Reduction Strategy implementation, would reduce natural gas demand compared to typical average demand for similar buildings. Additionally, all buildings constructed as part of implementing the 2019 LRDP would conform to both Title 24 energy efficiency requirements and UCOP and UC San Diego policies. The UCOP and UC San Diego requirements for energy efficiency, and how these requirements would be implemented through the GHG Reduction Strategy, are outlined in detail in Section 3.7 and Appendix E.

Use of natural gas for operation of the cogeneration facility would not be considered wasteful, inefficient, or unnecessary because it enhances the reliability of energy service on campus. Unlike the existing boiler system and existing campus grid that rely on electricity service from SDG&E, in the case of regional emergencies that result in the loss of power lines, such as past wildfires, the cogeneration facility would be able to produce power for the campus using natural gas. Rather than relying solely on emergency generators, essential emergency medical services and patient care would be able to continue to operate using power from the campus power grid.

Implementation of the 2019 LRDP would include practices that would reduce natural gas use beyond typical demand. The 2019 LRDP would not result in wasteful, inefficient, or unnecessary use of natural gas. Therefore, the impact would be less than significant.

Diesel and Vehicle Fuel

Diesel usage for emergency electric generation would be similar to the relatively low consumption that currently exists, because it would be used primarily for testing these facilities on a monthly basis and in the rare instance that other sources of electricity are unavailable. Diesel fuel would continue to be used only when necessary, similar to existing conditions and, therefore, would not result in wasteful, inefficient, or unnecessary energy use. Generators would also be newer models that would likely be more fuel efficient than existing generators. Therefore, the impact would be a less than significant impact.

Transportation fuel consumption was calculated using the same methodology described for existing fuel use and construction. The results of the GHG Reduction Strategy emissions inventory was used in conjunction with USEPA conversion factors. Table 3.5-5 compares estimated fuel usage with and without implementation of the GHG Reduction Strategy to existing fuel usage from campus operation. The GHG Reduction Strategy includes measures to reduce vehicle miles traveled (VMT), and how these requirements would be implemented through the GHG Reduction Strategy are outlined in detail in Section 3.7 and Appendix E. Generally, the GHG Reduction Strategy would make the campus more accessible by alternative modes of transportation. Additionally, as described in greater detail in the VMT analysis in Section 3.15.3.2 (Issue 2: Induce

Substantial Vehicle Miles Traveled), the 2019 LRDP includes several components that would reduce VMT and, therefore, reduce fuel use. Specifically, the campus would increase land use mix and density and provide a mix of residential and retail uses on the site. The proposed campus housing is intended to provide housing closer to work and reduce commute miles. Thus, implementation of the 2019 LRDP would include practices that strive to reduce fossil fuel use beyond typical demand, and the 2019 LRDP would not result in wasteful, inefficient, or unnecessary use of fossil fuels. Therefore, the impact would be less than significant.

Table 3.5-5. Operational Annual Gasoline Usage

Scenario	GHG Emissions (MT CO_2e)	Gallons
Existing	31,148.49	3,547,664
Buildout without GHG Reduction Strategy	26,059.85	2,968,092
Buildout with GHG Reduction Strategy	22,668.58	2,581,843

Source: LSA 2019 (GHG emissions); USEPA 2018 (conversion factor).

Notes: Includes fuel use from worker vehicle trips. Assumes a conversion factor of 8.78 kg/CO2 for motor gasoline. Detailed calculations provided in Appendix O.

Water Demand

Water consumption at the Hillcrest Campus would continue to require treatment and transport of potable water. The treatment and transport of water requires the use of energy; however, this energy use cannot be quantified. As discussed in Section 3.16, Utilities and Service Systems, water is provided to the campus from the City's Public Utilities Department (PUD), which obtains water from a variety of sources, including other water service providers. Data regarding the energy use to treat and transport water serving the campus from source to tap is not available, and subject to change as sources shift. Additionally, UC San Diego has no control over the energy use of water service providers serving the campus. However, as described in greater detail in Section 3.16, the UC Sustainable Practices Policy requires all UC campuses to reduce their potable water use by 36 percent by the year 2025 and to develop a water action plan that outlines how they will achieve their water reductions (UCOP 2018). The Hillcrest Campus does not have its own water action plan but would comply with the goals and policies of the UC San Diego La Jolla Campus Water Action Plan. As described in Section 3.16.3.2, Issue 2: Water Supply Availability, the campus would implement a variety of water-saving features, including installing water-efficient plumbing fixtures; installing aerators in laboratory sinks; converting to drought-tolerant and low-water vegetation; capturing and reusing water from the fire sprinkler and hydrant testing for use in the CUP cooling towers; and collecting condensation from heating and air conditioning units, reverse osmosis system wastewater, and cooling tower blow down for reuse in toilet flushing and irrigation. Thus, operation of the 2019 LRDP would reduce water use compared to typical demand and would not result in wasteful, inefficient, or unnecessary consumption of energy required for water treatment or transport. Therefore, the impact would be less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a potentially significant impact related to use of diesel and gasoline fuel during construction. Mitigation Measure ENE-1, as follows, would implement construction practices that encourage efficient use of fuel beyond typical demand. With implementation of Mitigation Measure ENE-1, construction energy use would not be wasteful, inefficient, or unnecessary, and this impact would be less than significant:

> **ENE-1: Construction Fuel Use.** For all construction activities, the construction contractor shall implement the following measures during construction:
>
> 1. When more than one piece of construction equipment is available to complete a task, the contractor shall use the most fuel-efficient equipment.
> 2. Newer or more fuel-efficient models shall be selected from the contractor fleet for use.
> 3. Workers shall be encouraged to carpool or use public transit to access the campus during construction. Construction contractor shall facilitate carpooling by providing means to organize carpools or request transit center pickups.
> 4. When haul trucks are available with a haul capacity larger than 15 cubic yards but a fuel efficiency similar to a 15-cubic-yard-capacity truck, the larger capacity trucks shall be used to reduce total truck trips.

3.5.3.2 Issue 2: Conflict with Renewable or Energy Efficiency Plan

Energy Issue 2 Summary

Would implementation of the 2019 LRDP conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact: Implementation of the 2019 LRDP would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix F of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Impact Analysis

Development of the 2019 LRDP would follow Title 24 Building Energy Efficiency Standards to reduce energy use, which establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building installation and roofing, and lighting. Furthermore, UCOP and UC San Diego as well as other state regulations include design features that reduce energy use, improve energy efficiency, and increase reliance on renewable energy sources that would be used in the operation of the Hillcrest Campus to reduce energy usage.

As described previously, implementation of the 2019 LRDP would be required to comply with Title 24 and other applicable building regulations. Section 3.7 details how the measures that would be implemented as part of the GHG Reduction Strategy to comply with UCOP and UC San Diego requirements related to energy reduction and carbon-free energy use, including the UC Sustainable Practices Policy. In addition, use of biofuels at the proposed cogeneration facility would support statewide goals, such as EO S-06-06, to expand use of renewable energy sources, including biofuels. With implementation of the GHG Reduction Strategy, the 2019 LRDP would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the 2019 LRDP would not result in a policy impact that would result in a significant impact on the environment.

Mitigation Measures

The proposed 2019 LRDP would conflict with or obstruct a state or local plan for renewable energy or energy efficiency; therefore, no mitigation measures would be required.

3.5.4 Cumulative Impacts and Mitigation

Energy Cumulative Issue Summary

Would implementation of the 2019 LRDP have a cumulatively considerable contribution to a cumulative energy impact considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Issue 1: Wasteful, inefficient, or unnecessary use of energy	Less than significant	Not cumulatively considerable
Issue 2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency	Less than significant	Not cumulatively considerable

The study area for cumulative impacts on energy is the San Diego region. The cumulative context for electricity and natural gas facilities is the services area for each utility. The cumulative effect

of regional growth, in conjunction with campus growth under the 2019 LRDP, on energy is discussed below.

3.5.4.1 Cumulative Issue 1: Wasteful or Inefficient Energy Usage

Table 3-1, Cumulative Projects, in Chapter 3, Environmental Setting, Impacts, and Mitigation, includes residential, institutional, and commercial projects that would have the potential to increase energy demand in the region. Some projects, such as the mixed-use project on Hotel Circle South, would redevelop a project site and may not result in a significant net increase in demand. However, regional energy demand would likely increase as growth occurs, especially demand for fuel, and a cumulatively considerable impact would potentially occur. However, implementation of the 2019 LRDP would result in a net decrease in electricity and fuel below levels currently consumed by the campus and would result in efficient use of natural gas compared to typical demand due to the implementation of the GHG Reduction Strategy and compliance with UCOP and UC San Diego requirements related to energy reduction and renewable energy use, including the UC Sustainable Practices Policy. In addition, use of biofuels at the proposed cogeneration facility would support statewide goals, such as EO S-06-06, to expand use of renewable energy sources, including biofuels. Therefore, the 2019 LRDP would not result in a considerable contribution to a cumulative impact pertaining to the wasteful, inefficient, or unnecessary use of energy.

3.5.4.2 Cumulative Issue 2: Conflict with Renewable or Energy Efficiency Plan

The 2019 LRDP would include the implementation of a GHG Reduction Strategy that incorporates state and UC policies and regulations, as well as additional requirements to reduce energy below current levels used by the campus. Therefore, the project would not result in a considerable contribution to a cumulative impact pertaining to the wasteful, inefficient or unnecessary use of energy.

3.5.5 CEQA Issues Where There Is No Potential for a Significant Effect

All checklist items in Appendix F of the CEQA Guidelines under Energy are evaluated above. There are no CEQA issues where there is no potential for significant effect.

3.5.6 References

CEC (California Energy Commission). 2018. 2019 Building Energy Efficiency Standards – Frequently Asked Questions. March 2018.

City of San Diego. 2015. City of San Diego Climate Action Plan. Adopted December 2015. Accessed January 2019. https://www.sandiego.gov/sites/default/files/final_july_2016_cap.pdf.

Dudek. 2017. Costco Wholesale Project Recirculated Partial Draft Environmental Impact Report (SCH 2011112025). Prepared for City of Ukiah. February 2017.

Harris (Harris & Associates). 2019. Air Quality Technical Report for the UC San Diego Hillcrest Campus 2019 Long Range Development Plan.

LSA (LSA Associates, Inc.). 2019. Greenhouse Gas Emissions Reduction Strategy – University of California, San Diego Hillcrest Campus Long Range Development Plan EIR. June 2019.

TK1SC. 2018. "UCSD Hillcrest – Campus Energy Consumption Table." October 24, 2018.

UC San Diego (University of California, San Diego). 2018. Hillcrest LRDP Info Update. October 1, 2018.

UCOP (University of California Office of the President). 2018. Sustainable Practices Policy. Issued July 1, 2004. Update effective August 10, 2018. Accessed January 2019. https://policy.ucop.edu/doc/3100155/SustainablePractices.

USEPA (U.S. Environmental Protection Agency). 2018. Emissions Factors for Greenhouse Gas Inventories. Center for Corporate Climate Leadership. March 9, 2018.

USEPA and NHTSA (National Highway Transportation Safety Administration). 2012. 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards; Final Rule. October 15.

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3.6 Geology and Soils

This section of this 2019 LRDP EIR describes the existing geology, soils, and seismic conditions at the Hillcrest Campus and analyzes the potential physical environmental effects related to seismic hazards, underlying soil characteristics, slope stability, erosion of soils and paleontological resources. The majority of the information provided in this section is summarized from the Geotechnical and Geologic Hazards Review, UC San Diego Hillcrest Campus, prepared by TRC Solutions (2018). Portions of the section are based on a geology and soils analysis prepared by UC San Diego Campus Planning Office and RECON Environmental, Inc. in the Final Environmental Impact Report for the University of California, San Diego Medical Center – Hillcrest 1995 Long Range Development Plan (UC San Diego and Recon 1995) and relevant elements of the 2019 LRDP.

3.6.1 Environmental Setting

3.6.1.1 Regional Geologic Setting

The Hillcrest Campus is located on the coastal portion of the Peninsular Ranges Geomorphic Province which includes approximately 900 miles extending from the Transverse Ranges and the Los Angeles Basin, south to the tip of the Baja California. The width of this province varies from approximately 30 to 100 miles. The province consists of steep mountains underlain by Jurassic-age metavolcanic and metasedimentary rocks along with Cretaceous-age igneous rocks of the Southern California batholith. The site is located on the western portion of the province in the County and consists of a dissected coast plain underlain by upper Cretaceous, Tertiary, and Quaternary sediments.

The Peninsular Ranges Province is traversed by a group of sub-parallel faults and fault zones trending roughly northwest. Several of these faults are major active faults. The Whittier-Elsinore, San Jacinto, and San Andreas Faults are major active fault systems located northeast of the site, and the Newport-Inglewood-Rose Canyon and San Clemente Faults are active faults located west and southwest of the site. Major tectonic activity associated with these and other faults within this regional tectonic framework consists primarily of right-lateral, strike-slip movement trending north–northwest.

3.6.1.2 Soils and Vicinity Geology

The Hillcrest Campus is located along the south side of the San Diego River, in the Uptown Community Plan area of the City. The site is located to the southwest of the I-8 and State Route 163 interchange. The approximately 62-acre Hillcrest Campus is situated along the edge of a mesa with approximately 28 acres of steep slope canyons which drain north towards the San Diego River flood plain in Mission Valley. The steep slope canyon areas are prevalent along the northeast, northwest, southwest, and west side of the Hillcrest Campus. Elevations range from approximately

300 feet mean sea level in the center of the campus to approximately 150 feet mean sea level in the northern portion of the site.

According to the Geotechnical and Geologic Hazards Review prepared by TRC (2018), the site is underlain, at depth, by basement rocks consisting of Jurassic-age metavolcanic and/or Cretaceous-age granitic rocks. The basement rocks are overlain by sedimentary rock ranging in age from middle Eocene to Pleistocene. Bedding within the on-site sedimentary units is generally poorly developed and/or exposed. The sedimentary units are overlain locally by surficial deposits of fill, topsoil, alluvium, and colluvium. Refer to Figure 3.6-1, Geologic Map of UC San Diego Hillcrest, which depicts the two main formations that underlie the Hillcrest Campus and Figure 3.6-2, Vicinity Geologic Map, which depicts the geologic formations surrounding the Hillcrest Campus based on Kennedy and Tan's (2008) geologic quadrangle maps.

The uppermost rock unit underlying the Hillcrest Campus is the Linda Vista Terrace Formation (Qvop9) which consists of "very old paralic deposits" (middle to early Pleistocene (1.8 to 2.6 million years ago [Ma]). This material is comprised generally of gravel and cobble conglomerate with a moderately cemented silty sandstone matrix. The Linda Vista Terrace Formation is interbedded sandstone and conglomerate. In the San Diego area, the Linda Vista Terrace Formation is moderately to highly cemented. TRC's field observations and review of geologic data indicate that the Linda Vista Terrace Formation within the Hillcrest Campus is estimated at less than 20 feet in thickness.

The Linda Vista Terrace Formation is underlain by the middle Eocene-age (about 44.5 Ma) Mission Valley Formation (Tmv) on the mesa top and is generally exposed on the canyon slopes in the northern and western portions of the site. This material is comprised generally of weakly cemented, silty fine-grained sandstone. The Mission Valley Formation is described as predominantly weakly to moderately cemented, friable, fine- to medium-grained sandstone with cobble conglomerate tongues. Field observations indicate that the Mission Valley Formation within the site is approximately 180 feet thick. Below the Mission Valley Formation lies Eocene-age Stadium Conglomerate.

Based on a review of previously completed geotechnical investigations at the site, the upper approximately 20 feet of the subgrade consists of a combination of artificial fill, alluvium, colluvium, and weathered bedrock. The engineered fill areas are generally associated with the roadways and building pads adjacent to or nearby the canyons. Due to limited grading data provided, there may be additional areas of fill material which could include undocumented or uncompacted fill. Alluvium was observed in the base of the canyons in the northeast and northwest portions of the Hillcrest Campus. Colluvium was observed on the slopes of the canyons in the northwest, northeast and west portions of the Hillcrest Campus (Ninyo & Moore 1993). According to the Unified Soil Classification System, these soils generally classify as silty and clayey sands

(SM, SC), sandy and clayey silts (ML), with gravels and cobbles, and are in medium-dense to very dense and stiff to very stiff states.

3.6.1.3 Geologic Hazards

The following discussion is an assessment of the existing environmental setting pertaining to potential geologic hazards including earthquakes, regional active faults, liquefaction, lateral spreading, landslides, erosion, groundwater, expansive soils, differential settlement, naturally occurring asbestos, radon gas, and corrosive soil.

Historical Earthquakes

Ground shaking as a result of earthquakes is a potential hazard throughout Southern California. The intensity of ground shaking at any particular site and relative potential for damage from this hazard depends on the earthquake magnitude, distance from the source (epicenter), and the site response characteristics (ground acceleration, predominant period, and duration of shaking).

According to the Geotechnical and Geologic Hazards Review (TRC 2018), a computer search was undertaken of known historical earthquakes with a magnitude of 5 or greater on the moment magnitude scale within a 100-kilometer (62-mile) radius of the site. Information from the U.S. Geological Survey Earthquake Data Base System was included which provided 216 years (1800 to 2016) of data in the search area. The results of the computer search indicated that 15 known earthquakes of a magnitude 5 or greater have occurred within 100 kilometers of the Hillcrest Campus during this time period. A plot of the historical earthquakes from 1800 to 2016 with a magnitude of 5 or greater is shown on Figure 3.6-3, Historical Earthquakes 1800 to 2016. The most recent significant regional earthquake occurred approximately 60 miles northeast of the site and approximately 10 miles northwest of Borrego Springs, along the San Jacinto Fault Zone, Anza Section, Buck Ridge Fault. This earthquake occurred on July 7, 2010 and produced a magnitude 5.50 on the moment magnitude scale. Figure 3.6-3 shows 15 earthquakes of magnitude 5 or greater, including two greater than 6.5 which have occurred in the region during the above noted time period. A review of USGS online data shows that since 2016, no earthquakes of magnitude 5 or greater have hit the San Diego region (USGS 2019).

Regional Active Faults

The Southern California region is recognized by geologists and seismologists as one of the most seismically active regions in the United States. Significant earthquakes occurring in Southern California are generally associated with crustal movement along defined active fault zones of the San Andreas Fault system. However, no active or potentially active fault underlie the Hillcrest Campus and it is not located within a currently designated Alquist-Priolo Earthquake Fault Zone. An Alquist-Priolo Earthquake Fault Zone is a regulatory zone that encompasses active faults and has the potential to rupture the surface and damage existing structures (DOC 2011). No surface

expression of active faulting was seen on aerial photographs of the Hillcrest Campus or during the field reconnaissance. A map showing known faults in the region surrounding the Hillcrest Campus is depicted on Figure 3.6-4, Regional Fault Map.

The closest active fault to the Hillcrest Campus is the Rose Canyon Fault within the Alquist-Priolo Earthquake Fault Zone. The Rose Canyon Fault is mapped generally north–northwest passing to the west of the Hillcrest approximately 1.5 miles and continuing through the City. Numerous small earthquakes measuring between moment magnitude 1.7 and 4.0 have occurred as a result of this fault between 1970 and 2010. The nearest potentially active fault is the La Nacion Fault mapped approximately 4 miles east of the Hillcrest Campus. Based on this information and the geologic and tectonic conditions at the site, fault rupture is not anticipated at the site.

Table 3.6-1 lists all known active or potentially active faults in order of increasing distance within 100 kilometers (62 miles) of the Hillcrest Campus. The seismic characteristics of some faults vary along their lengths so different segments of the same fault may be listed separately in the table.

Table 3.6-1. Known Active or Potentially Active Faults within 100-km Radius of the Hillcrest Campus

Abbreviated Fault Name	Approximate Distance to Hillcrest Campus mi (km)
Rose Canyon	1.5 (3.1)
La Nacion	4.0 (6.4)
Coronado Bank	14.1 (22.7)
Newport-Inglewood (Offshore)	31.7 (51.0)
Elsinore – Julian	39.7 (63.9)
Elsinore – Temecula	43.9 (70.7)
Earthquake Valley	45.0 (72.4)
Elsinore – Coyote Mountain	48.9 (78.7)
Palos Verdes	57.9 (93.2)
San Jacinto – Coyote Creek	61.5 (98.6)
San Jacinto – Anza	61.9 (99.6)

Source: TRC 2018.

Although research on earthquake prediction has greatly increased in recent years, seismologists cannot predict when or where an earthquake will occur. The Uniform California Earthquake Rupture Forecast (Version 3, 2015) predicts that Northern California and Southern California will experience magnitude 6.7 or larger earthquake in the next 30 years. The U.S. Geological Survey Working Group on California Earthquake Probabilities estimates there is a 0.4 percent chance of at least one magnitude 6.7 earthquake occurring in the San Diego region between 2014 and 2044 and a 1.8 percent chance of a magnitude 6.7 earthquake occurring on the Rose Canyon Fault. Although earthquakes can cause damage at a considerable distance, shaking is most intense near

the fault rupture location. Therefore, earthquakes located in urbanized areas of the Southern California region have the potential to cause considerable damage.

Liquefaction

Ground shaking or vibration, such as during earthquakes, within a mass of soil can cause the soil particles to lose contact with one another and behave like a liquid resulting in liquefaction. Liquefied soil can no longer support weight and causes downward slopes which could result in the collapse of structures above the soils. Soils most susceptible to liquefaction are loose to moderately dense, saturated non-cohesive soils with poor drainage, such as sands and silts with interbedded or capping layers of relatively low permeability soil. The site is underlain by two bedrock formations; very old paralic deposits (Linda Vista Terrace Formation) consisting of Pleistocene siltstone, sandstone and conglomerate, and Eocene Mission Valley Formation composed of marine and non-marine sandstone interlaced with beds of cobble conglomerate (see Figure 3.6-1). Geotechnical borings at depths of 15 and 19 feet on the Hillcrest Campus did not encounter groundwater, and the Uptown Community Plan EIR (City of San Diego 2016) reports that near surface groundwater is unlikely in geologic formations within the Uptown Community (TRC 2018; City of San Diego 2016). Due to the anticipated limited thickness of the alluvium at the site and the estimated depth of the groundwater table at the site (i.e., well below the ground surface), the potential for liquefaction of the on-site soils is low. In addition, review of the City's Seismic Safety Study: Geologic Hazards and Faults (City of San Diego 2018) indicates that the site is not located in an area prone to liquefaction.

Lateral Spreading

Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying alluvial material toward an open body of water, channel, or excavation. In soils, this movement is generally due to failure along a weak plane, and may often be associated with liquefaction. As cracks develop within the weakened material, blocks of soil displace laterally towards the open face. Cracking and lateral movement may gradually propagate away from the face as blocks continue to break free. Because of the low potential for liquefaction, the risk of lateral spreading at the site is considered low.

Landslides

The California Department of Conservation, Department of Mines and Geology mapped areas of relative landslide susceptibility and landslide distribution for the La Jolla quadrangle. The site is in an area mapped as Area 3-2, which is classified as "Generally Susceptible" to slope instability. Area 3-2 includes slopes at or near their stability limits with slope angles greater than 25 degrees. The site is underlain by two bedrock formations; very old paralic deposits (Linda Vista Terrace Formation) consisting of Pleistocene siltstone, sandstone and conglomerate, and the Eocene Mission Valley Formation composed of marine and non-marine sandstone interlaced with beds of cobble

conglomerate. These bedrock formations are mapped dipping gently to the southwest from 2 to 13 degrees. This orientation would help increase overall slope stability along the northeast-facing slopes on the Hillcrest Campus but may decrease overall slope stability along the southwest facing slopes. The materials on the Hillcrest Campus are typically considered to be stable and not expected to fail unless adversely modified, therefore the potential for gross, deep-seated, slope failure is low. The nearest mapped area of landslide susceptibility is located approximately 1.5 miles west of the site, in a steep sided canyon that opens into the San Diego River floodplain, north of Old Town. Therefore, the occurrence of landslides during a seismic event is not a hazard for the site.

Erosion

Erosion occurs when soil or rock is displaced by the means of wind, water, or ice or by the downward movement in response to gravity or by living organisms. A review of aerial photographs and site reconnaissance survey did not reveal evidence of excessive erosion on the site. However, during a field reconnaissance, a small localized area of surface slope instability was observed along the north side of the Hillcrest Campus and areas of erosion on the west-facing slopes of the canyon along the northwest portion of the site. The erosion potential of on-site materials may be significantly affected by alteration of the natural ground surface during future grading operations.

Groundwater

The Uptown Community Plan EIR reports that near surface groundwater is unlikely in geologic formations within the Uptown Community (City of San Diego 2016). In 2008, two exploratory geotechnical borings were drilled to depths of 15 and 19 feet on the Hillcrest Campus. No groundwater was encountered in the borings (TRC 2018). However, it was anticipated that seepage could occur along contacts or joints in the formation. In a site reconnaissance done for a previous geotechnical report for the Hillcrest Campus (Ninyo & Moore 1993), no seepage was observed. Shallow groundwater conditions within the Hillcrest Campus are not anticipated to occur. However, local fluctuations in the groundwater level may occur due to variations in the ground surface topography, subsurface geologic conditions, rainfall, irrigation and other factors.

Expansive Soils

Soils with a high expansion potential increase in volume with the addition of water. Soil expansion can be detrimental to foundations, concrete slabs, flatwork, and pavement. Expansive soils may be present in localized areas throughout the Hillcrest Campus. Loose or compressible soils may be found within the site, especially in undeveloped areas with deposits of alluvium or slope wash/colluvium and developed areas with the potential for undocumented and/or uncompacted fill. These materials may be subject to settlement under increased loads, or due to an increase in moisture content from site irrigation or changes in drainage conditions.

Differential Settlement

Differential settlement occurs when the soil beneath a structure expands, contracts, or shifts away. This can cause a structure's foundation to settle unequally and, therefore, cause damage to that structure. Two bedrock formations, the Linda Vista Terrace Formation approximately 20 feet thick and the Mission Valley Formation approximately 180 feet thick, were encountered throughout the Hillcrest Campus. It is possible that differential settlement could occur due to the differential thickness of soils above the bedrock surface. Because the geotechnical characteristics of bedrock and engineered fill are different, the long-term performance of these materials is also different. For instance, fill materials, even if well-compacted, are typically more compressible than bedrock materials and as a result would usually experience a greater amount of settlement. Shallow foundations and/or slabs-on-grade constructed over fill and bedrock transitions may experience differential movements under static and seismic loading conditions.

Naturally Occurring Asbestos

Naturally occurring asbestos is generally associated with serpentine rock formations. When rocks containing asbestos are broken or crushed, asbestos fibers can become airborne and cause health issues including lung cancer or lung disease (CARB 2017). Based on geologic mapping in the Geotechnical and Geologic Hazards Review (TRC 2018), there are no rock formations composed of or containing serpentine in the vicinity of the site. Therefore, naturally occurring asbestos would likely not be encountered when construction crews disturb subsurface soils and rock.

Radon Gas

Radon gas is a naturally occurring colorless, tasteless, and odorless radioactive gas that forms in soils from the decay of trace amounts of uranium that are naturally present in soils. It is possible for radon to enter buildings though cracks in the foundation or other openings. Once inside, radon can become trapped and concentrate to become a health hazard unless the building is properly ventilated. The USEPA recommends that action be taken to reduce radon in structures with an average annual level higher than 4 picocuries per liter (4.0pCi/l). According to the Geotechnical and Geologic Hazards Review (TRC 2018), 25 radon tests were conducted in the same postal zip code as the Hillcrest Campus (92103), with one test result above the USEPA minimum of 4 4.0pCi/l. Additionally, the USEPA has mapped radon zones throughout the country and has identified the County as being in Radon Zone 3. This zone is assigned to counties with the lowest potential for elevated radon levels and have an average indoor radon screening level of less than 2 pCi/l (USEPA 2018). Furthermore, the Radiation Safety Officer in the Environmental Health and Safety Department at UC San Diego has further confirmed that there has not been any cause for or need for radon testing on the Hillcrest Campus (Wagner, pers. comm. 2018). Therefore, radon gas is not anticipated to be an issue on the Hillcrest Campus due to its lack of presence in local soils.

Corrosive Soil

Corrosive soils contain chemical compounds that react with construction materials, such as concrete or metals, buried in the soil. This could result in damage to structure foundations and underground pipelines. Based on a review of previous corrosion studies for projects on the Hillcrest Campus, the soils appear to be severely corrosive to buried metallic structures, while sulfate exposure to Portland Cement Concrete is considered to be negligible.

Other Areas of Geologic Hazards

Other geotechnical concerns include debris due to demolition activities. It is anticipated that an extensive amount of debris including existing or former building foundations, pavement, and utilities, would be encountered during subsurface construction and require hauling off site. This would be considered a geological hazard if the materials are a surprise or difficult to remove and require an alternative construction method. In addition, some debris might remain in the soil after the demolition contractor has completed their work.

Based on review of readily available reports including aerial photographs and previous site reconnaissance, no other geologic hazards are known to be present at the site or to exist nearby that could adversely affect the site or the proposed development.

3.6.1.4 Paleontological Resources

Paleontological resources are the remains and/or traces of prehistoric plant and animal life exclusive of man. Fossil remains such as bones, teeth, shells, leaves, and wood are found in the geologic deposits within which they were originally buried. Paleontological resources can be thought of as including not only the actual fossil remains, but also the collecting localities and the geologic formations containing those remains.

Geologic formations in the San Diego region are rated according to the potential for yielding paleontological resources by the San Diego Natural History Museum, Department of Paleontology (Deméré and Walsh 2003). These sensitivity ratings are described below:

- High sensitivity ratings are assigned to formations known to contain paleontological sites with rare, well-preserved, critical fossil materials for interpretation, and fossils providing important information about the paleobiology and evolutionary history of animal and plant groups. In general, highly sensitive formations contain vertebrate fossil remains or are considered to have the potential to contain such remains.
- Moderate sensitivity is assigned to geologic formations known to contain paleontological localities with poorly preserved or common and unimportant fossil material. This category is also applied to formations judged to have strong, but unproven, potential for containing important remains.

- Low sensitivity is assigned to formations that, based on their relative youthful age or the history of the deposits, are judged unlikely to contain important fossil remains. Typically, low sensitivity formations contain invertebrate fossil remains in low abundance.

The Hillcrest Campus is made up of very old paralic deposits (Linda Vista Terrace Formation) underlain by the Mission Valley Formation. Each of the geologic units documented to occur on the Hillcrest Campus is described below, including its paleontological sensitivity rating.

Linda Vista Terrace Formation

The early Pleistocene-age Linda Vista Terrace Formation is the uppermost functional unit for Hillcrest Campus. The Linda Vista Terrace Formation is estimated at less than 20 feet in thickness. Fossils have been collected from the Linda Vista Terrace Formation in only a few areas of coastal San Diego County, consisting of marine invertebrates and marine vertebrates. This formation is only sparsely fossiliferous in most areas and is, therefore, considered to have a low to moderate paleontological resource sensitivity.

Mission Valley Formation

The Linda Vista Terrace Formation is underlain by the middle Eocene-age Mission Valley Formation on the mesa top and is generally exposed on canyon slopes in the northern and western portions of the Hillcrest Campus. This formation is approximately 180 feet thick. The Mission Valley Formation is known to produce important remains of marine invertebrate fossils in certain areas and land mammals in other areas. This formation is exposed in Mission Valley, and fossil localities from this rock unit could occur within the Hillcrest Campus. The Mission Valley Formation is considered to have a high paleontological resource sensitivity.

3.6.2 Regulatory Framework

Applicable federal, state, and UC regulations pertaining to geology and soils and paleontological resources are discussed below. Regulations pertaining to water quality impacts that may result from erosion are included in Section 3.9, Hydrology and Water Quality, of this 2019 LRDP EIR.

3.6.2.1 Federal

National Earthquake Hazards Reduction Act

The National Earthquake Hazards Reduction Act was passed to reduce the risks to life and property resulting from earthquakes. The act established the National Earthquake Hazards Reduction Program (NEHRP). The mission of NEHRP includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. NEHRP designates the Federal Emergency Management Agency as the lead

agency of the program and assigns several planning, coordinating, and reporting responsibilities. Other NEHRP agencies include the National Institute of Standards and Technology, National Science Foundation, and the U.S. Geological Survey.

3.6.2.2 State

California Building Code

California law provides a minimum standard for building design through the CBC. The CBC is based on the International Building Code, with amendments specifically tailored to geologic hazards in California. The UC by administrative policy follows the CBC.

Chapter 16, Structural Design, of the CBC requires that structural designs be based on geologic information for seismic parameters, soil characteristics, and site geology. Chapter 18, Soils and Foundations, defines the criteria for preparation of a geotechnical report. It also sets requirements for excavations and fills, foundations, and retaining structures with regard to expansive soils, subgrade bearing capacity, and seismic parameters, and also addresses waterproofing and damp proofing foundations. Liquefaction potential at the site should be evaluated, if warranted. Chapter 33 of the CBC contains specific requirements pertaining to site demolition, excavation, and construction to protect people and property from hazards associated with excavation cave-ins and falling debris, or construction materials. Construction activities are subject to occupational safety standards for excavation, shoring, and trenching as specified in California Department of Occupational Health and Safety regulations (8 CCR) and in Chapter 33 of the CBC.

California Code of Regulations, Title 14, Division 3, Chapter 1

California Code of Regulations, Title 14, Division 3, Chapter 1, prohibits any person from destroying, disturbing, or mutilating geological features including paleontological resources. This applies to all excavation and grading activities that would be performed under the 2019 LRDP.

Alfred E. Alquist Hospital Facilities Seismic Safety Act of 1983 (Assembly Bill 232)

AB 232 established a program of seismic safety building standards for certain hospitals constructed on or after March 7, 1973, and states that a general acute care hospital building that is determined to be at potential risk for collapse or poses to be a risk of significant loss of life in the event of seismic activity can be used only for non-acute care unless certain stipulations are met.

Hospital Seismic Safety Law (Senate Bill 1953)

SB 1953 was passed in 1994 to address seismic safety requirements for acute care hospitals within the state. This bill is an amendment to AB 232 and established five structural and five non-structural classifications of hospital building seismic-safety levels, as well as deadlines for some classification upgrades. In order to meet these more stringent safety standards, redevelopment

under the 2019 LRDP focuses on the need to update the Hillcrest Campus inpatient facilities by the year 2030, as set by SB 1953.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (PRC Section 2621–2630) intends to reduce the risk to life and property from surface fault rupture during earthquakes by regulating construction in active fault corridors and prohibiting the location of most types of structures intended for human occupancy across the traces of active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. The closest Alquist-Priolo Earthquake Fault Zone to the site is Rose Canyon Fault located approximately 1.5 miles west of the Hillcrest Campus.

Seismic Hazards Mapping Act

The California Geological Survey, formerly the California Department of Conservation, Division of Mines and Geology, provides guidance with regard to seismic hazards. Under the Seismic Hazards Mapping Act (1990), seismic hazard zones are identified and mapped to assist local governments in land use planning. The act provides direction and funding for the State Geologist to compile seismic hazard maps and to make those maps available to local governments. The Act, along with related standards in the Seismic Hazards Mapping Regulations (14 CCR 3270 et seq.), also directs local governments to require the completion and review of appropriate geotechnical studies prior to approving development projects. These requirements are implemented on a local level through means such as general plan directives and regulatory ordinances. In addition, the California Geological Survey's Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California (CGS 2008), provides guidance for the evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigations.

University of California Policies on Seismic Safety

The UC Seismic Safety Policy, last updated May 19, 2017, is intended to provide an acceptable level of earthquake safety for students, employees, and the public who occupy University Facilities and Leased Facilities, to the extent feasible by present earthquake engineering practice. The level of safety, also known as the expected seismic performance level, is outlined in Appendix A of the UC policy. The UC Seismic Safety Policy articulates nine primary points (UCOP 2017):

- **Seismic Advisory Board.** Provide guidance on seismic design, risk, and rehabilitation associated with University Facilities and Leased Facilities. Responsibilities include assessing seismic risk, advising on seismic priorities, reviewing new building and rehabilitation plans, and providing revision recommendations.
- **Survey of Existing University Facilities.** Engage structural engineers to examine University Facilities and report on the adequacy of these facilities to resist seismic

forces, based on the CBC and the engineer's professional evaluations with respect to Appendix A of the UC Seismic Safety Policy. Additionally, engineers are to identify potential falling hazards that pose a significant life or safety hazard to occupants.

- **Seismic Risk Model.** Maintain a seismic risk model for consistent evaluation of seismic risk in University Facilities. This assessment will identify deficient buildings and alternatives to undiminished continued use and occupancy, as well as develop a plan for rehabilitation in accordance with the UC Seismic Safety Policy.
- **Program for Abatement of Seismic Hazards.** Develop a program for the identification and temporary or permanent abatement of seismic hazards to existing buildings and other facilities.
- **Seismic Rehabilitation Standards.** Provide an acceptable level of earthquake safety with respect to life and prevention of personal injury in accordance with the CBC and current practice of earthquake engineering.
- **Post-Earthquake Response.** Maintain an emergency response plan for use in the event of a damaging earthquake. The plan will consider structural condition, hazardous materials, and fire and life safety issues applicable to each facility. The plan will additionally cover coordination and communication with emergency preparedness centers and post-earthquake inspection procedures.
- **Standards for New Construction and Renovation.** This section sets standards for designing and constructing University Facilities in compliance with the current seismic provisions of the CBC and University policies. It requires approval of all structural aspects of projects from a licensed structural or civil engineer.
- **Standards for Acquisition by Purchase or Other Title Transfer and for Leased Facilities.** The structure or facility must have a level of safety rating in accordance with Appendix A of the UC Seismic Safety Policy. Prior to lease, the facility must be evaluated for compliance with the Seismic Safety Policy. In the case that a leased facility does not meet the requirements in the Seismic Safety Policy, provisional use may be authorized in accordance with the Policy.
- **Seismic Review.** A licensed structural engineer is required to conduct a seismic review for new construction, renovations, title transfers and leases to confirm that the facility is in compliance with the CBC for new or existing buildings and to evaluate the facility's anticipated seismic performance and significant life or safety hazards. A written technical discussion must be submitted. Any geotechnical investigation must include consideration of seismic hazards, including liquefaction, differential settlement, lateral spreading, landsliding, and surface faulting.

University of California, San Diego, Design Guidelines

The UC San Diego Design Guidelines provide design criteria for UC projects for planning, design and construction. Division II – Site Requirements, of the guidelines requires a geotechnical report and as graded (post-construction) report for every project.

The geotechnical report is required to include the results of percolation tests and/or other evaluations to support infiltration and storm water BMP design. The guidelines require avoiding "substantial development on slopes over 20%." Where a project includes development on slopes, the guidelines require measures to protect slopes, such as energy dissipaters, to minimize erosion. Division II also requires storm water BMPs to be implemented in accordance with UC San Diego's NDPES Phase II Small MS4 General permit 20130001DWQ and Storm Water Management Program.

3.6.3 Project Impacts and Mitigation

The following sections address various potential impacts relating to geology and soils that could result due to the implementation of the proposed 2019 LRDP.

3.6.3.1 Issue 1: Exposure to Seismic-Related Hazards

Geology and Soils Issue 1 Summary

Would implementation of the 2019 LRDP directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic related ground failure, liquefaction, or landslides?

Impact: The Hillcrest Campus contains potential seismic hazards but compliance with the CBC and UC Seismic Safety Policy would reduce seismic related hazards to people and structures.

Mitigation: No mitigation is required.

Significance Before Mitigation: Less than significant

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- 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;
- Strong seismic ground shaking;

- Seismic-related ground failure, including liquefaction; or
- Landslides.

Significant adverse geologic impacts not directly related to seismic activity including topsoil loss, soil stability, landslides, lateral spreading, subsidence, liquefaction, collapse, and expansive soils are discussed in Issues 2 through 4.

Impact Analysis

Development under the proposed 2019 LRDP would involve the net new construction of 1.6 million gsf. Implementation of the 2019 LRDP would involve substantial grading and excavation in native soils which may result in the exposure of future development to seismic-related hazards. Potential impacts would occur from demolition, excavation, grading, and construction activities associated with the proposed 2019 LRDP phases. The details of each phase, including the amount of grading and excavation, are discussed in Chapter 2, Project Description. All phases would have potentially significant impacts associated with seismic-related hazards. The potential seismic hazards and their potential impacts on and as a result of future development on the Hillcrest Campus are described below.

Fault Rupture

The Hillcrest Campus is not located on any active or inactive faults. However, the campus is located in Southern California, which is recognized by geologists and seismologists as one of the most seismically active regions in the United States. The site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone, and no surface expression of active faulting has been observed on the site from aerial photographs or during field reconnaissance. The closest active fault is a portion of the Rose Canyon Fault, which is mapped as an Alquist-Priolo Earthquake Fault Zone, located approximately 1.5 miles northwest of the site. The nearest potentially active fault is the La Nacion Fault mapped approximately 4 miles east of the site. Based on this information and the geologic and tectonic conditions at the site, there is negligible chance for fault rupture. Further, since fault rupture can only occur on or near an active fault, and there are no faults near the Hillcrest Campus, fault rupture is not anticipated at the site.

In addition, UC San Diego routinely reviews all building plans for compliance with the CBC and also follows the UC Policy on Seismic Safety that requires compliance with the CBC as well as independent review of structural seismic design of both new construction and remodeling projects. The proposed Replacement Hospital would also comply with SB 1953 seismic safety requirements for acute care hospitals. Because there are no faults located on campus and the Hillcrest Campus complies with the CBC as well as the UC Seismic Policy, implementation of the 2019 LRDP would result in a less than significant impact associated with the rupture of a known earthquake fault.

Ground Shaking

As previously stated, the Hillcrest Campus is located in a seismically active area that could experience strong ground shaking. Ground shaking has the potential to dislodge objects from walls, ceilings, and shelves, and to damage and destroy buildings and other structures. People in the area would be exposed to these hazards. UC San Diego minimizes hazards associated with damage or destruction to buildings and other structures through a number of ways, including:

- Reviewing and approving all draft building plans for compliance with the CBC, which includes specific structural seismic safety provisions;
- Implementation of the UC program to upgrade or replace existing buildings not adequately prepared to withstand seismic hazards, which diminishes the existing hazards;
- Compliance with the UC Seismic Safety Policy, which requires anchorage for seismic resistance of nonstructural building elements such as furnishings, fixtures, material storage facilities, and utilities that could create a hazard if dislodged during an earthquake; and
- Incorporation of seismic-related emergency procedures into departmental emergency response plans.

These programs and procedures reduce the hazards from seismic shaking by preparing faculty, staff, patients, and students for emergencies. All of these programs and procedures would continue to be implemented as new facilities are developed at the Hillcrest Campus under the proposed 2019 LRDP.

The site-specific Geotechnical and Geologic Hazards Review (TRC 2018) recommends that, at minimum, the proposed 2019 LRDP improvements be designed in accordance with the seismic design criteria outlined in Chapter 16 of the 2016 CBC. Based on the above information and local seismic sources, the 2019 LRDP would be reviewed using the information in the CBC Chapter 16 or adhere to the most current code at the time of construction. The proposed Replacement Hospital would also comply with SB 1953 seismic safety requirements for acute care hospitals. Therefore, adherence to the CBC standards and SB 1953 and incorporation of safety measures by UC San Diego on the Hillcrest Campus would make impacts associated with ground shaking less than significant.

Seismic-Related Ground Failure and Liquefaction

Ground failure such as fault rupture and seismically induced landslides is discussed within other portions of this issue. Soil liquefaction occurs within relatively loose, cohesionless sands located below the water table that are subjected to ground accelerations from earthquakes. Due to the anticipated limited thickness of the alluvium confined to the canyons surrounding the Hillcrest Campus and the estimated depth of the groundwater table (i.e., well below ground surface), the potential for liquefaction of the on-site soils is low. In addition, review of the City's Seismic Safety Study (City of San Diego 2018), indicates that the site is not located in an area prone to

liquefaction. Furthermore, geotechnical investigations that address the potential for liquefaction, lateral spreading, and other types of ground failure are routinely performed for applicable projects, and compliance with the CBC would reduce hazards associated with liquefaction, if there were a potential for it to occur at a given site. Therefore, impacts associated with liquefaction would be less than significant.

Landslides

As identified in the Geotechnical and Geologic Hazards Review (TRC 2018), the Hillcrest Campus is in an area that is classified as "Generally Susceptible" to slope instability. The site is underlain by two bedrock formations; very old paralic deposits consisting of Pleistocene siltstone, sandstone and conglomerate, and the Eocene Mission Valley Formation composed of marine and nonmarine sandstone with beds of cobble conglomerate. The angle and orientation at which these formations are sloped and situated help increase overall slope stability on-campus. The materials on site are typically considered to be stable and are not expected to fail. Therefore, the potential for slope failure is low. Additionally, the nearest mapped area of landslide susceptibility is located approximately 1.5 miles west of the site, in a steep-sided canyon that opens into the San Diego River floodplain, north of Old Town. Geotechnical investigations that address the potential for landslides are routinely performed for applicable projects (those on or adjacent to slopes) and compliance with CBC as well as the UC Policy on Seismic Safety would reduce hazards. Therefore, impacts associated with landslides are considered less than significant.

Mitigation Measures

Compliance with the CBC, SB 1953, and UC Policy on Seismic Safety and incorporation of seismic safety measures into future development projects would reduce hazards associated with the proposed 2019 LRDP to a less than significant level with regard to seismic-related hazards such as fault rupture, strong seismic ground shaking, seismic-related ground failure, liquefaction, and landslides. Therefore, no mitigation measures are required.

3.6.3.2 Issue 2: Soil Erosion or Topsoil Loss

Geology and Soils Issue 2 Summary

Would implementation of the 2019 LRDP result in substantial soil erosion or the loss of topsoil?

Impact: Implementation of the 2019 LRDP would not result in substantial soil erosion or loss of topsoil associated with development of the Hillcrest Campus.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would result in substantial erosion or the loss of topsoil.

Impact Analysis

Erosion, including loss of topsoil, can occur as a result of, or be accelerated by, site preparation activities associated with development. Vegetation removal in native and/or landscaped (pervious) areas could reduce soil cohesion, as well as the buffer provided by vegetation from wind, water, and surface disturbance, which could render the exposed soils more susceptible to erosive forces. Additionally, excavation or grading for proposed development projects may also result in erosion during construction activities, irrespective of whether hardscape previously existed at the construction site, as bare soils would be exposed and could be eroded by wind or water. Earth-disturbing activities associated with construction would be temporary and erosion effects would depend largely on the areas disturbed, the quantity of disturbance, and the length of time soils are subject to conditions that would be affected by erosive processes.

The 2019 LRDP proposes new development and building improvements involving construction activities that would result in ground disturbance, including excavation, grading, and soil removal. The potential exists for soil erosion or loss of topsoil to occur from this disturbance. Construction Phases 1A, 1B, 2A, 2B, 3, and 5 would have the potential to cause erosion or the loss of topsoil because these phases would include cut and fill into the subgrade of the site associated with new development projects. Phase 4 would also have the potential to result in erosion or loss of topsoil during the removal of surficial and subsurface components of the existing hospital and CUP. The details of each phase, including the amount of grading and excavation, are described in Chapter 2.

Native soils have been replaced with artificial fill throughout the developed portions of the Hillcrest Campus. According to the Geotechnical and Geologic Hazards Review (TRC 2018), a review of aerial photographs and site reconnaissance did not reveal evidence of excessive erosion on site. However, erosion issues have been known to occur west of the existing CUP in the steep slope canyon. Redevelopment of the Hillcrest Campus under the 2019 LRDP would aim to correct these problems through improved storm water management and infrastructure.

The erosion potential of on-site materials may be affected by alteration of the natural ground surface during future grading operations, such as those associated with the 2019 LRDP construction phases. The TRC report recommends that erosion, runoff, and sedimentation control measures be implemented for both short-term and long-term conditions in conformance with applicable regulations. Future site development would incorporate design and maintenance practices to continue appropriate erosion control.

As stated in Section 3.2, Air Quality, UC San Diego would continue to implement dust control measures on the Hillcrest Campus consistent with APCD regulations associated with earth-disturbing activities during construction. As discussed in greater detail in Section 3.9, all projects implemented under the proposed 2019 LRDP would be required to comply with the UC San Diego Design Guidelines (UC San Diego 2018), which include the incorporation of low impact development and erosion and sediment control BMPs including tree planting and preservation, porous pavement, and bioswales, and UC San Diego's Storm Water Management Program (and pursuant to the campus's small MS4 permit) and other regulatory requirements, as needed to minimize erosion and top soil loss. Section 3.3, Biological Resources, provides additional measures to specifically protect sensitive canyon resources from erosion. With the continued implementation of these measures, substantial erosion or topsoil loss is unlikely to occur during implementation of the 2019 LRDP related to construction of the proposed development, and the associated impact would be less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact on the loss of topsoil and soil erosion with compliance with appropriate measures consistent with APCD regulations and the UC San Diego Design Guidelines; therefore, no mitigation is required.

3.6.3.3 Issue 3: Geologic Stability

Geology and Soils Issue 3 Summary

Would implementation of the 2019 LRDP 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?

Impact: Steep, unstable slopes or differential settlement of soils may be found on campus; however, compliance with applicable regulations would ensure that the 2019 LRDP would not expose people or structures to hazards associated with soil stability issues.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the 2019 LRDP, and potentially result in on- and off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Impact Analysis

The 2019 LRDP proposes new development and building improvements involving construction activities that would result in ground disturbance, including excavation, grading, and soils removal. The potential exists for unstable soils to occur on site from this disturbance. Construction Phases 1A, 1B, 2A, 2B, 3, and 5 would have the potential to cause substantial soil instability because these phases would include cut and fill into the subgrade of the site associated with new development projects. Phase 4 would also have the potential to result in unstable soils during the removal of surficial and subsurface components of the existing hospital and CUP. The details of each phase, including the amount of grading and excavation, are described in Chapter 2.

Areas of the Hillcrest Campus that are susceptible to seismic-related geologic hazards including fault rupture, landslides, liquefaction, and other hazards are discussed in Issue 1. The potential for slope instability, lateral spreading, and differential settlement on the Hillcrest Campus not related to seismic activity are discussed below.

Slope Instability

Potential hazards associated with slope instability may include surficial failures, earthflows, debris flows, mudslides, rockfalls, soil creep, or erosion. According to the Geotechnical and Geologic Hazards Review (TRC 2018), the site is in an area which is classified as "Generally Susceptible" to slope instability. This category includes slopes at or near their stability limits with slope angles greater than 25 degrees. The site is underlain by two bedrock formations; very old paralic deposits (Linda Vista Terrace Formation) consisting of Pleistocene siltstone, sandstone and conglomerate, and the Eocene Mission Valley Formation composed of marine and nonmarine sandstone interlaced with beds of cobble conglomerate. These bedrock formations are mapped dipping gently to the southwest from 2 to 13 degrees. This orientation increases overall slope stability along the northeast-facing slopes but decreases overall slope stability along the southwest-facing slopes.

In compliance with applicable regulations, the Geotechnical and Geologic Hazards Review (TRC 2018) recommends that proposed cut and fill slopes should be stable at inclinations of 2 to 1 (horizontal to vertical) or flatter if properly designed. Design of slopes should include exploration, geologic reconnaissance, laboratory testing, and stability analysis using current procedures. Geologic evaluation should be conducted to determine if adverse bedding is present within the proposed cut slopes. Keyways and buttresses may be required for fill slopes as well as internal drainage features. Surface drainage details such as benches, drain swales, and surface erosion protection such as hydroseeding should be performed. With these recommendations and compliance with the CBC, impacts associated with slope instability would be less than significant.

Lateral Spreading

As stated in Section 3.6.1.2, lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying alluvial material towards a body of water, channel, or excavation. In soils, this movement is generally due to failure along a weak plane. Because liquefaction causes soils to lose their strength, lateral spreading is more likely to occur as a result. As cracks develop within the weakened material, blocks of soil displace laterally towards the open face. Because of the low potential for liquefaction discussed in Issue 1, the risk of lateral spreading at the site is considered low. Therefore, impacts due to lateral spreading would be less than significant.

Differential Settlement

Bedrock was encountered at varying depths throughout the Hillcrest Campus. It is possible that differential settlement could occur due to the differential thickness of soils above the bedrock surface. To reduce the effects of differential settlement across fill and bedrock transitions, the Geotechnical and Geologic Hazards Review (TRC 2018) recommends that areas with shallow foundations and/or slabs-on-grade be over-excavated to provide a uniform soil cushion foundation support in compliance with applicable regulations. The exact depth of over-excavation below the shallow foundations or slabs-on-grade should be determined during future geotechnical investigations. Implementation of these recommendations in compliance with applicable regulations such as the CBC would result in less than significant impacts.

Mitigation Measures

Compliance with the recommendations set forth in the Geotechnical and Geologic Hazards Review (TRC 2018) and regulations of the CBC would make impacts related to soil stability with the implementation of the 2019 LRDP less than significant; therefore, no mitigation is required.

3.6.3.4 Issue 4: Expansive Soils

Geology and Soils Issue 4 Summary

Would implementation of the 2019 LRDP result in construction located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Impact: Expansive soils may be found on campus; however, compliance with applicable regulations would ensure they would not pose a substantial hazard to life or property.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would be located on expansive soil, as defined in Section 1803.5.3 of the CBC (DGS 2017), creating substantial direct or indirect risks to life or property. According to the CBC, a soil is defined as an expansive soil if it meets all four of the following provisions:

1. Plasticity index of 15 or greater, determined in accordance with American Society for Testing and Materials (ASTM) D4318.
2. More than 10 percent of the soil particles are less than 75 micrometers in size, determined in accordance with ASTM D422.
3. More than 10 percent of the soil particles are less than 5 micrometers in size, determined in accordance with ASTM D422.
4. Expansion index greater than 20, determined in accordance with ASTM D4829.

Impact Analysis

Expansive soils are soils that are high in expansive clays or silts and that swell and shrink with wetting and drying, respectively. This shrinking and swelling can be detrimental to foundations, concrete slabs, flatwork, and pavement. However, proper fill selection, moisture control, and compaction during construction can prevent these soils from causing significant damage. Expansive soils can be treated by removal (typically the upper 3 feet below finish grade) and replacement with low expansive soils, lime-treatment, and/or moisture conditioning. According to the Geotechnical and Geologic Hazards Review (TRC 2018), loose or compressible soils may be found within the Hillcrest Campus, especially in undeveloped areas with deposits of alluvium or slope wash/colluvium and developed areas with undocumented and/or uncompacted fill. These materials may be subject to settlement under increased loads, or due to an increase in moisture content from site irrigation or changes in drainage conditions.

The 2019 LRDP proposes new development and building improvements involving construction activities that would result in ground disturbance, including excavation, grading, and soil removal. The potential exists for construction activities associated with the 2019 LRDP to be located in areas with expansive soils. According to the Geotechnical and Geologic Hazards Review (TRC 2018), expansive soils have been primarily found within the sloped canyon areas surrounding the Hillcrest Campus. Construction Phases 2A and 2B would have the highest potential to cause substantial soil expansion because these phases would result in development in undeveloped areas of the canyon where expansive soils have been identified. The details of each phase, including the amount of grading and excavation, are described in Chapter 2. Phase 2A would involve the construction of a north access driveway through the undeveloped canyon. Phase 2B would include the widening of Bachman Place to three lanes which would require development into the canyon. The Geotechnical and Geologic Hazards Review (TRC 2018) recommends that evaluation of on-site soils for

compressibility be performed as a portion of the geotechnical design evaluation for proposed developments on a case-by-case basis, consistent with applicable UC policies and regulations.

For any development on the Hillcrest Campus under the proposed 2019 LRDP, the UC Seismic Safety Policy would require compliance with the CBC, which includes provisions for construction on expansive soils during each phase. Furthermore, geotechnical investigations that address the potential to cause soil expansion are performed for applicable projects prior to any earth-moving activities. Complying with the provisions of the CBC requires that a geotechnical investigation be performed to provide data for the architect and/or engineer to responsibly design the 2019 LRDP. Continued compliance with the CBC would ensure that this impact would be less than significant.

Mitigation Measures

Compliance with the CBC, UC Policy on Seismic Safety, and compliance with the recommended on-site soil evaluations would reduce hazards associated with expansive soils under the proposed 2019 LRDP to a less than significant impact. Therefore, no mitigation is required.

3.6.3.5 Issue 5: Paleontological Resources

Geology and Soils Issue 5 Summary

Would implementation of the 2019 LRDP directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact: Implementation of the 2019 LRDP could potentially impact significant paleontological resources during construction grading and excavation.	**Mitigation:** Paleontological Monitoring during Construction (GEO-5)
Significance Before Mitigation: Potentially significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP would have a significant impact if it would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Because paleontological resources are typically buried and, therefore, not apparent until revealed by excavation, the potential for significant impacts to paleontological resources is often determined based on the geologic formations that would be disturbed and the potential for those geologic formations to contain fossils.

Impact Analysis

Impacts to paleontological resources generally take the form of physical destruction of fossil remains by excavation operations that cut into geologic formations. Trenching and tunneling

activities may also result in impacts to paleontological resources. When such activities take place, potential impacts are limited to the immediate project area. Burial of paleontological sites (when the resources are not destroyed) would not be a significant impact. No paleontological resource sites have been identified within the Hillcrest Campus; however, there is potential to uncover unknown paleontological resources.

As described previously, the Hillcrest Campus is underlain by two geologic units that are assigned sensitivity levels based on their potential to yield significant fossil remains. Refer to Figure 3.6-1 for an illustration of the geologic formations present on the Hillcrest Campus. The uppermost rock unit underlying the Hillcrest Campus is the Linda Vista Terrace Formation consisting of very old paralic deposits. This formation is considered to have a low to moderate paleontological resource sensitivity. The Eocene-age Mission Valley Formation, which is made of weakly cemented, fine-grained sandstone, underlies the Linda Vista Terrace Formation on the mesa top greater than 20 feet in depth and is generally exposed in the steeply sloped, undeveloped canyons north, west, and east of the Hillcrest Campus. This formation is considered to have a high paleontological resource sensitivity. Therefore, implementation of the 2019 LRDP would involve the construction of various campus facilities and utility improvements that could result in the disturbance of fossil resources in highly sensitive geologic formations.

Excavation and grading activities associated with the proposed 2019 LRDP construction phases that would occur in the Mission Valley Formation have potential to impact unknown paleontological resources due to the high paleontological sensitivity of this underlying rock unit. Phases 1A, 1B, 2A, 2B, 3, and 5 would have the potential to reveal unknown paleontological resources on the mesa top greater than 20 feet in depth and in the steep slope canyons because these phases would include excavation and grading at depths that would impact the underlying formations. The details of each phase, including the amount of grading and excavation, are discussed in Chapter 2. Project impacts to unknown paleontological resources during construction would be potentially significant.

Mitigation Measures

Implementation of Mitigation Measure GEO-5 would mitigate any direct or indirect impacts to paleontological resources to less than significant:

> **GEO-5: Paleontological Monitoring during Construction.** To address potentially significant impacts to previously undocumented paleontological resources within highly sensitive geologic formations, a monitoring program shall be implemented. Grading and excavation

equating to 1,000 cubic yards or more within highly sensitive Mission Valley Formation shall require monitoring by a qualified Paleontologist and shall include the following measures:

1. Prior to beginning any grading/excavation work:
    a. A preconstruction meeting shall be held that includes the qualified Paleontologist, the UC San Diego Project Manager and Campus Planning staff, Construction Manager and/or Grading Contractor, and other appropriate personnel so the Paleontologist can make comments and/or suggestions concerning the monitoring program to the Construction Manager and/or Grading Contractor.
    b. The Paleontologist shall (at that meeting or subsequently) submit to the UC San Diego Project Manager a copy of the site/grading plan (reduced to 11 x 17 inches) that identifies areas to be monitored as well as areas that may require delineation of grading limits.
    c. The Paleontologist shall also coordinate with the UC San Diego Project Manager on the construction schedule to identify when and where monitoring is to begin and to specify the start date for monitoring.
2. The Paleontologist shall be present during grading/excavation and shall document such activity on a standardized form. A record of activity shall be sent to UC San Diego Campus Planning and the UC San Diego Project Manager each month.
3. For excavations in geologic units of known high sensitivity for paleontological resources (i.e., Mission Valley Formation), a qualified Paleontologist shall be present initially during 100 percent of the earth moving activities. After 50 percent of the excavations are complete within the unit, if no significant fossils have been recovered, the level of monitoring may be reduced or suspended entirely at the Paleontologist's discretion and in consultation with UC San Diego Campus Planning.
4. Excavations in formations of low and moderate paleontological sensitivity, such as the Linda Vista Terrace Formation, do not require paleontological monitoring.
5. Discoveries:
    a. **Discovery Process.** In the event of a discovery, and when requested by the Paleontologist, the UC San Diego Project Manager shall be contacted and shall divert, direct, or temporarily halt ground-disturbing activities in the area of discovery to allow for preliminary evaluation of potentially significant paleontological resources. The Paleontologist shall also immediately notify UC San Diego Campus Planning of such findings at the time of discovery.
    b. **Determination of Significance.** The significance of the discovered resources shall be determined by the Paleontologist in consultation with UC San Diego Campus Planning. UC San Diego Campus Planning must concur with the evaluation before grading activities shall be allowed to resume.

c. **Documentation and Treatment of Finds**. Based on the scientific value and/or uniqueness of the find, the qualified Paleontologist may record the find and allow work to continue, or recommend salvage and recovery of the fossil. If treatment and salvage are required, recommendations shall be consistent with Society of Vertebrate Paleontology 2010 guidelines and currently accepted scientific practice. Work in the affected area may resume once the fossil has been assessed and/or salvaged and a paleontological monitor is present.

6. **Notification of Completion.** The Paleontologist shall notify UC San Diego Campus Planning, as appropriate, in writing of the end date of monitoring.
7. **Handling and Curation of Significant Paleontological Specimens and Letter of Acceptance.** The Paleontologist shall ensure that all significant fossils collected are appropriately prepared and permanently curated with an appropriate institution, and that a letter of acceptance from the curation institution has been submitted to UC San Diego Campus Planning.
8. **Final Results Reports (Monitoring and Research Design and Recovery Program).** Prior to completion of the 2019 LRDP, two copies of the Final Results Report (even if no significant resources were found) and/or evaluation report, if applicable, which describe the results, analysis, and conclusions of the Paleontological Monitoring Program (with appropriate graphics) shall be submitted to UC San Diego Campus Planning for approval.

3.6.4 Cumulative Impacts and Mitigation

Geology and Soils Cumulative Issue Summary

Would implementation of the 2019 LRDP have a cumulatively considerable contribution to a cumulative geology and soils impact considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Issue 1: Exposure of persons to seismic-related hazards	Less than significant	Not cumulatively considerable
Issue 2: Soil erosion or topsoil loss	Less than significant	Not cumulatively considerable
Issue 3: Geologic Stability	Less than significant	Not cumulatively considerable
Issue 4: Expansive soils	Less than significant	Not cumulatively considerable
Issue 5: Paleontological resources	Potentially significant	Not cumulatively considerable

3.6.4.1 Cumulative Issue 1: Exposure to Seismic-Related Hazards

The geographic context for the analysis of impacts regarding seismic-related hazards is generally site-specific, rather than cumulative in nature because each development site has unique geologic considerations that would be subject to uniform site development and construction standards. As discussed in Section 3.6.3.1, geologic hazards related to seismic ground shaking, seismic related ground failure, liquefaction, and landslides would not be significant with compliance with building codes and other applicable regulations. All development on the Hillcrest Campus would continue to comply with the CBC, SB 1953, and UC Seismic Safety Policy, which requires the use of the most stringent seismic safety standards, consistent with all applicable regulations. Additionally, all cumulative projects within the Hillcrest Campus vicinity would be required to comply with the CBC. As described above, the Hillcrest Campus is not located within an Alquist-Priolo Earthquake Fault Zone. Although the proposed 2019 LRDP and related cumulative projects could have potentially significant geological impacts requiring mitigation, these projects are geographically independent to the extent that a hazardous geologic event at one site would not necessarily occur at another site. Therefore, potential geological impacts associated with seismic-related hazards would not be cumulatively significant.

3.6.4.2 Cumulative Issue 2: Soil Erosion or Topsoil Loss

The geographic context for the analysis of impacts regarding soil erosion or topsoil loss would be site-specific and the immediate surrounding area. Development projects near the Hillcrest Campus that could potentially cause a cumulative effect would be the Legacy International Center project approximately 0.3 mile to the northwest. Erosion, including loss of topsoil, could occur as a result of site preparation activities associated with development of these two projects. However, development of cumulative projects in the area (see Table 3-1 in Chapter 3, Environmental Setting, Impacts, and Mitigation) are subject to state and local runoff and erosion prevention requirements, including the general construction permit, applicable BMPs, NPDES requirements, and the grading requirements of the City's Land Development Code. Therefore, a significant cumulative impact would not occur.

The 2019 LRDP would comply with design guidelines specific to the Hillcrest Campus set forth in the UC Design Guidelines, applicable provisions of the general construction permit, BMPs, and Phases I and II of NPDES. These measures are designed to reduce or eliminate potential erosion impacts and are implemented as conditions of approval for development projects and are subject to continuing enforcement. As a result, the proposed 2019 LRDP's contribution would not be cumulatively considerable.

3.6.4.3 Cumulative Issue 3: Geologic Stability

The geographic context for the analysis of impacts resulting from unstable soils is generally site-specific rather than cumulative in nature. Issues including unstable soils, including landslides,

lateral spreading, subsidence, liquefaction, or collapse, would normally involve effects to the 2019 LRDP and/or are specific to on-site conditions. However, the Legacy International Center project is located directly downslope approximately 0.3 mile to the northwest of the Hillcrest Campus. The 2019 LRDP proposes new development and building improvements involving construction activities that would result in ground disturbance, including excavation, grading, and soils removal that could potentially result in unstable soils. However, potential geology and soils effects are inherently restricted to the areas proposed for development and would not contribute to cumulative impacts associated with other planned or proposed development. Additionally, the Legacy International Center project, other cumulative projects in the area, and development under the proposed 2019 LRDP would be required to comply with all regulations in the CBC as well as recommendations set forth in the respective geotechnical reports. Therefore, a significant cumulative impact associated with unstable soils would not occur. The proposed 2019 LRDP's contribution would not be cumulatively considerable.

3.6.4.4 Cumulative Issue 4: Expansive Soils

The geographic context for the analysis of impacts resulting from expansive soils is generally site-specific, rather than cumulative in nature. Potential impacts related to the 2019 LRDP are not additive with other projects and are therefore not cumulatively significant. However, the Legacy International Center project is located directly downslope approximately 0.3 mile to the northwest of the Hillcrest Campus. Expansive soils were mainly mapped within the steep slope canyons bounding the two project sites and minimal development is proposed for these areas. As discussed above, geologic hazards related to expansive soils would not be significant as long as future development on the Hillcrest Campus complies with applicable CBC requirements and the UC Seismic Safety Policy along with recommendations set forth in the geotechnical report. Therefore, potential geological impacts associated with expansive soils would not be cumulatively significant. The proposed 2019 LRDP's contribution would not be cumulatively considerable.

3.6.4.5 Cumulative Issue 5: Paleontological Resources

The geographic context for the analysis of cumulative impacts to paleontological resources is considered to be the County region. According to the San Diego County General Plan: A Plan for Growth, Conservation, and Sustainability, there are a number of distinct geological rock units (i.e., formations) within the County that contain paleontological resources, such as bones, teeth, shells, and wood (County of San Diego 2011). Cumulative projects within the County region have the potential to disturb these geologic formations and the fossils that they contain. However, previous development has also led to the discovery of many fossil sites that have been documented and which have been added to the natural history records for the region. Future development in the region could impact unrecorded paleontological resources, which would result in a significant cumulative impact.

The continued development of projects within the San Diego area has the potential to disturb sensitive paleontological units; however, monitoring for paleontological resources is now typically required for projects that involve significant earthwork in geologic units with higher paleontological sensitivities. Because the implementation of the 2019 LRDP would require implementation of a paleontological monitoring program for areas of the Hillcrest Campus with the highest potential for buried fossil resources (i.e., Mitigation Measure GEO-5), additional discoveries may be added to the regional natural history record as a result of campus development. This mitigation would prevent the harm or destruction of potentially highly valuable paleontological resources and allow these resources to be properly documented and preserved. Therefore, implementation of the proposed 2019 LRDP would not result in cumulatively considerable impacts to paleontological resources.

3.6.5 CEQA Issues Where There Is No Potential for a Significant Effect

The following section discusses the other Standards of Significance related to Geology and Soils contained in Appendix G of the CEQA Guidelines wherein the proposed 2019 LRDP was determined to not cause a significant effect.

Would implementation of the 2019 LRDP 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?

The Hillcrest Campus is provided sanitary sewer service by the City and no septic tanks or alternative wastewater systems are used or anticipated to be associated with the implementation of the 2019 LRDP; therefore, no further analysis is required.

3.6.6 References

CARB (California Air Resources Board). 2017. "Naturally Occurring Asbestos." May 19, 2017. Accessed January 8, 2019. https://www.arb.ca.gov/toxics/asbestos/asbestos.htm.

CGS (California Geological Survey). 2008. Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California.

City of San Diego. 2016. Final Program Environmental Impact Report for the Uptown Community Plan Update. City of San Diego, Planning Department. September.

City of San Diego. 2018. City of San Diego Seismic Safety Study: Geologic Hazards and Faults. Updated 2008. Explanation revised and updated 2018.

County of San Diego. 2011. San Diego County General Plan: A Plan for Growth, Conservation, and Sustainability. August 2011.

Deméré, Thomas A., and Stephen L. Walsh. 2003. Paleontological Resources, County of San Diego, California. Revised. Department of Paleontology, San Diego Natural History Museum.

DGS (California Department of General Services). 2017. California Building Standards Code. July 1, 2016. Effective January 1, 2017.

DOC (California Department of Conservation). 2011. "Alquist-Priolo Earthquake Fault Zones." January 12, 2011. Accessed on January 7, 2019. https://www.conservation.ca.gov/cgs/Pages/Earthquakes/disclose.aspx.

Kennedy, M.P., and S.S. Tan. 2008. Geologic Map of the San Diego 30-Foot x 60-Foot Quadrangle, La Jolla Quadrangle, 7.5-Minute Series, California Geological Survey scale 1:100,000.

Ninyo & Moore. 1993. Geologic Reconnaissance and Limited Geotechnical Evaluation, UCSD Medical Center, Hillcrest, San Diego, CA. December 7, 1993.

TRC (TRC Solutions). 2018. Geotechnical and Geologic Hazards Review, UC San Diego Hillcrest Campus. Prepared for UC San Diego Campus Planning. December 16, 2017. Edited August 2018.

UC San Diego (University of California, San Diego). 2018. UC San Diego Design Guidelines. October 5.

UC San Diego and Recon. 1995. Final Environmental Impact Report for the University of California, San Diego Medical Center – Hillcrest 1995 Long Range Development Plan. March 8, 1995.

UCOP (University of California Office of the President). 2017. Seismic Safety Policy. University of California Facilities Manual, Vol. 1. Chapter 5. Latest revision effective May 19, 2017. Accessed September 19, 2018. http://policy.ucop.edu/doc/3100156/.

USEPA (U.S. Environmental Protection Agency). 2018. USEPA Map of Radon Zones including State Radon Information and Contacts. Accessed January 11, 2019. https://www.epa.gov/radon/find-information-about-local-radon-zones-and-state-contact-information#radonmap.

USGS (Unites States Geological Survey). 2019. "Latest Earthquakes." Accessed May 2019. https://earthquake.usgs.gov/earthquakes/map/.

Wagner, Jeff. 2018. Email regarding radon testing on the Hillcrest Campus. Radiation Safety Officer, Environmental Health and Safety Department, UC San Diego. January 11, 2018.

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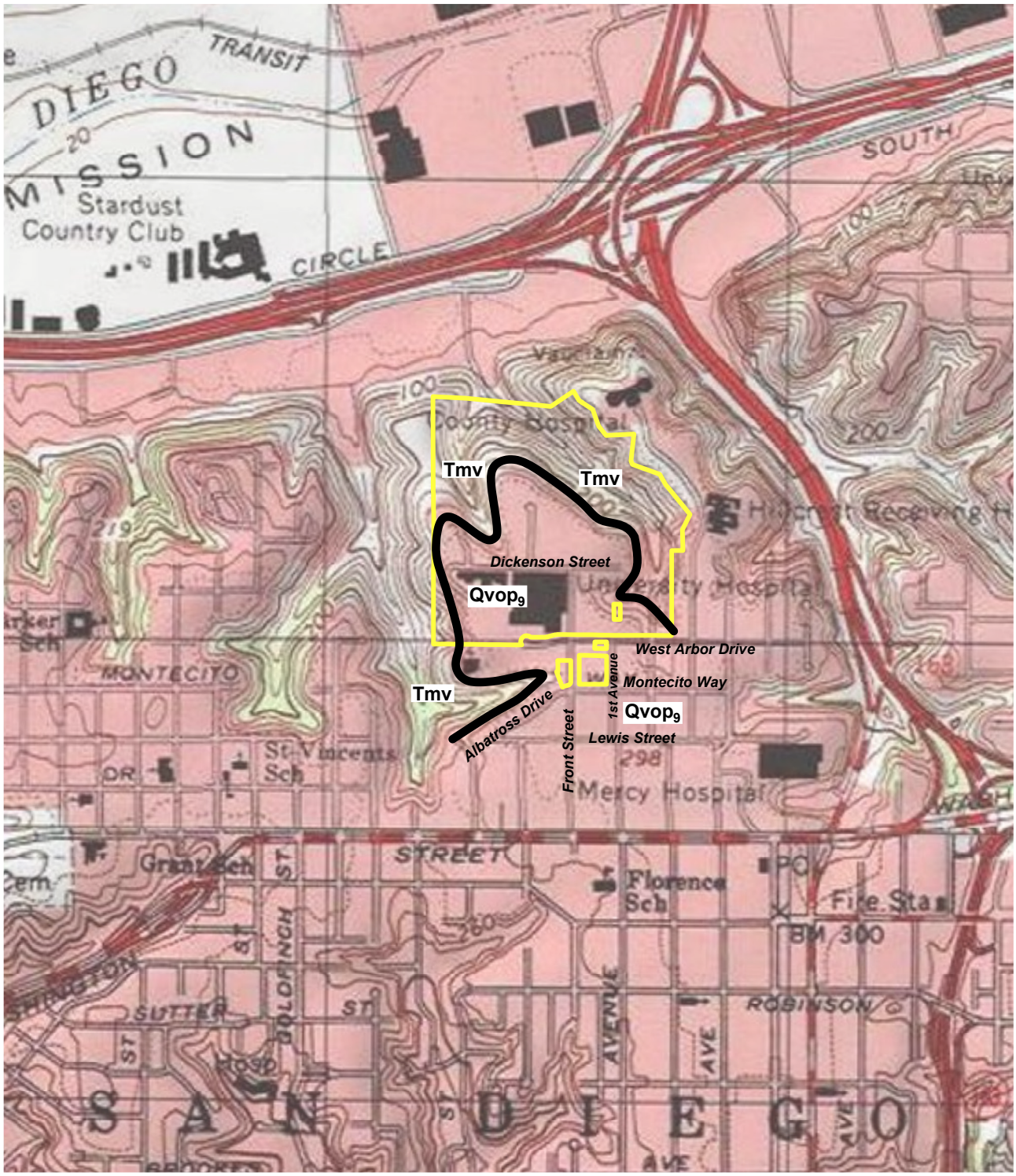

SOURCE:United States Geological Survey 7.5 Minute Topographic Maps: La Jolla and Point Loma Quadrangles, California

Edited by Harris & Associates

Source: TRC 2017

LEGEND

Approximate site boundary

Approximate geologic contact

$Qvop_9$ Linda Vista Terrace Formation. Very old paralic deposits (middle to early Pleistocene); poorly sorted deposits composes of siltstone, sandstone and conglomerate:
Unit 9 overlies the 113-115 meter Linda Vista terrace.

Tmv Mission Valley Formation (middle Eocene), marine and non-marine sandstone containing cobble conglomerate tongues

N

Figure 3.6-1
Geologic Map of UC San Diego Hillcrest

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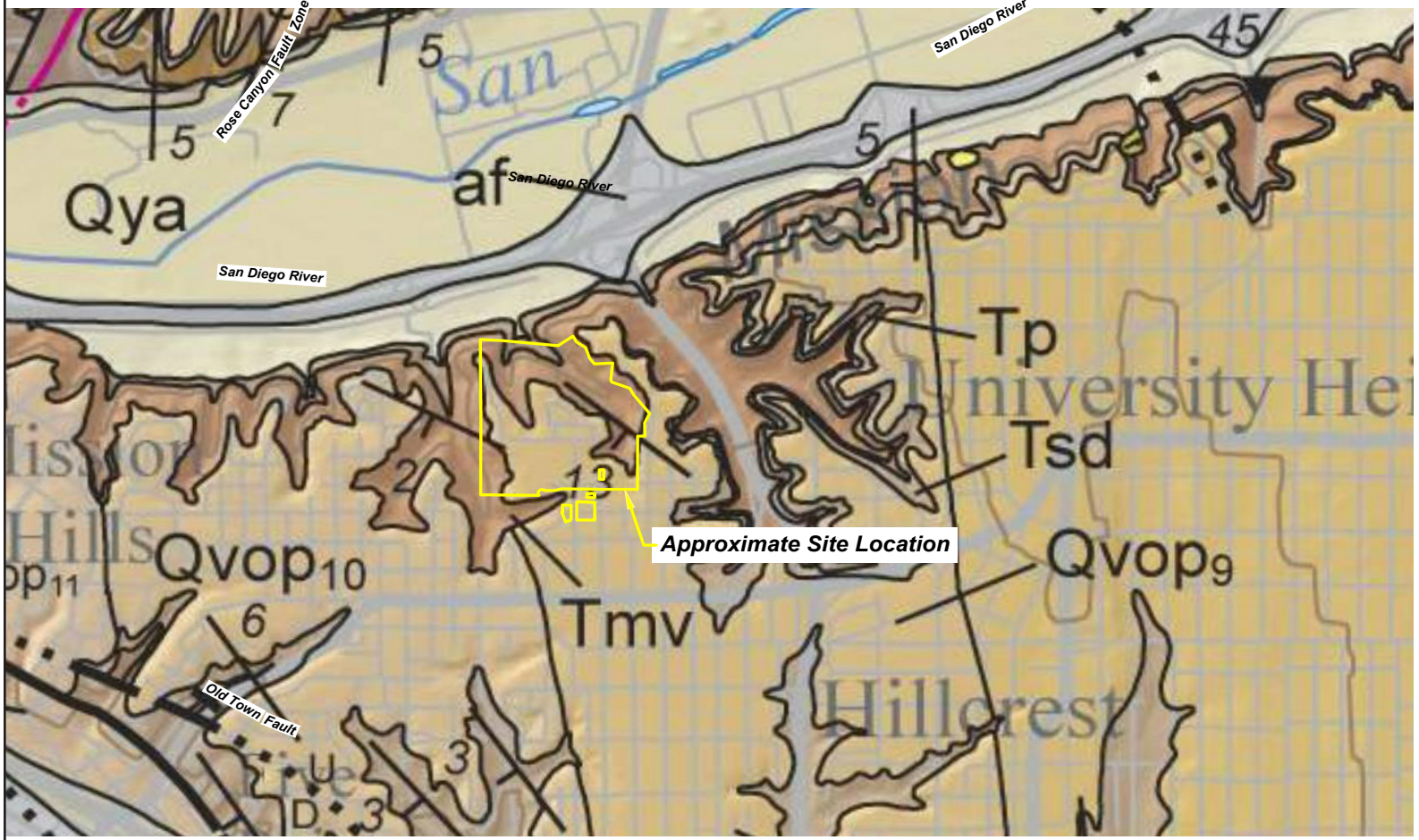

GEOLOGIC LEGEND

5	Slope and dip
	Accurately located fault line
	Concealed fault line

Lithologies

af	Artificial fill (late Holocene)
Qls	Landslide deposits (Holocene)
Qya	Young alluvial flood plain deposits (Holocene and late Pleistocene)
Qop_6	Old paralic deposits, Unit 6 (late to middle Pleistocene), poorly sorted, deposits of siltstone, sandstone and conglomerate. These deposits overlie the 22-23 meter Nestor terrace.
Qvop	Very old paralic deposits (middle to early Pleistocene); poorly sorted deposits composes of siltstone, sandstone and conglomerate:
$Qvop_{11}$	*Unit 11 overlies the 92-94 meter Clairemont terrace.*
$Qvop_{10}$	*Unit 10 overlies the 104-106 Tecolote terrace.*
$Qvop_9$	*Unit 9 overlies the 113-115 meter Linda Vista terrace.*
Tsd	San Diego Formation (early Pleistocene and late Pliocene), undivided sandstone and conglomerate
Tp	Pomerado Conglomerate (middle Eocene), massive cobble conglomerate with coarse-grained sandstone matrix
Tmv	Mission Valley Formation (middle Eocene), marine and non-marine sandstone containing cobble conglomerate tongues

N

APPROXIMATE SCALE (MILES)

0 0.25 0.5 MILE

Path: \\hasans-file1\Data\Projects\UCSD\170053900 UCSD Hillcrest LRDP EIR\Figures\3.6 Geology

Source: TRC 2017

N

Figure 3.6-2
Vicinity Geologic Map

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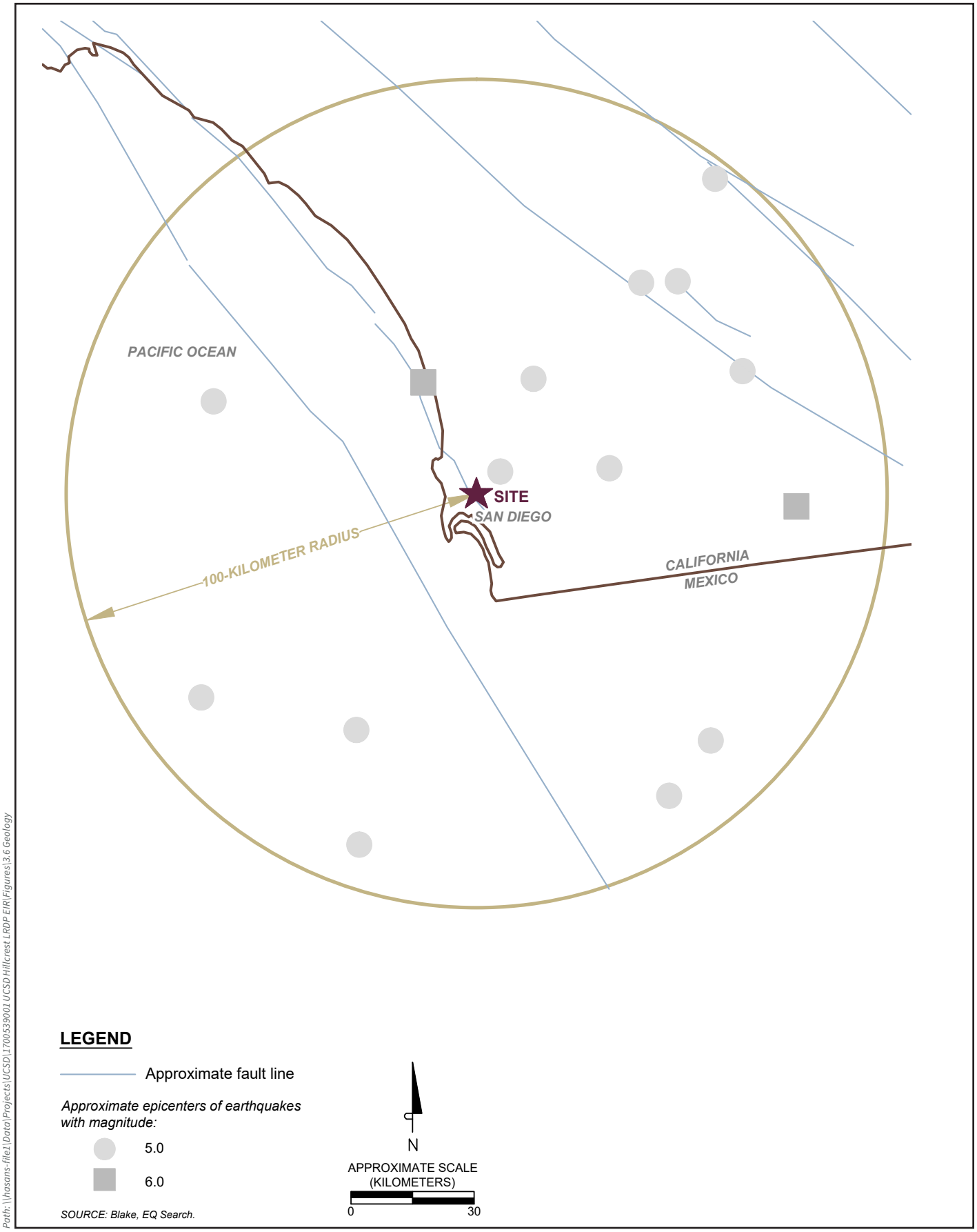

Path: \\hasans-file1\Data\Projects\UCSD\170053900 UCSD Hillcrest LRDP EIR\Figures\3.6 Geology

Source: TRC 2017

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Figure 3.6-3
Historical Earthquakes 1800 to 2016

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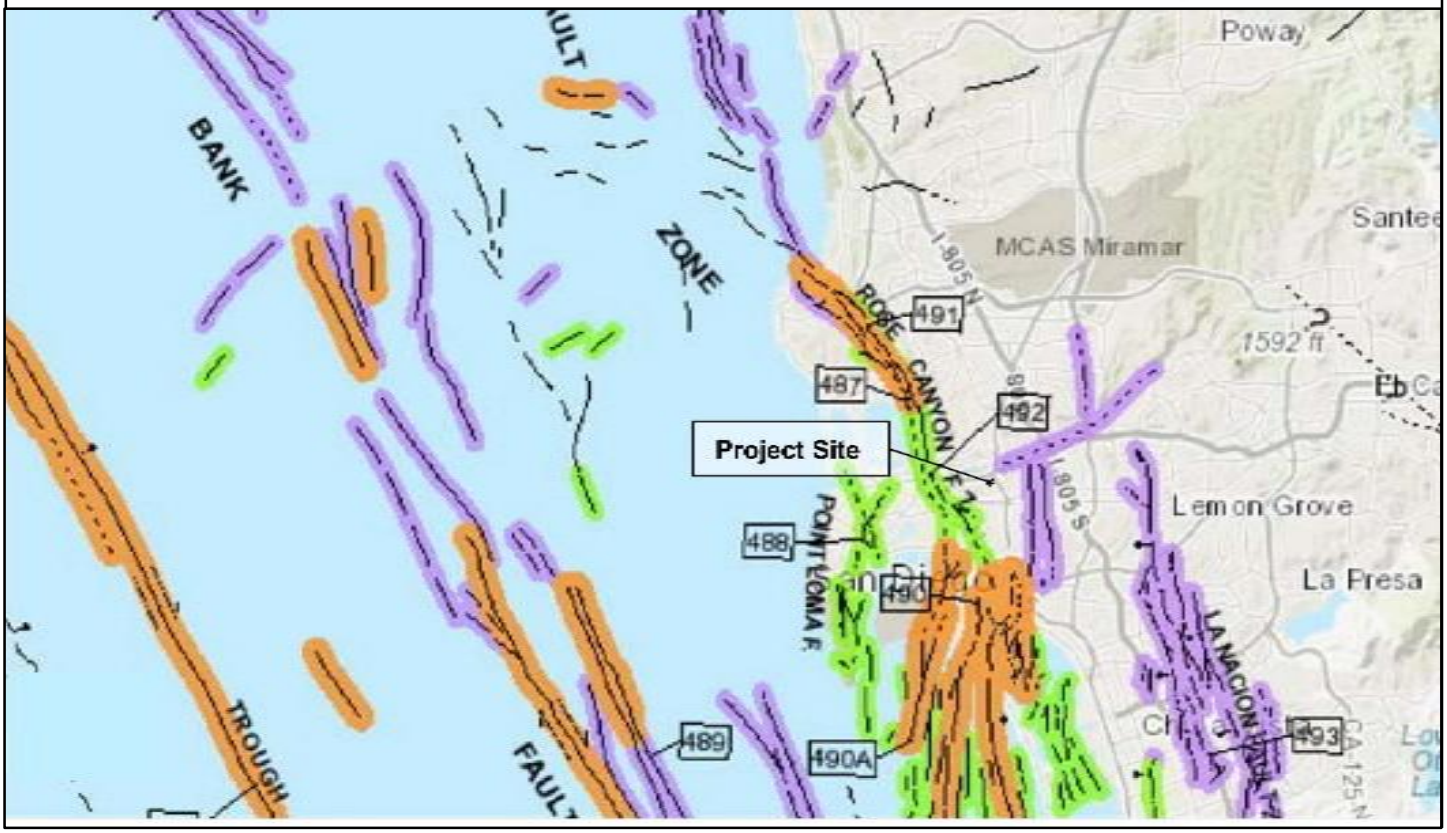
Geologic Time Scale			Years Before Present (Approx.)	Fault Symbol	Recency of Movement on Land Offshore[1]	DESCRIPTION
Quaternary	Late Quaternary	Historic				Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.
		Holocene	200			Displacement during Holocene time.[2]
		Pleistocene	10,000			Faults showing evidence of displacement during late Quaternary time.[3,4]
	Early Quaternary		700,000			Quaternary (undifferentiated) faults — most faults in this category show evidence of displacement during the last 2,000,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.
Pre-Quaternary	Pliocene		2,000,000			Fault showing evidence of no displacement during Quaternary time or faults without recognized Quaternary displacement.
	Miocene		5,000,000			



Source: UC San Diego

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Figure 3.6-4
Regional Fault Map

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3.7 Greenhouse Gas Emissions

This section assesses the GHG emissions that would be generated under implementation of the 2019 LRDP for the Hillcrest Campus. GHG emissions have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. This section also provides a background discussion of climate change, a discussion of existing sources of GHG emissions, and a summary of applicable regulations. The information provided in this section is based on the GHG Reduction Strategy prepared for the proposed 2019 LRDP by LSA Associates, Inc. (LSA 2019), which is included as Appendix E of this 2019 LRDP EIR.

3.7.1 Environmental Setting

Global Climate Change Overview

Climate change refers to any substantial change in climate measurement characteristics (such as temperature, precipitation, or wind) lasting for decades or longer. According to the USEPA, the Earth's climate has changed many times during the planet's history, including events ranging from ice ages to long periods of warmth. Historically, natural factors such as volcanic eruptions, changes in the earth's orbit, and the amount of energy released from the sun have affected the earth's climate. Some GHGs, such as water vapor, occur naturally and are emitted to the atmosphere through natural processes, while others are emitted through human activities. Beginning late in the eighteenth century, human activities associated with the Industrial Revolution have also changed the composition of the atmosphere and therefore very likely are influencing the earth's climate. For over the past 200 years, the burning of fossil fuels, such as coal and oil, and deforestation has caused concentrations of heat-trapping GHG to increase substantially in the atmosphere.

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat-trapping effects of GHGs, the earth's temperature would be about 34 degrees Celsius cooler (CCAT 2007). However, it is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Greenhouse Gases

The following are GHGs that are widely accepted as the principal contributors to human-induced global climate change:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons
- Perfluorocarbons

- Sulfur hexafluoride (SF_6)
- Nitrogen trifluoride (NF_3)

CO_2 enters the atmosphere through the burning of fossil fuels, solid waste, trees and wood products, and as a result of other chemical reactions such as through the manufacturing of cement. Globally, the largest source of CO_2 emissions is the combustion of fossil fuels in power plants, automobiles, industrial facilities, and other similar sources. CO_2 is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle. As part of the carbon cycle billions of tons of atmospheric CO_2 are removed from the atmosphere by oceans and growing plants, also known as "sinks," and are emitted back into the atmosphere annually through respiration, decay, and combustion, also known as "sources." When in balance, the total CO_2 emissions and removals from the entire carbon cycle are roughly equal. Since the Industrial Revolution in the 1700s, human activities, such as the burning of oil, coal and gas or deforestation, have increased CO_2 concentrations in the atmosphere (USEPA 2018a).

CH_4 is emitted from a variety of both natural and human-related sources, including fossil fuel production, animal husbandry, rice cultivation, biomass burning, and waste management (USEPA 2018b). It is estimated that 60 percent of global CH_4 emissions are related to human activities. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. Natural processes in soil and chemical reactions in the atmosphere help remove CH_4 from the atmosphere (USEPA 2018a).

N_2O is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste (USEPA 2018b). N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. Globally, about 40 percent of total N_2O emissions come from human activities (USEPA 2018a).

Hydrofluorocarbons, Perfluorocarbons, SF_6, and NF_3 are synthetic, powerful GHGs that are emitted from a variety of industrial processes, and the production of chlorodifluoromethane (HCFC-22). Construction or operation of the 2019 LRDP would not include any industrial processes, and HCFC-22 has been mostly phased out of use in the U.S. (UNEP 2012); therefore, these GHGs are not discussed further in this 2019 LRDP EIR.

Individual GHGs have varying heat-trapping properties and atmospheric lifetimes. Table 3.7-1 identifies the carbon dioxide equivalent (CO_2e) and atmospheric lifetimes of basic GHGs. The CO_2e is a consistent methodology for comparing GHG emissions because it normalizes various GHG emissions to a consistent measure. Each GHG is compared to CO_2 with respect to its ability to trap infrared radiation, its atmospheric lifetime, and its chemical structure. For example, CH_4 is a GHG that is 28 times more potent than CO_2; therefore, 1 metric ton (MT) of CH_4 is equal to 28 $MTCO_2e$.

Table 3.7-1. Global Warming Potentials and Atmospheric Lifetimes of Common GHGs

GHG	Formula	100-Year Global Warming Potential[1]	Atmospheric Lifetime
Carbon dioxide	CO_2	1	~100
Methane	CH_4	28	12
Nitrous oxide	N_2O	265	121

Source: CARB 2014. Consistent with CalEEMod, Version 2016.3.2.

Notes:

[1] The warming effects over a 100-year time frame relative to other GHG.

Greenhouse Gases Emissions Inventories

California

Total California GHG emissions in 2016 were 429 million metric tons (MMT) CO_2e, according to the California Greenhouse Gas Emissions Inventory for 2006 to 2016. During the 2000 to 2016 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 14 tonnes per person to 10.8 tonnes per person in 2016, a 23 percent decrease. The transportation sector remains the largest source of GHG emissions in the state, accounting for 39 percent of the inventory, and shows a small increase in emissions in 2016. Emissions from the electricity sector (160 percent in 2016) continue to decline due to growing zero-GHG energy generation sources. Emissions from the industrial sector contributed 21 percent to total GHG emissions in 2015 and 2016, the commercial sector contributed 5 percent, residential sector contributed 7 percent, and agriculture contributed 8 percent (CARB 2018).

County of San Diego

In February 2018, in conjunction with the County's Climate Action Plan (CAP), the County published a GHG inventory for County operations and the activities occurring within the unincorporated communities of the County. The GHG inventory includes a discussion of the primary sources and annual levels of GHG emissions for 2014 (baseline year) and describes likely trends if emissions are not reduced for 2020, 2030, and 2050. Total GHG emissions in the County in 2014 were estimated to be 3.2 MMT CO_2e from the following sectors: transportation (on- and off-road), electricity, solid waste, natural gas, agriculture, water, wastewater, and propane (County of San Diego 2018). On-road transportation is the largest emissions sector, accounting for approximately 1.5 MMT CO_2e, or 45 percent of total emissions. Energy consumption, including electricity and natural gas use, is the next largest source of emissions, accounting for approximately 1.1 MMT CO_2e, or 35 percent of the total.

City of San Diego

The most recent inventory completed by the City was published in 2018 for 2015–2017 emissions. The 2017 community-wide emissions were estimated to be approximately 10.2 MMT CO_2e, a 0.2 percent decrease from 2016 emissions (City of San Diego 2018). Transportation is the largest

emissions sector, accounting for approximately 54 percent of the total emissions. Energy consumption, including electricity and natural gas use, is the next largest source of emissions, accounting for approximately 40 percent of the total.

UC San Diego

A baseline inventory of GHG emissions and emissions sources from operation of the Hillcrest Campus was prepared as part of development of the GHG Reduction Strategy proposed as part of the 2019 LRDP (LSA 2019). Total GHG emissions from existing operation of the Hillcrest Campus are the sum of emissions from both direct and indirect sources. Direct sources include mobile sources (e.g., construction equipment, motor vehicles, landscape equipment) and stationary sources (e.g., cooling and heating equipment). Indirect sources are comprised of electricity consumption, potable water use, the generation of solid waste, and production of wastewater.

In 2017, the Hillcrest Campus emitted, directly and indirectly, approximately 47,490 MT CO_2e, summarized in Table 3.7-2. The largest GHG emitting sector of the Hillcrest Campus was mobile sources (66 percent), including commuter traffic by doctors, employees, patients, and visitors going in and out of the Hillcrest Campus. Mobile source emissions were also emitted by delivery trucks and emergency vehicles related to operations at the campus. The second largest source of emissions (25 percent) was the consumption of energy (natural gas and electricity) within the hospital, offices, and other buildings on the campus. The energy sector also includes emissions from the CUP currently operating on the Hillcrest Campus. Emissions from the CUP are generated from natural gas combustion in the boilers, the consumption of electricity by the chillers, and the combustion of diesel fuel by the emergency generators, and other ancillary equipment. The remaining sources include the transport and deposition of solid waste (8 percent), embedded energy within potable water supplies associated with pumping and treating the water (1 percent), and very minor emissions (<1 percent) from other area sources, which for Hillcrest Campus primarily consist of landscape equipment (e.g., lawn mowers, leaf blowers).

Table 3.7-2. Existing Operational Greenhouse Gas Emissions

Sector	Annual Emissions (MT CO_2e)	Percent of Inventory
Energy	11,811.84	24.9
Mobile	31,148.49	65.6
Waste	3,890.97	8.2
Water	585.87	1.2
Area Sources	48.92	0.1
Total Existing Emissions	**47,486.09**	**100.0**

Source: LSA 2019.

3.7.2 Regulatory Framework

Applicable federal, state, and local (non-regulatory) laws and regulations governing the generation of GHG emissions are described in the following sections.

3.7.2.1 Federal

The USEPA is the federal agency responsible for implementing the federal CAA.

Greenhouse Gas Findings under the Federal Clean Air Act

The U.S. Supreme Court ruled on April 2, 2007, in Massachusetts v. USEPA that CO_2 is an air pollutant, as defined under the CAA, and that the USEPA has the authority to regulate emissions of GHGs. The USEPA announced that GHGs (including CO_2, CH_4, N_2O, Hydrofluorocarbons, Perfluorocarbons, and SF_6) threaten the public health and welfare of the American people. This action was a prerequisite to finalizing the USEPA's GHG emissions standards for light-duty vehicles, which were jointly proposed by the USEPA and the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA). The standards require compliance with progressively more stringent GHG emission standards for the 2012 through 2025 vehicle model years.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, the USEPA published the Final Mandatory Greenhouse Gas Reporting Rule (Reporting Rule) in the Federal Register. The Reporting Rule requires reporting of GHG data and other relevant information from fossil fuel and industrial GHG suppliers, vehicle and engine manufacturers, and all facilities that would emit 25,000 MT or more of CO_2e per year. Facility owners are required to submit an annual report with detailed calculations of facility GHG emissions on March 31 for emissions from the previous calendar year. The Reporting Rule also mandates recordkeeping and administrative requirements to enable the USEPA to verify the annual GHG emissions reports.

3.7.2.2 State

CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California, including those related to GHG emissions.

Executive Order S-3-05

EO S-3-05, signed in June 2005, proclaimed that California is vulnerable to the impacts of climate change. EO S-3-05 declared that increased temperatures could reduce the Sierra Nevada's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emissions targets. Specifically,

emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

Assembly Bill 32

In 2006, California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code, Division 25.5, Sections 38500, et seq.). AB 32 further details and puts into law the mid-term GHG reduction target established in EO S-3-05: reduce GHG emissions to 1990 levels by 2020. AB 32 also identifies CARB as the state agency responsible for the design and implementation of emissions limits, regulations, and other measures to meet the target. In addition, AB 32 includes a cap-and-trade regulation that applies to large industrial facilities and electricity generators emitting more than 25,000 MT CO_2e per year.

Senate Bill 97

SB 97 required the Governor's Office of Planning and Research to develop recommended amendments to the CEQA Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

In response to SB 97, the California Natural Resources Agency (CNRA) adopted amendments to the CEQA Guidelines that require evaluation of GHG emissions or the effects of GHG emissions. The amendments, in Section 15064.4, provided that:

(a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project.

(b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

    (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

    (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;

    (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions.

The amendments also added Section 15126.4(c), Mitigation Measures Related to Greenhouse Gas Emissions. Generally, this CEQA Guidelines section requires lead agencies to consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of GHG emissions.

The amendments also added Section 15183.5, which provides standards for tiering and streamlining analysis of GHG emissions, including provisions for adoption of and reliance on GHG reduction plans.

Executive Order B-30-15

In April 2015, Governor Edmund Brown issued an EO establishing a statewide GHG reduction goal of 40 percent below 1990 levels by 2030. The emission reduction target acts as an interim goal between the AB 32 goal (i.e., achieve 1990 emission levels by 2020) and Governor Brown's EO S-03-05 goal of reducing statewide emissions 80 percent below 1990 levels by 2050. In addition, the EO aligns California's 2030 GHG reduction goal with the European Union's reduction target (i.e., 40 percent below 1990 levels by 2030) that was adopted in October 2014.

Senate Bill 32

Effective January 1, 2017, Senate Bill (SB) 32 (Stats. 2016, Ch. 249) added a new Section 38566 to the Health and Safety Code. It provides that "in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by [Division 25.5 of the Health and Safety Code], [CARB] shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030." In other words, SB 32 requires California, by the year 2030, to reduce its statewide GHG emissions so that they are 40 percent below those that occurred in 1990.

California Air Resources Board Climate Change Scoping Plans

In December 2008, CARB adopted its Climate Change Scoping Plan (Scoping Plan), which contains the main strategies California will implement to achieve the required GHG reductions required by AB 32 (CARB 2008). The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of California's GHG inventory. CARB further acknowledges that decisions about how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emissions sectors.

CARB is required to update the Scoping Plan at least once every 5 years to evaluate progress and develop future inventories that may guide this process. In November 2017, CARB released the 2017 Climate Change Scoping Plan, which establishes a framework of action for California to

reduce statewide emissions by 40 percent by 2030, compared to 1990 levels (CARB 2017). The 2017 Scoping Plan builds upon the framework established by the 2008 Scoping Plan and the 2014 Scoping Plan Update, while also identifying new, technologically feasible and cost-effective strategies to ensure that California meets its GHG reduction targets.

Assembly Bill 1493

AB 1493, signed in July 2002, requires CARB to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with model year 2009. In June 2009, the USEPA Administrator granted a CAA waiver of preemption to California. This waiver allowed California to implement its own GHG emissions standards for motor vehicles beginning with model year 2009. California agencies worked with federal agencies to conduct joint rulemaking to reduce GHG emissions for passenger car model years 2017 to 2025.

Executive Order S-1-07

EO S-1-07, which was signed by then California governor Arnold Schwarzenegger in 2007, proclaims that the transportation sector is the main source of GHG emissions in California, at more than 40 percent of statewide emissions. EO S-1-07 establishes a goal that the carbon intensity of transportation fuels sold in California should be reduced by a minimum of 10 percent by 2020. CARB adopted the low carbon fuel standard on April 23, 2009. In November 2015, the Office of Administrative Law approved re-adoption of the low carbon fuel standard.

Senate Bill 375

SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations to adopt a Sustainable Communities Strategy (SCS) or an Alternative Planning Strategy, which will prescribe land use allocation in that Metropolitan Planning Organizations' Regional Transportation Plan. On September 23, 2010, CARB adopted regional GHG targets for passenger vehicles and light trucks for 2020 and 2035 for the 18 Metropolitan Planning Organizations in California.

Senate Bill 350

California's Renewable Portfolio Standard (RPS) was established in 2002 under SB 1078 and accelerated in 2006 under SB 107, by requiring that 20 percent of electricity retail sales be served by renewable energy sources by 2010. Subsequent recommendations in California energy policy reports advocated a goal of 33 percent by 2020, and on November 17, 2008, then governor Arnold Schwarzenegger signed EO S-14-08 requiring retail sellers of electricity to serve 33 percent of their load with renewable energy by 2020. In April 2011, SB X1-2 codified EO S-14-08, setting the new RPS targets at 20 percent by the end of 2013, 25 percent by the end of 2016, and 33 percent

by the end of 2020 for all electricity retailers. Most recently, Governor Edmund Brown signed SB 350 in October 2015, which extended the RPS target by requiring retail sellers to procure 50 percent of their electricity from renewable energy resources by 2030.

Assembly Bill 341

In 2011, the state legislature enacted AB 341 (California Public Resource Code, Section 42649.2), increasing the diversion target to 75 percent statewide. AB 341 also requires the provision of recycling service to commercial and residential facilities that generate 4 cubic yards or more of solid waste per week. AB 341 does not include a recycling target for local municipalities.

California Code of Regulations, Title 24, Part 6

California Code of Regulations, Title 24, Part 6, California's Energy Efficiency Standards for Residential and Nonresidential Buildings, were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for water heating) results in GHG emissions. The Title 24 standards are updated periodically to allow the consideration and possible incorporation of new energy-efficiency technologies and methods. The latest update to the Title 24 standards occurred in 2016 and went into effect January 1, 2017. The 2016 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant efficiency improvements to the residential Standards include improvements for attics, walls, water heating, and lighting. The Standards are divided into three basic sets. First, there is a basic set of mandatory requirements that apply to all buildings. Second, there is a set of performance standards – the energy budgets – that vary by climate zone (of which there are 16 in California) and building type; thus, the Standards are tailored to local conditions. Finally, the third set constitutes an alternative to the performance standards, which is a set of prescriptive packages that are basically a recipe or a checklist compliance approach.

California Green Building Standards Code

The California Green Building Standards Code (24 CCR, Part 11) is a code with mandatory requirements for new residential and nonresidential buildings throughout California. The code is Part 11 of the California Building Standards Code in Title 24 of the California Code of Regulations. The current 2016 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings went into effect on January 1, 2017.

The development of the CALGreen Code is intended to (1) cause a reduction in 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.

In short, 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.

The CALGreen Code contains requirements for storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options that allow 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 the verification that all building systems, such as heating and cooling equipment and lighting systems, are functioning at their maximum efficiency.

University of California

The UC is a national leader in sustainability and effective actions to reduce GHG emissions to mitigate climate change. The UC has developed the following policies.

UC Sustainable Practices Policy

In 2003, the UC adopted a comprehensive policy of detailed guidelines for Green Building Design and Clean Energy Standards (UC Sustainable Practices Policy), including an annual sustainability reporting requirement. This policy has been revised several times, the most recent version became effective in August 2018, which commits the UC to implementing actions intended to minimize the UC's impact on the environment and reduce the UC's dependence on non-renewable energy (UCOP 2018). The policy covers the areas of green building design, clean energy, climate protection, sustainable transportation, sustainable operations, zero waste, sustainable purchasing, sustainable foodservices, and sustainable water systems. The UC Sustainable Practices Policy establishes guidelines and includes climate change goals for all campuses that are consistent with AB 32 and SB 32. It also requires each campus to complete an update of its CAP for reducing GHG emissions to 1990 levels by 2020 and achieving the goals of the UC Carbon Neutrality Initiative (CNI). Additionally, the UC Sustainable Practices Policy sets the following requirements and goals relevant to GHG emissions reduction:

Green Building Design

1. All new building projects, other than acute care facilities, must be designed, constructed, and commissioned to outperform Title 24 energy-efficiency standards by at least 20 percent or meet whole-building energy performance targets;
2. Requires 30 percent better energy performance than ASHRAE 90.1 for new construction of acute care/hospital facilities and medical office buildings, or meet whole-building energy performance targets;
3. All new buildings must meet a minimum standard of LEED Silver and strive for LEED Gold when possible;

4. Requires new laboratory buildings to achieve a minimum of LEED Silver and meet the prerequisites for the 21st Century Environmental Performance Criteria;
5. All new buildings achieve at least two points in LEED Water Efficiency category;
6. Renovation projects that require 100 percent equipment replacement, and 50 percent non-shell areas, must achieve LEED Silver at a minimum and strive for Gold, and shall outperform Title 24, Part 6 by 20 percent;
7. No new building or major renovation shall use on-site fossil fuel combustion (e.g., natural gas) for space and water heating, except those projects connected to an existing campus central thermal infrastructure. Projects unable to meet this requirement shall document the rationale for this decision.

Clean Energy

1. Campuses and health locations will install additional on-site renewable electricity supplies and energy storage systems whenever cost-effective and/or supportive of the location's CAP or other goals.
2. By 2025, each campus and health location will obtain 100 percent clean electricity. By 2018, the University's Wholesale Power Program will provide 100 percent clean electricity to participating locations. (UC San Diego is a participating location.)
3. By 2025, at least 40 percent of the natural gas combusted on-site at each campus and health location will be biogas.

Climate Protection

1. Each campus will develop strategies for meeting the following carbon neutrality goals:
    a. Climate neutrality from Scope 1 (direct) and Scope 2 (indirect) sources by 2025.
    b. Climate neutrality from specific Scope 3 (campus commuters and business air travel) sources by 2050.
    c. At a minimum, reduce GHG emissions to 1990 levels by 2020, pursuant to AB 32.

Sustainable Transportation

1. Develop goals for reducing transportation related GHGs and report on progress annually:
    a. By 2025, zero emission vehicles or hybrid vehicles shall account for at least 50 percent of all new light-duty fleet vehicle acquisitions.
2. For single-occupancy vehicles (SOV):
    a. By 2025, each location shall strive to reduce its percentage of employees and students commuting by SOV by 10 percent relative to its 2015 SOV rates.
    b. By 2050, each location shall strive to have no more than 40 percent of its employees and no more than 30 percent of all employees and students commuting to the location by SOV.

3. By 2025, each location shall strive to have at least 4.5 percent of commuter vehicles be zero-emissions vehicles.
4. By 2050, each location shall strive to have at least 30 percent of commuter vehicles be zero-emissions vehicles.
5. Each location to develop business-case analysis for any parking structures to document how a capital investment in parking aligns with each campus CAP and/or sustainable transportation policies.

Sustainable Building Operations for Campuses

1. Each campus will submit one pilot LEED for Operations and Maintenance building for certification.
2. Each campus shall seek to certify as many buildings as possible through the LEED for Operations and Maintenance.
3. All locations to implement an ongoing Green Lab Assessment Program supported by a department on campus to assess operational sustainability of research groups and laboratories they use by summer of 2018:
    c. All locations to submit a UC Green Laboratories Action Plan by summer of 2018. UC San Diego is in compliance with this requirement.

Zero Waste

1. Divert 50 percent municipal solid waste by 2008, 75 percent by 2012, and achieve zero waste (90 percent diversion) for uses other than health care by 2020.

Sustainable Purchasing

1. Maximize procurement of environmentally preferable products and services.

Sustainable Foodservices

1. Purchase 20 percent sustainable food products by 2020, while maintaining accessibility and affordability for all students and Medical Center foodservice patrons.

Sustainable Water Systems

1. Develop a Water Action Plan and reduce potable water consumption by 20 percent by 2020, 36 percent by 2025, when compared to a 3-year average baseline of fiscal year 2005–2008.

UC Strategic Energy Plan

In February 2009, the UC Strategic Energy Plan was prepared for all UC campuses, to fulfill a goal of the UC Sustainable Practices Policy to implement energy efficiency projects in existing buildings. The initial goal for the retrofit projects is to reduce system-wide, growth-adjusted energy consumption by 10 percent or more by 2014 from the year 2000 base consumption level. The UC Strategic Energy Plan analyzes energy use and GHG trends, and identifies potential energy

efficiency retrofit projects at all buildings over 50,000 square feet (primarily lighting, HVAC, commissions and central plant measures) for all UC campuses (UCOP 2009). Energy savings, GHG emissions savings, and financial returns are estimated for hundreds of projects, which are grouped into Tier 1 (committed projects to be completed over the next 6 years) and Tier 2 (additional planned projects) projects based on their savings and financial payback. The UC Strategic Energy Plan project list is intended to be regularly updated by each campus to evaluate the feasibility of additional energy-saving measures.

UC Carbon Neutrality Initiative

In November 2013, UC President Janet Napolitano announced the CNI, which commits the UC to achieve net zero carbon emissions from Scope 1 and 2 sources by 2025 and net zero carbon emissions from specific Scope 3 sources by 2050 or sooner. Scope 1 emission sources include direct emissions from sources owned or controlled by the university, such as emissions from stationary combustion, process emissions, and fugitive emissions; while Scope 2 sources include indirect emissions from purchased electricity and purchased co-generation for heating or cooling. Scope 3 sources include emissions for all other sources that occur as a result of university operations, but occur from sources not owned or controlled by the university, such as emissions from campus commutes and business air travel (UC San Diego 2019a).

UC San Diego, Climate Action Plan

In 2008, and recently updated in 2019, UC San Diego published a CAP for implementing the UC San Diego's climate strategy to meet state and UC climate policies and objectives, including reducing GHG emissions to 1990 levels by 2020, achieving net zero carbon emissions by 2025, and continuing to certify new and existing building under the LEED rating system. The UC San Diego CAP also identifies how UC San Diego will include net zero carbon emissions and sustainability in curriculum and research, identifies goals for reducing emissions and impacts from purchasing, campus operations, transportation, and water usage, and identifies mechanisms for tracking progress and financing mechanisms (UC San Diego 2019b).

Carbon offsets play a critical role in UC San Diego's CAP. As discussed in the CAP, assuming that, starting in 2025, at least 40 percent of the UC San Diego natural gas supply could be from renewable bio-methane gas and that direct access purchased grid power is 100 percent carbon-free. UC San Diego, including the La Jolla and Hillcrest Campuses, would still need to purchase approximately 75,364 MT CO_2e of carbon offsets in 2025 at an initial cost of about $1.7 million in order to achieve net zero additional emissions. Measures that retain value for the campus, such as energy efficiency or additional renewable energy projects, will be prioritized over measures that send value off campus, such as purchasing offsets. Additionally, options for investing in community-based research or student engagement projects as alternative or "innovative" types of offsets are being investigated through a UC system-wide initiative.

Carbon offsets can be purchased in compliance with voluntary markets, which are transactions of carbon offsets that are not part of the active regulated state Cap-and-Trade program. The voluntary markets provide additional carbon offsets outside of the Cap-and-Trade program. The Hillcrest Campus is not subject to Cap-and-Trade requirements under AB-32 because the GHG emissions level is less than 25,000 MT CO_2e. UC San Diego currently uses carbon offsets to cover approximately 8 percent of its compliance obligations. While further evaluation would be necessary to determine the proper mix of offsets that would need to be purchased to meet the CNI goal, a recommended starting point that is mentioned in the UC San Diego CAP for consideration includes UC developed offsets, once they become available. The UC San Diego CAP also recognizes that the role of carbon offsets should be reduced overtime.

3.7.2.3 Local (Non-Regulatory)

As discussed in other sections of this 2019 LRDP EIR, UC San Diego is part of the UC, a constitutionally created entity of the State of California, with "full powers of organization and government" (Cal. Const. Art. IX, Section 9). As a constitutionally created state entity, the UC is not subject to municipal regulations of surrounding local governments, such as the City's General Plan or land use ordinances, for uses on property owned or controlled by the UC that are in furtherance of the UC's education purposes. However, UC San Diego may consider, for coordination purposes, aspects of local plans and policies for the communities surrounding the campus when it is appropriate and feasible, but it is not bound by those plans and policies in its planning efforts. Thus, UC San Diego has voluntarily reviewed municipal plans for general consistency with the proposed 2019 LRDP; however, none of the following plans have jurisdiction over UC San Diego. Additionally, the SDAPCD has not adopted rules or regulations related to GHG emissions.

County of San Diego Climate Action Plan

In February 2018, the County adopted the County of San Diego CAP (County CAP), which outlines actions that the County will undertake to meeting the state's 2020 and 2030 GHG reduction targets, and to demonstrate progress towards the 2050 GHG reduction goal. The County CAP quantifies GHG emissions; establishes reduction targets for 2020, 2030, and 2050; identifies strategies and measures to reduce GHG levels; provides a climate change vulnerability assessment; and provides guidance for monitoring progress on an annual basis. The County CAP identifies a comprehensive set of goals and actions, including ordinances, policies, resolutions, programs, and incentives, that the County can use to reduce GHG emissions. The strategies and reduction measures can be organized under the following emissions categories: built environment and transportation; energy; solid waste; water and wastewater; and agriculture and conservation (County of San Diego 2018). The County's CAP will require modification as a result of recent court rulings; however, an updated CAP has not yet been released.

City of San Diego Climate Action Plan

The City adopted a CAP (City CAP) in December 2015 (City of San Diego 2015). The City CAP quantifies GHG emissions; establishes reduction targets for 2020 and 2035; identifies strategies and measures to reduce GHG levels; and provides guidance for monitoring progress on an annual basis. The City CAP identifies a comprehensive set of goals and actions, including ordinances, policies, resolutions, programs, and incentives, that the City can use to reduce GHG emissions. The City CAP includes strategies and actions that encourage (1) water and energy efficiency buildings, (2) clean and renewable energy, (3) bicycling, walking, transit and land use, (4) zero waste, and (5) climate resiliency. In conjunction with the City CAP, the City adopted the CAP Consistency Checklist in July 2016. The CAP Consistency Checklist contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emission targets in the City CAP are achieved.

3.7.3 Project Impacts and Mitigation

The following sections address potential impacts relating to GHG that could result from implementation of the proposed 2019 LRDP.

3.7.3.1 Issue 1: Generate Greenhouse Gas Emissions

Greenhouse Gas Emissions Issue 1 Summary

Would implementation of the 2019 LRDP generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact: Implementation of the 2019 LRDP would not generate GHG emissions that would have a significant impact on the environment.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

The analysis of GHG emissions recognizes that the impact GHG emissions have on global climate change does not depend on whether they are generated by stationary, mobile, or area sources, or whether they are generated in one region or another. CARB developed regulations and recommendations toward achieving the statewide GHG reduction goal within AB 32 and SB 32 through the 2017 Scoping Plan Update. The 2017 Scoping Plan provides GHG reduction recommendations to lead agencies under CEQA. Therefore, this analysis incorporates the recommendations in the 2019 LRDP would not result in a cumulatively considerable GHG impact.

The 2017 Scoping Plan Update states that "there are recent examples of land use development projects in California that have demonstrated that it is feasible to design projects that achieve zero net additional GHG emissions." CARB recognizes that achieving no net increase in GHG emissions compared to existing conditions would demonstrate that a project is not contributing to climate change impacts, and is a recommended objective for land use development projects that are able to feasibly achieve this goal. Therefore, in this 20219 LRDP EIR, the 2019 LRDP would not result in a significant impact on the environment if GHG emissions from construction and operations would not exceed a threshold of zero net additional GHG emissions compared to the existing conditions baseline.

As shown in Table 3.7-2, the baseline emissions from the Hillcrest Campus are approximately 47,490 MT CO_2e. Therefore, the 2019 LRDP would result in a less than significant impact if, at full buildout of the 2019 LRDP, GHG emissions associated with the Hillcrest Campus would not exceed 47,490 MT CO_2e per year.

Impact Analysis

GHG emissions from construction and operation of the proposed 2019 LRDP are summarized below.

Construction

Construction activities would result in temporary increases in GHG emissions from operation of heavy equipment and vehicles during construction. GHG emissions from construction under the 2019 LRDP were calculated as part of preparation of the Air Quality Technical Report (Harris 2019) and incorporated in the GHG Reduction Strategy (LSA 2019). Refer to Section 3.2, Air Quality, for detailed construction assumptions for each phase. Construction emissions by phase, and total construction emissions, are reported in Table 3.7-3. To determine the contribution of construction emissions to the 2019 LRDP's ongoing GHG contribution, total construction emissions were amortized over a 30-year period and added to operational emissions based on methodology recommended by the County (County of San Diego 2015).

Table 3.7-3. Construction-Related GHG Emissions

Construction Phase	GHG Emissions (MT CO_2e)
1	12,014
2	12,348
3	6,728
4	8,289
5	3,766
Total	**43,145**

Source: LSA 2019, from data provided by Harris (2019).
Notes: MT CO2e = metric tons carbon dioxide equivalents.

Operations

The GHG Reduction Strategy proposed as part of the 2019 LRDP includes a calculation of buildout operational emissions using CalEEMod version 2016.3.2 (LSA 2019). Forecasted annual emissions associated with buildout of the 2019 LRDP are shown in Table 3.7-4. Emissions would continue to result from mobile sources, electricity consumption, potable water use, the generation of solid waste, production of wastewater, and area sources (specifically, landscape equipment). Under the 2019 LRDP, the existing CUP would be replaced by a new CUP that would include a cogeneration unit.

Table 3.7-4. Long-Term Annual Operational Greenhouse Gas Emissions

Sector	Emissions (MT CO_2e)	Percent of Inventory
Energy	22,576.24	38.8
Mobile	26,059.85	44.8
Waste	6,044.72	10.4
Water	449.52	0.8
Area Sources	1,545.05	2.7
Amortized Construction	1,438.15	2.5
Total Buildout Emissions	**58,113.52**	**100.0**
Total Net Change from Existing	**10,627.43**	**–**

Source: LSA 2019.

Note: MT CO_2e = metric tons of carbon dioxide equivalent. Amortization period for construction is 30 years.

Numbers in table may not appear to add up correctly due to rounding of all numbers to two decimal places. Assumes no greenhouse gas reduction measures implemented.

At full buildout, total annual emissions related to the Hillcrest Campus are anticipated to be 58,114 MT CO_2e in the absence of any GHG reduction measures. Implementation of the 2019 LRDP would result in an increase over baseline of approximately 10,627 MT CO_2e compared to existing conditions (Table 3.7-2). Reduction measures would be required to achieve net zero additional emissions compared to existing conditions.

The reduction measures outlined in the GHG Reduction Strategy build on the existing reduction policies in the UC Sustainable Practices Policy and UC San Diego CAP GHG mitigation strategies. Table 3.7-5 summarizes the reduction strategies outlined in the GHG Reduction Strategy and lists the corresponding UC Sustainable Practices Policy and UC San Diego CAP mitigation strategies. The GHG Reduction Strategy has been incorporated into the 2019 LRDP. In addition, some of the reduction measures have also been incorporated into 2019 LRDP principles, and where this occurs the corresponding principle is listed.

Table 3.7-5. Summary of Greenhouse Gas Reduction Strategy Reduction Measures and UC Sustainable Practices Policy Compliance

Sector	Reduction Measure	SPP Policies	CAP Strategies	2019 LRDP Principles
Energy Efficiency	**High-Efficiency Lighting:** Consistent with UC San Diego Design Guidelines, UC San Diego would opt to install high-efficiency lighting throughout the Hillcrest Campus, including light-emitting diode (LED) streetlights, path lighting, emergency lights, maintenance lighting, and building lighting. High-efficiency medical exam lights and surgery room lighting could use LED or other high-efficiency technology. It would be feasible to avoid usage of fluorescent, incandescent, or high-intensity discharge (HID) light sources.	Section A	Section 4: 4.1-1 to 3	LU-8.1
	High-Efficiency Appliances: UC San Diego could establish energy efficiency criteria for appliances installed on the Hillcrest Campus.	Sections A and B	Sections 4.1 and 4.2	LU-8.1
	Energy-Efficient Building Envelopes. Title 24 Standards are scheduled for updates and improvements every 3 years, with the ultimate goal of zero net energy. The 2019 LRDP would take proactive steps toward this advanced energy-efficiency goal by requiring all new buildings within the project area to exceed 2016 Title 24 standards.	Section A	Sections 4.1 and 4.2	LU-8.1
Renewable Energy	**On-Site Renewable Energy Generation:** The 2019 LRDP would include rooftop-mounted photovoltaic (PV) solar panels, and PV solar panels would be mounted on elevated racks in parking lots as a sustainability strategy that creates shade and reduces the urban heat island effect while generating renewable energy for the 2019 LRDP.	Section B: B-2	Section 4: 4.3, 4.3.1, Section 5: Scenarios	UT-2.1, UT-2.2, UT-2.3
	Off-Site Renewable Energy Generation: Through direct access, UC San Diego has the opportunity to purchase 100 percent of the electricity supplied to the Hillcrest Campus as renewable power. UC San Diego has committed to purchasing electricity that is 100 percent generated by carbon-free generation facilities that will result in zero GHG emissions by the 2019 LRDP buildout.	Section B: B-3	Section 4: 4.3, 4.3.2	NA
	Bio-Methane Fueling the Central Utilities Plant: UC San Diego would purchase bio-methane to address GHG emissions associated with use of natural gas at the CUP.	Section B: B-4	Section 4: 4.3, 4.3.1 and 4.3.2	NA

Table 3.7-5. Summary of Greenhouse Gas Reduction Strategy Reduction Measures and UC Sustainable Practices Policy Compliance

Sector	Reduction Measure	SPP Policies	CAP Strategies	2019 LRDP Principles
	On-Site Steam and Electric Cogeneration: Cogeneration systems can use a variety of fuels to generate electricity or power at the point of use, allowing the heat that would normally be lost in the power generation process to be recovered to provide needed heating. If fueled with bio-methane, a cogeneration system can be considered a renewable energy source of power and heat. A cogeneration system with either steam turbine or gas turbine could also be chosen based on the power and heat needs of the CUP.	NA	Section 4: 4.2 and 4.3	NA
	On-Site Fuel Cell Electric Generation within a Micro Grid: Fuel cells offer efficient on-site electric generation and steam production similar to traditional co-generation facilities (combustion turbine with a heat recovery steam generator). If fueled with bio-methane, fuel cells are considered a renewable energy source of power and heat.	NA	Section 4: 4.2 and 4.3	NA
	On-Site Battery Storage within a Micro Grid: Energy storage can be used to take full advantage of PV solar power generation by storing electricity not consumed on-site during times of peak generation. The stored electricity would be available to provide electricity during the peak energy consumption periods and at night when the PV panels are not generating electricity.	Section B	Section 4: 4.2 and 4.3	UT-2.4
Mobile	**Bicycle Infrastructure:** The 2019 LRDP would have a comprehensive network of bicycle paths connecting all the land uses within the medical campus and the nearby transit stations. Secure bike parking could be included in the design of the various land uses such that employees and visitors can safely and securely commute to Hillcrest Campus on bicycles and other wheeled devices. Showers and lockers could be made available to employees in order to facilitate and encourage commuting to work on bicycles and other wheeled devices.	NA	Section 4: 4.5	CIR-3.3, CIR-4.3, CIR-4.8, OS-5.1
	Employee Trip Reduction Program: The Hillcrest Campus would continue to implement an Employee Trip Reduction Program (ETRP) to reduce mobile source emissions from employee commutes. As a worst-case scenario, this strategy does not assume employees are living on campus.	Section D	Section 4: 4.5	CIR-2.4, CIR-2.5, CIR-3.1, CIR-3.2, CIR-5.4
	Improved Walkability Design: The 2019 LRDP proposes pedestrian pathways connecting the various land uses on campus with crosswalks at major street intersections.	NA	Section 4: 4.5	LU-6.2, CIR-4.1, CIR-4.3

Table 3.7-5. Summary of Greenhouse Gas Reduction Strategy Reduction Measures and UC Sustainable Practices Policy Compliance

Sector	Reduction Measure	SPP Policies	CAP Strategies	2019 LRDP Principles
	Neighborhood Electric Vehicles (NEV): The Hillcrest Campus could provide an NEV-friendly road network within the campus, including charging stations, and use an NEV fleet to shuttle visitors and employees between the various buildings on campus. In addition, maintenance crews would use specially equipped NEVs rather than trucks on campus when transporting personnel, tools, and maintenance equipment, in accordance with the UC Sustainable Practices Policy. NEV carts are currently in use on the campus.	Section D	Section 4: 4.4	NA
	Transit Oriented Design: The 2019 LRDP would facilitate linkages between the campus and the Fashion Valley Transit Center and Washington Street Transit Station in order to provide visitors and employees with alternatives to driving to the campus. For example, construction of pedestrian and bike lane linkages between the transit stations and the various land uses within the Hillcrest Campus.	NA	Section 4: 4.5	CIR-3.1, CIR-3.2, CIR-4.7
Solid Waste	**Institute a Recycling and Waste Diversion Program:** The 2019 LRDP could include recycling containers located within public areas, and a waste diversion and recycling program could be implemented within the campus to divert all non-hazardous and non-health care related waste that can be safely recycled or composted. The campus is currently in the process of developing policy and waste-reduction targets for health care related waste.	Section F	Section C	NA
Water Conservation	**Water Conservation Strategies:** The Hillcrest Campus 2019 LRDP could implement water conservation strategies that are designed to be as efficient as possible (36 percent indoor water use reduction) with potable water supplies. At buildout, all landscape irrigation needs within the campus could be provided through low precipitation spray heads or drip irrigation connected to weather-based irrigation control systems. In addition, a drought tolerant and native plant landscape pallet would be developed for the 2019 LRDP with the goal of conserving water, and air conditioning condensate would be recovered for irrigation and cooling tower use.	Section I: I-1 to 5	Section C	OS-3.3, OS-4.1, OS-4.2, OS-4.3, OS-6.4, OS-6.5, UT-2.5
Area Source (Landscape Equipment) Measures	**Electric Landscape Equipment:** Lawnmowers, leaf blowers, and chainsaws utilized on campus could be 100 percent electric-powered.	NA	NA	NA

Source: LSA 2019.

Notes: CAP = climate action plan; CIR = circulation; GHG = greenhouse gas; LRDP = 2019 Long Range Development Plan; LU = land use; NA = not applicable or not included in the document; OS = campus open space; UC = University of California; UC San Diego = University of California San Diego; UT = utilities and infrastructure

Table 3.7-6 summarizes 2019 LRDP emissions at buildout with implementation of the GHG Reduction Strategy measures. As shown in Table 3.7-6, after buildout of the 2019 LRDP and implementation of the GHG Reduction Strategy, the emissions inventory in 2035 would be 38,597 MT CO_2e per year, which is below the baseline emissions reduction target of approximately 47,490 MT CO_2e.

Table 3.7-6. Emissions with Reduction Measure Implementation

Sector	GHG Emissions (MT CO_2e)			
	2035 Emissions Inventory	2035 Emissions Inventory with Reduction Measures	Amount Reduced	Percent Reduction
Energy[1]	22,576.24	13,589.30	8,986.94	39.8
Mobile[2]	26,059.85	22,668.58	3,391.27	13.0
Waste	6,044.72	604.47	5,440.25	90.0
Water	449.52	287.69	161.83	36.0
Area	1,545.05	8.80	1,536.25	99.4
Amortized Construction	1,438.15	1,438.15	—	—
Total	**58,113.52**	**38,596.99**	**19,516.53**	**33.6**
Emissions Reduction Target	**—**	47,490	**—**	**—**
Below Target?	**—**	**Yes**	**—**	**—**

Source: LSA 2019. For additional details on how the reductions are allocated to land use types see Appendix E.

Notes: CARB = California Air Resources Board; CH_4 = methane; CO_2 = carbon dioxide; GHG = greenhouse gas; MT CO_2e = metric tons of carbon dioxide equivalent; N_2O = nitrous oxide

[1] Due to anticipated supply constraints on certified biogas credits, biogas is assumed to meet 40 percent of fuel gas needed for a cogeneration system with a gas turbine, and the remaining would be natural gas. The CARB Mandatory Reporting Regulation considers CO_2 emissions from combustion of biogas to be biogenic and reduced from the inventory of emissions. Emissions of CH_4 and N_2O due to combustion of biogas are still included in the inventory.

[2] The without reduction measures 2035 GHG emissions assume 4.5 percent electric vehicle (EV) ownership, while the with reduction measures 2035 GHG emissions assume 13 percent EV ownership.

The GHG Reduction Strategy presents a reasonably foreseeable pathway illustrating how the reduction measures would be implemented to reduce the 2035 emission inventory for the Hillcrest Campus to below the 2017 baseline levels of GHG emissions to achieve the reduction target of net zero additional emissions. However, implementation of the Hillcrest Campus 2019 LRDP would occur over approximately 15 years, during which services and technologies will evolve and circumstances will change. As such, the GHG Reduction Strategy includes an implementation strategy to monitor progress. The strategy uses performance standards to verify that the levels of GHG emissions reduction that are required in order to achieve the emissions reduction target are met or exceeded as a result of measure implementation regardless of the pace of development or other factors that might change over time (e.g., new weather patterns that could change the heating and cooling needs of buildings). Generally, the implementation strategy involves seven components, summarized in Table 3.7-7. Refer to the GHG Reduction Strategy in Appendix E for additional details regarding implementation and monitoring.

Table 3.7-7. Implementation Strategy Summary

Component	Summary
Administration and Staffing	The UC San Diego Health Sustainability Officer would be designated as the GHG Reduction Strategy Implementation Coordinator (IC) to oversee the successful implementation and tracking of all GHG reductions implemented pursuant to the GHG Reduction Strategy. The IC would be primarily responsible for coordinating with contacts across departments to provide and gather data, reporting on progress, tracking completed projects, and ensuring that the GHG Reduction Strategy is considered during the planning and design of development pursuant to the 2019 LRDP.
Financing and Budgeting	Funding for proposed improvements under the 2019 LRDP would be provided as part of Hillcrest Campus's annual budgeting process and may include private funding, endowments, and other sources of funding. The GHG Reduction Strategy does not include any components intended to limit funding sources associated either with 2019 LRDP buildout or achievement of the GHG reduction target.
Employee Outreach and Education	As part of the development process, the Hillcrest Campus IC intends to collaborate with employees in management positions within the various UC San Diego departments to educate them on the commitments within the GHG Reduction Strategy. In outreach efforts to all employees, the IC should focus on the education of employees on the commitment to a net zero increase in GHG emissions under the 2019 LRDP, specifically about the GHG reduction measures that require their participation, encourage participation in these programs, and alert them to program requirements.
Monitoring and Reporting	The IC would be responsible for developing a protocol for monitoring the effectiveness of emissions reduction programs as well as for undertaking emissions inventory updates. These components would include the following: • **Update GHG Inventory:** The IC would ensure emissions are inventoried at least every 3 years until buildout and compare that data to the Hillcrest Campus baseline GHG emissions in 2017. Based on subsequent inventories and tracking of reduction measure as implemented, the IC, in coordination with the Campus Planning Department, would evaluate whether the actual GHG emissions reflect the reductions anticipated by the GHG Reduction Strategy. If an inventory update shows an increase in emissions compared to baseline levels, the IC and Campus Planning Department would reevaluate and adjust the reduction measures to keep the GHG Reduction Strategy on track for meeting the target of zero net additional GHG emissions compared to 2017 baseline levels. A final inventory would occur in 2035 (buildout) to verify that the emissions reduction target of annual GHG emissions that are below the 2017 baseline has been achieved. • **Track Completion of GHG Reduction Measures:** The IC would keep track of measures implemented as part of the 2019 LRDP and in compliance with UC policy, including progress reports on each measure, using a Tracking Tool. The Campus Planning Department would support this effort by providing project-level tabulation annually to IC. • **Regular Progress Reports:** The IC would report annually to the Campus/Medical Center Leadership and relevant campus departments, including the Campus Planning Director, on GHG Reduction Strategy implementation progress for the Hillcrest Campus.
Development Review and Screening Tables	The GHG Development Review Process provides an enforceable mechanism for reducing emissions in compliance with the GHG Reduction Strategy. The GHG Reduction Strategy includes Screening Tables that would be used by the Campus Planning Department and project design teams for review of the 2019 LRDP development projects in order to ensure that the specific reduction strategies in the GHG Reduction Strategy are implemented as buildout of the 2019 LRDP occurs over time. The Screening Tables provide a menu of performance standards/options that can be selected and implemented to demonstrate consistency with the reduction measures and GHG reduction quantities in the GHG Reduction Strategy. The Campus Planning Department would prepare development-specific tabulation of the GHG reduction "points" achieved by a particular development project during the development review process and maintain an ongoing tabulation of the GHG reductions achieved on a project-by-project basis. This tabulation would be provided to the IC annually. In this way, the development

Table 3.7-7. Implementation Strategy Summary

Component	Summary
	review process would monitor the 2019 LRDP progress toward achieving the reduction target. The Screening Tables are provided in Chapter 7.0 of the GHG Reduction Strategy (Appendix E).
Updating and Modifying the GHG Reduction Strategy	The GHG Reduction Strategy is a dynamic program that requires implementation and monitoring, and may require adaptation. The key feature of the GHG Reduction Strategy that would not change over time is UC San Diego's commitment to achieving net zero GHG emissions by full buildout of the 2019 LRDP. The GHG Reduction Strategy may be modified, as needed, to achieve the net zero emissions target of approximately 47,490 MT CO_2e per year or less at full 2019 LRDP buildout and to incorporate future reduction strategies (e.g., incorporation of new GHG reduction technologies).

Source: LSA 2019.

As demonstrated previously in Table 3.7-6, with implementation of the GHG Reduction Strategy, the 2019 LRDP would not result in a net increase in GHG emissions. The GHG Reduction Strategy is incorporated into the 2019 LRDP and would be adopted as part of the 2019 LRDP. Therefore, the GHG emissions associated with the 2019 LRDP would not result in in a significant impact on the environment. This impact would be less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact associated with GHG emissions; therefore, no mitigation is required.

3.7.3.2 Issue 2: Conflict with Applicable Plan

Greenhouse Gas Emissions Issue 2 Summary

Would implementation of the 2019 LRDP conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact: Implementation of the 2019 LRDP would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

Mitigation: No mitigation is required.

Significance Before Mitigation: Less than significant

Significance After Mitigation: Less than significant

Standards of Significance

There are several UC and UC San Diego plans and policies that reduce GHG emissions and are applicable to the 2019 LRDP that would address this CEQA threshold. They are the UC San Diego CAP, the UC Sustainable Practices Policy, and the CNI.

Impact Analysis

The GHG Reduction Strategy implements all relevant UC San Diego CAP reduction measures and the UC Sustainable Practices Policy provisions that are designed to reduce GHG emissions. In addition, the 2019 LRDP would advance UC San Diego's achievement of goals set forth in the adopted CNI, which by 2025 would achieve net zero carbon levels in UC system-wide Scope 1 (direct and controlled) and Scope 2 (indirect) and by 2050 would achieve full net zero carbon levels in UC system wide-emissions, including Scope 3 (campus commuters and business air travel) emissions. The CNI goal is more stringent than the statewide target of achieving 80 percent below 1990 emission levels by 2050. In compliance with the UC San Diego CAP and UC Sustainable Practices Policy, as well as the CNI, UC San Diego currently undergoes annual inventories of GHG emissions for Scope 1, 2, and 3 emissions to monitor GHG reduction progress.

The Hillcrest Campus is making significant efforts to develop pathways to offset carbon emissions that would contribute to achieving the CNI goals by offsetting carbon emissions. To offset the Scope 1 (direct and controlled) and Scope 2 (indirect) emissions, the first strategy is to reduce energy demand through investments in achieving deep energy efficiency of the buildings and facilities on campus. The second strategy is the UC Regents Direct Access Program and purchase of carbon-free electricity from a solar field and a hydropower plant, which would contribute to achieving carbon neutrality in Scope 2 (indirect) emissions. The third strategy is the transition from natural gas consumption to biogas consumption. The UC owns two biogas plants: one is a landfill and the other is a rendering facility. The biogas generated from these plants is refined to pipeline quality and injected into the pipeline system. Starting in 2025, this directed pipeline-quality biogas will replace 40 percent of the campus natural gas consumption. After implementing these three strategies (maximizing energy efficiency across campus systems and operations, purchasing carbon-free renewable energy, and replacing the use of natural gas with the use of directed biogas), annual inventories of GHG emissions for Scope 1, 2, and 3 emissions would be completed by campus staff and verified by a qualified verification process through The Climate Registry. Starting in 2025, the campus would offset any remaining Scope 1 and Scope 2 emissions by purchasing carbon credits on the accredited voluntary carbon credit market in fulfillment of the UC CNI Policy. Measures that retain value for the campus, such as energy efficiency or additional renewable energy projects, will be prioritized over measures that send value off campus, such as purchasing offsets. Additionally, options for investing in community-based research or student engagement projects as alternative or innovative types of offsets are being investigated through a UC system-wide initiative.

After validating the annual inventory, UC San Diego would purchase carbon credits through the Climate Action Reserve, American Carbon Registry, Verra, or other accredited voluntary markets[1] to offset the remaining Scope 1 and Scope 2 emissions. The Hillcrest Campus would be actively involved in this effort and contribute to the implementation of the UC system-wide CNI. Compliance with the UC Sustainable Practices Policy and CNI ensures that the campus is implementing the UC San Diego CAP. Therefore, the 2019 LRDP would not conflict with any adopted plans, policies, or regulations for the reduction of GHG emissions. The impact would be less than significant.

The 2019 LRDP is anticipated to reach buildout in 2035. However, UC San Diego, through the UC Sustainable Practices Policy and the CNI, is committed toward continued and sustained GHG reductions beyond 2035 through 2050, which is the horizon year of State reduction goal. The Hillcrest Campus would continue the application of this GHG Reduction Strategy through buildout of the campus, which would implement long-term GHG reductions through sustainable design, renewable energy generation, electrification of the transportation fleet, sustainable water use, and zero waste (for non-health care uses) programs as described in Chapter 4.0 of the GHG Reduction Strategy. In addition, UC San Diego will continue annual inventories of GHG emissions into perpetuity to monitor progress and ensure achievement of CNI for Scope 1 and 2 emissions starting in 2025, and Scope 1, 2, and 3 emissions in 2050. Therefore, the UC San Diego Hillcrest Campus is consistent with the State's efforts toward achieving 2050 reduction target. This impact would be less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact related to conflicts with applicable GHG reduction plans; therefore, no mitigation is required.

3.7.4 Cumulative Impacts and Mitigation

The geographic scope of consideration for GHG emissions is on a global scale as such emissions contribute, on a cumulative basis, to global climate change. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies evaluate the cumulative impacts of GHGs, even relatively small additions, on a global basis. By nature, GHG evaluations are a cumulative study. The plans applicable to the 2019 LRDP for reducing GHG emissions, including the UC Sustainable Practices Policy, UC San Diego CAP, and CNI, establish targets for addressing this global issue at a UC system-wide level, considering global and regional projections of GHG emissions as well as local projects that may contribute to GHG

[1] The Climate Action Reserve, American Carbon Registry, and Verra are the three major carbon registries approved by CARB for the voluntary carbon offset market. The voluntary carbon offset market means that GHG mitigation projects within this carbon market are not required by policies or regulations and, therefore, are voluntarily implemented. UC San Diego currently purchases various types of carbon offsets from these markets. Other carbon registries in the voluntary carbon offset market can be used as long as they are accredited and approved by CARB.

emission impacts. As such, the analysis in Section 3.7.3, Project Impact and Mitigation, considers the potential cumulative impacts of the 2019 LRDP related to GHG emissions. Implementation of the 2019 LRDP, including the GHG Reduction Strategy, would result in decreased annual GHG emissions compared to existing conditions. As such, implementation of the 2019 LRDP would not be cumulatively considerable.

3.7.5 CEQA Issues Where There Is No Potential for a Significant Effect

All checklist items under greenhouse gas emissions are evaluated in the 2019 LRDP EIR.

3.7.6 References

CARB (California Air Resources Board). 2008. Climate Change Scoping Plan: A Framework for Change. Pursuant to AB 32, the California Global Warming Solutions Act of 2006. Accessed April 2018. https://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf.

CARB. 2014. First Update to the Climate Change Scoping Plan, Building on the Framework Pursuant to AB 32, the California Global Warming Solutions Act of 2006. May 2014.

CARB. 2017. Climate Change Scoping Plan. November 2017. Accessed January 2019. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

CARB. 2018. California Greenhouse Gas Emissions for 2000 to 2016, Trends of Emissions and Other Indicators. 2018.

CCAT (California Climate Action Team). 2007. Climate Action Team Proposed Early Actions to Mitigate Climate Change in California. Accessed December 10, 2017. http://www.climatechange.ca.gov/climate_action_team/reports/index.html.

City of San Diego. 2015. City of San Diego Climate Action Plan. Adopted December 2015. Accessed January 2019. https://www.sandiego.gov/sites/default/files/final_july_2016_cap.pdf.

City of San Diego. 2018. City of San Diego 2018 Climate Action Plan Annual Report Appendix. Accessed January 2019. https://www.sandiego.gov/sites/default/files/city_of_san_diego_appendix_for_2018_cap_annual_report_0.pdf.

County of San Diego. 2015. Recommended Approach to Addressing Climate Change in CEQA Documents. January 21, 2015.

County of San Diego. 2018. County of San Diego Climate Action Plan. Final. February 2018. Accessed January 2019. https://www.sandiegocounty.gov/content/dam/sdc/pds/advance/cap/publicreviewdocuments/PostBOSDocs/San%20Diego%20County%20Final%20CAP.pdf.

Harris (Harris & Associates). 2019. Air Quality Technical Report for the UC San Diego Hillcrest Campus 2019 Long Range Development Plan. June 2019.

LSA (LSA Associates, Inc.). 2019. Greenhouse Gas Emissions Reduction Strategy – University of California, San Diego Hillcrest Campus Long Range Development Plan EIR. June 2019.

UC San Diego (University of California, San Diego). 2019a. "Carbon Neutrality." Accessed January 2019. https://sustain.ucsd.edu/focus/cni.html.

UC San Diego. 2019b. UC San Diego Climate Action Plan. December 2008. Update effective April 2019.

UCOP (University of California Office of the President). 2009. University of California Strategic Energy Plan: Systemwide Summary Report. Final. February 23, 2009. Accessed January 2019. https://www.ucop.edu/sustainability/_files/energy/ucsep_sw.pdf.

UCOP. 2018. Sustainable Practices Policy. Issued July 1, 2004. Update effective August 10, 2018. Accessed January 2019. https://policy.ucop.edu/doc/3100155/SustainablePractices.

UNEP (United Nations Environment Programme). 2012. Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer, Ninth Edition.

USEPA. 2018a. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2016. February 2018. Accessed April 16, 2018. https://www.epa.gov/sites/production/files/2018-01/documents/2018_complete_report.pdf.

USEPA (U.S. Environmental Protection Agency). 2018b. "Greenhouse Gas (GHG) Emissions." Updated June 4, 2018. Accessed December 2018. https://www.epa.gov/ghgemissions.

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3.8 Hazards and Hazardous Materials

This section of the 2019 LRDP EIR describes the existing hazards and hazardous materials conditions on the Hillcrest Campus and surrounding area, potential hazards and hazardous materials impacts resulting from implementation of the 2019 LRDP, recommended mitigation measures to help reduce or avoid impacts, and the level of significance of impacts after mitigation. The information and analysis provided in this section is largely derived from the Phase I prepared by TRC in 2018 (see Appendix J of this 2019 LRDP EIR). Please note that the discussion of toxic air emissions and water quality issues are discussed in Section 3.2, Air Quality, and Section 3.9, Hydrology and Water Quality, respectively, in this 2019 LRDP EIR.

3.8.1 Environmental Setting

3.8.1.1 History of Medical Facilities

The San Diego County Hospital, originally located in Old Town San Diego, began operations in 1869. The hospital was relocated to Mission Valley in 1889 and a new, three-story County Hospital building was established in San Diego's Hillcrest neighborhood (current site) by 1904. Beginning in the early 1960s, a new hospital facility (existing hospital) was built on the site and leased to the UC San Diego School of Medicine in 1966, renaming it University Hospital. UC San Diego officially purchased the facility in 1981 and gave it its current name: UC San Diego Medical Center – Hillcrest. The site encompasses approximately 62 acres of developed and undeveloped land and is bordered by residential and other medical uses to the east; canyons to the north, west, and east; and residential and commercial to the south. This includes 35 buildings generally used for medical services, research, administrative, and utilities and 6 asphalt parking lots.

3.8.1.2 Campus Use and Disposal of Hazardous Materials

The term hazardous material is defined in different ways for different regulatory programs. This 2019 LRDP EIR uses the definition of hazardous materials from the California Health and Safety Code, Section 25501(n), which defines hazardous materials as:

> *Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous wastes, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.*

By convention, most hazardous materials are thought to be hazardous chemicals, but certain radioactive materials and biohazardous materials, as defined here, are also hazardous. This 2019

LRDP EIR considers hazardous materials to include hazardous chemicals, radioactive materials, and biohazardous materials that are used on campus.

Hazardous materials used on the Hillcrest Campus include general waste (universal waste), radioactive materials, biohazardous materials, pharmaceutical waste, and chemical materials. Table 3.8-1 summarizes the more specific hazardous materials present on the Hillcrest Campus and their associated hazards. These hazardous materials are related to a variety of campus activities such as hospital inpatient care, outpatient care, teaching and research laboratories, infrastructure and support services, and grounds services.

Table 3.8-1
Hazardous Materials Used at UC San Diego

Substance	Examples	Uses	Hazards
Solvents	Alcohols, ether, ethers, toluenes, and hexanes	Lab chemicals, paint removers, degreasers, and pesticides	Flammable, some explosive; toxic; damage to skin and respiratory tract; systematic damage to liver, kidneys, and nervous system.
Oxidizers	Hydrogen peroxide, perchloric acid, nitric acid, silver nitrate, potassium dicholorate, and ammonium persulfate	Hazardous medications, lab chemicals	Stimulates combustion of organic materials
Compressed Gases	Carbon dioxide, nitrogen, acetylene, oxygen, compressed air, refrigerants and miscellaneous small quantities and mixtures.	Hazardous medical gases, labs, facility systems, welding, and other campus shops	Flammable, some explosive (with potential for propellant effect, and some toxic)
Corrosives	Hydrochloric, nitric, sulfuric, and acetic acid, sodium hydroxide, and ammonium hydroxide	Hazardous medications, lab chemicals, cleaning agents, paint and paint thinners, Freon refrigerants, pesticides, and herbicides	Damage to skin and respiratory tract; some react to produce fire, explosion, or toxic fumes
Reactives	Alkyl metals (sodium potassium), and hydrides	Lab chemicals	Explosive (with or without detonation); toxic fumes; and explodes with exposure to water
Toxics	Chemotherapy drugs and bulk wastes, RCRA hazardous drugs and wastes, heavy metals, chlorinated hydrocarbons, arsenic, and cyanide compounds	Hazardous medications, lab chemicals, pesticides, photographic chemicals, and paints or dyes	Capable of causing acute or chronic systemic damage or death, cancer, infertility, and birth defects
Biohazards	Waste containing blood, bodily fluids, used sharps, pharmaceutical waste, trace chemotherapy drug waste, and other potentially infectious materials, bacteria and viruses	Regulated medical waste from the hospital and clinics and research laboratories	Capable of producing diseases

Table 3.8-1
Hazardous Materials Used at UC San Diego

Substance	Examples	Uses	Hazards
Radioactivity	Radionuclides (radioisotopes)	Labs and medical center	Capable of causing acute or chronic systematic damage, cancer, infertility, and birth defects
Fuels	Gasoline, diesel, and waste oil	Campus maintenance (grounds and building) and vehicles	Flammable, some explosive; toxic; damage to skin and respiratory tract; and produces fire/explosions

Source: UC San Diego 2019.

A hazardous waste, for the purposes of this 2019 LRDP EIR, is any hazardous material that has been abandoned, discarded, or recycled. The types of hazardous materials and waste used on the Hillcrest Campus are discussed in further detail below.

General Chemicals

Many chemical materials, some hazardous, are used for instructional and research activities, as well as facilities maintenance, during the course of daily campus operations. Virtually all of the buildings on the Hillcrest Campus contain commercial products, including janitorial and office supplies that could be considered "hazardous materials" under regulatory definitions. Non-household–type hazardous materials used in research laboratories include chemical reagents, solvents, radioisotopes, and biohazardous substances (discussed further below). UC San Diego Facilities Management units, including grounds, custodian services, pest management, and craft shops, use a wide variety of commercial products formulated with hazardous materials. These include fuels, cleaners, degreasers, solvents, paints, lubricants, pesticides and herbicides, adhesives, and sealers.

All chemical waste recycling or disposal is managed through EH&S. Hazardous materials collected by EH&S for disposal are packaged and labeled properly, which includes segregating incompatible materials, placing them in appropriate sealed containers, and identifying all components with approximate concentrations. Chemical wastes are further segregated by type, and consolidated, bulked, or compacted before a licensed hauler transports them from the campus to permitted off-campus facilities for incineration, treatment, recycling, or other forms of disposal. Some special projects may require a department to contract directly with a waste disposal vendor. In these cases, any waste removal must first be approved by EH&S. EH&S comprehensively reviews the waste manifest documents, the waste hauler information, and the disposal facility status prior to waste shipment. EH&S also tracks the waste until it reaches the final destination and is disposed. EH&S maintains manifest documents, as required by state and federal regulations, and produces documentation during regulatory agency audits. UC San Diego also pays annual hazardous waste taxes based on the volumes of waste disposed. It should be noted that the Hillcrest

Campus is not permitted as a disposal facility and does not dispose of chemical hazardous wastes on the site. Within 90 days, the waste is shipped off the campus by licensed transporters for recycling, treatment, and/or disposal at licensed treatment storage or disposal facilities in California and other states.

The Hillcrest Campus generated approximately 80,000 pounds of chemical waste in 2017 (UC San Diego 2018a). The material was either lab packed or bulked. A lab pack is a regulated method of handling hazardous waste and is defined as a packed drum that holds smaller containers of hazardous waste. Bulking is the consolidation of various waste types into a single waste container for disposal.

Radioactive Materials

Radioactive substances contain atoms that spontaneously emit radiation from the transformation of unstable atomic nuclei, which result in chemically different substances that may or may not be radioactive. Radioactive atoms are called "radionuclides" or "radioisotopes." Because radioactive materials emit ionizing radiation, their presence can be detected easily. Researchers and health care professionals take advantage of this easy detectability by using radioactive materials to study various biochemical functions in animals and humans. Radiopharmaceuticals (radioisotopes or drugs containing radioisotopes) are used in medicine and research. Limited types and quantities of radioisotopes are also used in research laboratories. All radioisotopes used on the Hillcrest Campus are done so in accordance to law, listed in the campus Broad Scope Radioactive Materials License issued by the state, and are stored in sealed containers designed to prevent release of radioactive materials to the environment and are secured against unauthorized removal or access per federal regulations (10 CFR 20.1801).

Exposure to ionizing radiation can result in adverse human health effects that range from short-term mild symptoms (such as sunburn) to serious illness or death, depending upon the amount and concentration of the radioactive source and the duration of the exposure. The extent to which exposure would result in any adverse effects depends on the radioisotope and the amount of duration of exposure.

After their use, radioisotopes become low-level radioactive waste (LLRW). Like chemical hazardous wastes, LLRW from campus teaching, research, and health science-related activities are collected and managed by EH&S. UC San Diego normally collects dry and liquid LLRW directly from its sources (researchers or clinical users). In accordance with strict regulatory guidelines and procedures, EH&S transports the waste to the waste handling facility, which is designed to safely and securely store and contain LLRW. EH&S also prepares and packages the waste for shipment and disposal, or for decay-in-storage within the Environmental Management Facility.

Dry LLRW with a half-life of less than 120 days is compacted and stored for decay (as part of the decay-in-storage program) in accordance with the Broad Scope Radioactive Materials License (10 CFR 33) until its radiation levels are indistinguishable from background levels. The waste is then transported as non-radioactive waste to a solid waste landfill. Liquid LLRW is disposed of based on activity and concentration in accordance with the Broad Scope Radioactive Materials License and applicable regulatory standards (10 CFR 20.2003) (UC San Diego 2018b, as cited in UC San Diego 2018b). For example, liquid LLRW that is mixed with chemical waste is transferred to a permitted facility for further processing. All other liquid LLRW (up to 2 curie [Ci]/year[1]) after hold up for decay (less than 90 days half-life), or directly after sampling (greater than 90 days half-life) is disposed via sanitary sewer (10 CFR 20.2003). Scintillation vials (vials used for detecting and measuring ionizing radiation) that consist of mixed waste or isotopes other than P-32, S-35, H-3, or C-14 are transferred to a permitted facility for further processing.

For solid wastes that are longer-lived, the final disposal depends on the hazard class of the LLRW. The federal Nuclear Regulatory Commission (NRC) regulations divide LLRW into Classes A, B, and C, depending on the concentration of isotopes and the half-life of the material. Class A is waste that consists of either short-lived radionuclides (i.e., half-lives below 30 years) or low concentrations of certain long-lived radionuclides; Class B is waste that must meet more rigorous requirements on waste form to ensure stability after disposal; and Class C is waste that must not only meet more rigorous requirements on waste form to ensure stability, but also requires additional measures at the disposal facility to protect against inadvertent intrusion (10 CFR 171-173). Class A waste must be disposed of in a manner that will isolate it for at least 100 years, while Class B and Class C waste must be isolated for at least 300 and 500 years, respectively. In addition, Class C waste disposal must include barriers that will prevent people from accidentally encountering the waste in the future. Currently, LLRW generators can ship waste to four out-of-state facilities: (1) the Barnwell, South Carolina LLRW disposal facility; (2) Clive, Utah LLRW disposal facility; (3) Richland, Washington LLRW disposal facility; and (4) Andrews County, Texas LLRW disposal facility (Nuclear Energy Institute 2014).

All of the radioactive waste currently generated at the Hillcrest Campus is classified as Class A waste. The waste is either decayed on campus in solid or liquid form, or disposed of off campus at a state- or federally licensed disposal facility, or disposed of via sanitary sewer (liquid form only if conditions under 10 CFR 20.2003 are met, as described above).

The UC San Diego Radiation Safety Manual (2016a) describes the radiation safety program for sources of ionizing radiation handled on campus. The manual outlines procedures and processes for the safe handling of ionizing radiation materials per campus policies and regulatory requirements. This manual is incorporated by reference into UC San Diego's Broad Scope

[1] Note that radioactivity of a substance is measured by the number of nuclei that decay per unit time. Thus, Ci/year is the number of nuclei that decay per year.

Radioactive Materials License. All principal investigators and radioactive material users are required to comply with all of its provisions, as well as the conditions of the Radioisotope Use Authorization (RUA).

Biohazardous Materials

A biohazardous material is a material that harbors a biological agent capable of causing diseases in humans, animals, or plants. Biohazardous materials include infectious agents, microbiological specimens, and cultures of microorganisms capable of causing disease; microbiological specimens or cultures included in National Institutes of Health (NIH)/Centers for Disease Control and Prevention (CDC) Risk Group 2, 3, or 4; recombinant organisms containing deoxyribonucleic acid (DNA) from infectious agents; human blood, body fluids, or unfixed tissue; laboratory waste contaminated with biohazards; animal parts, tissues or fluids suspected of containing an agent infectious to humans, whether deliberately introduced or naturally occurring; and discarded materials suspected of contamination with infectious agents.

Medical waste is a general term that includes both biohazardous and sharps waste (California Health and Safety Code, Section 117690). Sharps waste includes devices capable of cutting or piercing, such as hypodermic needles, razor blades, and broken glass (California Health and Safety Code, Section 117755). Medical waste mixed with hazardous chemical waste is also referred to as mixed waste. Medical waste includes pathology waste, recognizable human anatomical parts and fixed human surgery specimens and tissues, and chemotherapy waste; waste such as gloves, towels, empty bags; and intravenous tubing that contains or is contaminated with chemotherapeutic agents.

UC San Diego has developed programs, practices, and procedures for monitoring, routine inspection, reporting, and waste management to reduce community and worker exposure to potential hazards associated with medical wastes and biological hazards. Activities that could create biohazardous aerosols are conducted in biosafety cabinets, which filter all released air to remove biohazardous materials. Biosafety cabinets and equipment with special filters to remove biological agents are used and tested regularly by outside contractors. Regulations specify that medical wastes are stored in refrigerated facilities for not more than 90 days and those wastes are properly packaged and labeled. Medical waste may also be rendered noninfectious through steam sterilization. UC San Diego disposes of biohazardous and medical waste in accordance with their biosafety program, which is compliant with applicable federal, state, and local disposal regulations.

Hazardous Materials Associated with Infrastructure

Substances, such as asbestos, lead, and mercury, could be present in some buildings on campus. Underground utility tunnels may also contain asbestos. Activities that involve cutting, grinding, or drilling during older building (pre-1982) renovation or demolition, or relocation of underground utilities, could release friable asbestos fibers (e.g., fibers that, when dry, can be easily crumbled or pulverized to powder by hand) unless proper precautions are taken. Lead, a naturally occurring metallic

element, can be found in numerous uses and sources, such as paint, water pipes, and solder in plumbing systems. Lead-based paint on buildings and structures may contaminate surrounding soils. Elemental mercury, an insoluble (i.e., cannot be dissolved) liquid metal, is commonly used in laboratory and medical equipment, such as thermometers and manometers (used for measuring pressure), electrical equipment, and some water pumps. In addition, an unknown number of fluorescent light ballasts containing polychlorinated biphenyls are also present in some campus buildings.

UC San Diego has a comprehensive asbestos management program in place to protect the health of the UC San Diego community. The UC San Diego Asbestos Management Program outlines the responsibilities of the Asbestos Control Coordinator and project managers from UC San Diego departments that have the potential to disturb asbestos-containing materials (UC San Diego 2017p, as cited in UC San Diego 2018b). UC San Diego also has an Asbestos Action Plan for project managers, and a list of approved vendors for project managers seeking asbestos and lead abatement services. In accordance with Sections 25915 through 25916 of the California Health and Safety Code, EH&S maintains an inventory of on-campus buildings that could contain asbestos and provides on-going campus-wide notification of these locations. In this notification, which is available on the EH&S website, buildings constructed after 1981 are identified as unlikely to contain asbestos (UC San Diego 2014a). UC San Diego is in compliance with applicable U.S. Occupational Safety and Health Administration (OSHA) regulations regarding general and construction industry standards for asbestos.

UC San Diego implements a Lead-Based Paint Management Program designed to identify, evaluate, and control lead hazards that may affect the UC San Diego community. In addition, state and federally mandated regulations related to hazardous materials that may be present in campus buildings or other infrastructure are implemented during renovation and demolition activities. Contractors who disturb or potentially disturb asbestos, lead, or other infrastructure-related hazardous materials are required to comply with all federal, state, and local regulations regarding hazardous materials.

3.8.1.3 Disposal and Transportation of Hazardous Materials

Regulated medical waste on the Hillcrest Campus is collected in approved containers by waste stream and transported to the same area as solid waste but in secured storage cages. The waste is loaded into box trucks or tractor trailers and transported by Stericycle, Inc. to a special regulated medical waste treatment location. For the Hillcrest Campus, this treatment location is the Stericycle Autoclave Facility in Vernon, California, which processes approximately 5.25 million pounds of regulated medical waste per month (Moore 2019).

All chemical waste recycling or disposal on the Hillcrest Campus is managed through the UC San Diego EH&S office. Hazardous materials collected by EH&S for disposal are packaged and labeled properly, which includes segregating incompatible materials, placing them in appropriate

sealed containers, and identifying all components with approximate concentrations. Chemical wastes are further segregated by type and consolidated, bulked, or compacted before a licensed hauler transports them from the campus to permitted off-campus facilities for incineration, treatment, recycling, or other forms of disposal. Some special projects may require a department to contract directly with a waste disposal vendor. In these cases, any waste removal must first be approved by EH&S. EH&S comprehensively reviews the waste manifest documents, the waste hauler information, and the disposal facility status prior to waste shipment. EH&S also tracks the waste until it reaches the final destination and is disposed. EH&S maintains manifest documents, as required by state and federal regulations, and produces documentation during regulatory agency audits. UC San Diego also pays annual hazardous waste taxes based on the volumes of waste disposed. It should be noted that the Hillcrest Campus is not permitted as a disposal facility and thus does not dispose of chemical hazardous wastes on the site. Within 90 days, the waste is shipped off campus by licensed transporters for recycling, treatment, and/or disposal at licensed treatment storage or disposal facilities in California and other states.

3.8.1.4 Hazardous Materials Sites

The potential exists for buildings or sites on the Hillcrest Campus to have been historically contaminated by hazardous substances as a result of former uses of the sites, leaks from unidentified underground storage tanks (USTs), or unidentified buried debris that could contain hazardous materials or by-products. A summary of potentially hazardous materials sites on and adjacent to the Hillcrest Campus is provided below.

Leaking Underground Storage Tank

A number of USTs are located on the Hillcrest Campus. A release of approximately 800 to 900 gallons of diesel fuel occurred near two USTs in December of 1991, reportedly the result of overfilling of the tanks during an integrity (tightness) test. The USTs were located near the existing CUP. Approximately 630 gallons of fuel was recovered by pumping the tank vaults immediately following the release.

Between September 17, 1998 and January 28, 1999, seven additional USTs were removed from the same site location under the supervision of the County Department of Environmental Health (DEH). During the UST removal, cracks and perforations were observed along the bottom of four of the USTs. When the USTs were removed, approximately 1.5 feet of water and 1–2 inches of free product (believed to be diesel), were observed in the bottom of the excavation. Approximately 1,500 gallons of water and free product were removed from the excavation and transported to an appropriate disposal facility. In 1999, the cracked USTs were removed. Analytical results of the soil samples collected from the bottom of the excavation reported concentrations of total recoverable petroleum hydrocarbons (TRPH).

Permanent monitoring wells were installed in and around the former tank pit to analyze soil and groundwater samples. Site assessment activities were conducted at the site where the USTs were previously removed in four phases between December 2003 and June 2011. In April 2008, during the replacement of an existing concrete utility bridge, construction crews detected hydrocarbon odors in soil exposed in formational material found during excavation. Soil samples were collected from soil exposed in the cut and submitted for laboratory analysis. Petroleum hydrocarbons as gas (TPHg) and petroleum hydrocarbons as diesel (TPHd) concentrations were detected in the soil samples up to 3,500 and 1,200 mg/kg, respectively. The affected soil was segregated from the rest of the excavated materials for disposal at an appropriate facility. In May 2008, 11 new nested monitoring wells were installed.

The analysis of soil and groundwater samples from the area near the CUP indicates the presence of petroleum hydrocarbon constituents, primarily gasoline and diesel. There are no identified impacts to surface water. The nearest perennial surface water body is the San Diego River, situated in Mission Valley more than 3,100 feet north of the Hillcrest Campus. In addition, there are no identified air pollutant impacts. Current site conditions have limited most pathways for exposure to hydrocarbons in the subsurface. However, the site cannot be considered a low-risk groundwater case as defined by the State Water Resources Control Board (SWRCB) as long as Light Non-Aqueous Phase Liquids, or liquid phase hydrocarbons, are present, even though there is no known domestic or municipal use of the groundwater and the hydrocarbons are not migrating off site.

In 2014, a Corrective Action Plan was prepared to address the removal of Light Non-Aqueous Phase Liquids from soil in the source areas and recovery of liquid phase hydrocarbons and contaminated groundwater through the process of High Vacuum Dual Phase Extraction (Apex 2013). The Corrective Action Plan was never implemented or completed. Ongoing groundwater monitoring at designated monitoring wells has occurred at the site since 1998. In addition, since December 2011, free product monitoring has occurred and, when necessary, removal activities have occurred. Monitoring over time has shown that the contaminated area has not grown (Apex 2018).

Hazardous Materials Site Records

To determine if other hazardous materials sites besides the LUST, discussed above, exist on or adjacent to the Hillcrest Campus, a records search of federal and state hazardous materials sites databases was conducted. The databases were searched for any sites located within a given radius, based on industry records search standards, from the Hillcrest Campus (EDR 2018). Specifically, the study area boundary included all campus properties contained within the boundary of the proposed 2019 LRDP and surrounding area within 1 mile of the campus boundaries. Additional details regarding the records search of federal and state hazardous materials sites databases are provided in Appendix J of this 2019 LRDP EIR.

A total of 155 properties/listings were found within a 1-mile radius of the Hillcrest Campus as shown on Figure 3.8-1, Hillcrest Campus Underground Storage Tank (UST) Map. Some of these sites overlap in the various searched databases. The Phase I concluded that one of these sites is listed with the SWRCB and is considered a recognized environmental concern. A review of the database listings resulted in the conclusion that none of the remaining 154 sites would be an environmental concern to the Hillcrest Campus based on the nature of the database listing (i.e., site was listed in a compliance-related database versus contamination-related database) or regulatory status (i.e., case closed, no violations found). See Appendix J of this 2019 LRDP EIR for a summary of the database listings.

3.8.1.5 Wildland Fire Hazards

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped areas of significant fire hazards in the state through its Fire and Resources Assessment Program (FRAP). These maps place areas of the state into different fire hazard severity zones (FHSZ) based on a hazard scoring system using subjective criteria for fuels, fire history, terrain influences, housing density, and occurrence of severe fire weather where urban conflagration could result in catastrophic losses. A particular fire threat within the City's Uptown Community where the Hillcrest Campus is located is the steep open space canyons that primarily extend along the edges of the neighborhoods, including the Hillcrest Campus, and I-8 in Mission Valley to the north. These heavily vegetated areas have been prone to fires in the past. According to CAL FIRE's Fire Hazard Severity Zone Map of San Diego County (City of San Diego 2009), a portion of the Hillcrest Campus lies within a local responsibility very high fire hazard severity zone. More specifically, the steep canyons that surround the campus to the north, east, and west constitute a high risk as well as the existing campus buildings that border the canyons.

The Hillcrest Campus does not have its own fire department and relies on the San Diego Fire-Rescue Department (SDFR) to respond to all applicable emergencies. The SDFR has an active program that promotes the management of canyon vegetation near structures. The City has recognized the value of fire prevention measures, including adopting strenuous safety codes and a brush management program, to reduce pressure on the overall response system in the long term. The City will continue to evaluate fire (and police) capacity as growth and redevelopment continues to occur in the City to ensure that station locations and staffing levels are adequate to maintain acceptable levels of service (City of San Diego 2016b).

Nevertheless, the Hillcrest Campus itself employs various fire protection measures to ensure adequate safety on campus. When new development, redevelopment, or site improvements occur at the Hillcrest Campus, UC San Diego is responsible for amending the campus emergency access route map to ensure that adequate fire protection equipment access is maintained on campus at all times. The City Deputy Fire Marshal meets with the Hillcrest Campus Fire Marshal as needed to review site access plans. Maintenance activities for water mains and fire hydrants are managed by the UC San Diego Facilities

Management Department, which is responsible for ensuring that the water supply for fire hydrants meets fire flow standards (refer to Section 3.17.1 in Section 3.17, Wildfire).

Additionally, the Hillcrest Campus employs fuel management techniques to protect the campus from wildfires. Fuel management is required around buildings adjacent to undeveloped areas (City of San Diego 2019).

3.8.1.6 Aircraft Accident Hazards

San Diego International Airport (SDIA) is located approximately 1.5 miles to the southwest of the Hillcrest Campus. It is owned and operated by the San Diego County Regional Airport Authority. SDIA is the busiest single runway airport in the United States. The Hillcrest Campus is located within the designated Airport Influence Area of SDIA (San Diego Regional Airport Authority 2014) which requires specific protection measures for noise, overflight, safety, and/or airspace protection. The Hillcrest Campus is also located in the SDIA Airspace Protection Boundary (San Diego Regional Airport Authority 2014). This boundary ensures that new development will not impact flight safety by limiting the height of new structures and objects, preserving the operational capability of SDIA, and preventing further reduction of available runway landing distance. Finally, the Hillcrest Campus is also located in the SDIA Overflight Boundary (San Diego Regional Airport Authority 2014). This boundary ensures that prospective buyers of new housing within areas subject to aircraft overflights are informed about the potential effects of overflights by, ensuring that owners and developers of new residential projects provide notice of the presence of aircraft overflight.

Currently, the 3-story Medical Offices North building located at the intersection of Front Street and Arbor Drive hosts the campus's helicopter landing zone on its roof, which is an essential facility for the hospital's trauma center. According to Mercy Air and Reach, the helicopter operators, there were 531 helicopter landings at the hospital in 2017.

3.8.1.7 UC San Diego Safety Plans and Programs

The policy of the UC is to maintain a safe environment and conduct operations in compliance with applicable regulations and health and safety standards. Per Section 516-14 of the UC San Diego Policy and Procedure Manual, all hazardous materials are inventoried and waste is removed from individual spaces and from the general campus area as often as necessary to prevent disease, nuisance, and safety problems and to comply with regulatory requirements. Prior to removal, hazardous wastes are safely and securely stored in a manner compliant with regulatory requirements to prevent nuisance, spills, exposure, and environmental problems. EH&S has the primary responsibility for coordinating the management of hazardous materials on campus, which include a variety of chemical, biohazardous, and radioactive waste, according to local, state, and federal regulations. Key UC San Diego plans, policies, and procedures are described in further detail below.

Hazardous Materials Business Plan

Pursuant to the California Hazardous Materials Release Response Plan and Inventory Law (California Health and Safety Code, Division 20, Chapter 6.95), UC San Diego has prepared a Hazardous Materials Business Plan (HMBP) for the Hillcrest Campus containing information about the location of and emergency procedures for campus buildings in which hazardous materials are handled, as well as employee training (UC San Diego 2016b). As the local Certified Unified Program Agency (CUPA), the County DEH administers the California Hazardous Materials Release Response Plan and Inventory Law requirements for UC San Diego and other private and public entities subject to the law. The Hillcrest Campus HMBP requires that all personnel working with hazardous materials receive annual training in safe handling of hazardous materials, hazardous waste, and basic emergency spill response. The HMBP is submitted and re-certified annually through submittals in the statewide California Environmental Reporting System (CERS). The HMBP is also updated and resubmitted to CERS within 30 days for any of the following changes: a 100 percent or greater increase in quantity of a hazardous material previously reported; any handling of a disclosable quantity of a previously undisclosed hazardous material; deleting a previously disclosed hazardous material; any change in the storage, location, or use of hazardous materials, which could affect an emergency response; and any change in business name, ownership, or address (County of San Diego 2016).

Emergency Operations Plan

UC San Diego has prepared an Emergency Operations Plan for the Hillcrest Campus, Medical Center Policy 801.3, which addresses the campus community's planned response to various levels of human-made or natural emergency situations including fires, hazardous spills, earthquakes, flooding, explosion, and civil disorders (UC San Diego 2014b). It provides information for building evacuation, emergency supplies, and related emergency contacts and information sources. The purpose of the Emergency Operations Plan is to provide information that will save lives during extraordinary emergency events and hasten the resumption of normal campus operations during the recovery process. An effective organizational emergency response depends on an informed campus community containing members who are familiar with campus procedures and understand their personal responsibility for emergency preparedness and response.

The Emergency Operations Plan identifies three levels of emergencies. A Level 1 emergency is a small-scale, localized problem confined to a single space such as a laboratory and loading dock. This type of emergency is easily contained utilizing existing campus resources. A Level 2 emergency is larger in scope and size than a Level 1 emergency, and could be a more serious event affecting many people by involving an entire floor or building. A Level 2 emergency may involve large-scale evacuation and include the need to access off-campus emergency response resources to effectively control the situation. A Level 3 emergency is a campus-wide emergency event causing widespread damage and injuries that overwhelms available resources and personnel (such

as a strong earthquake). Such emergencies pose a major threat to life and property and can impact the well-being of large numbers of people. In the event of a Level 3 emergency, outside emergency response resources from both the governmental and private sector would be used in addition to full activation of all procedures contained within the plan.

Health and Safety Policy (PPM 516-1)

This policy outlines UC San Diego's commitment to providing a healthy and safe workplace and to eliminating conditions that could result in personal injury and ill health. Campus operations are required to comply with applicable regulations, and with accepted health, safety, and environmental protection standards. The Hillcrest Campus is required to provide a safe and healthy environment for its visitors and members of the public who come onto UC San Diego's premises or are affected by UC San Diego's actions (UC San Diego 2006).

Research Area Safety Coordinator Webpage

Research area safety coordinators play a key role in helping achieve worker safety and regulatory compliance within laboratories. The purpose of this webpage is to help designated coordinators meet their departmental safety needs and facilitate the flow of health and safety information from EH&S into the workplace, including information related to laboratory personnel management, emergency preparedness in the laboratory, hazardous waste management, and environmental protection.

Soils Management Policy

UC San Diego's Soils Management Policy aims to protect human health and the environmental from petroleum, heavy metals, and other hazardous materials or wastes that may be contained in soils (UC San Diego 2017a). This policy applies to soil disturbance and soil placement associated with new development and redevelopment on the Hillcrest Campus. The policy outlines procedures that assist in determining the presence of hazardous materials or wastes within a proposed project site, and the primary department implementing the project is required to coordinate with EH&S to determine the appropriate application of the policy and level of implementation.

Safety Committees

UC San Diego maintains numerous safety committees (some of which are mandated by law), which are represented by a variety of faculty members, community members, representatives from the larger academic departments, graduate student representatives, the Chemical Safety Officer, and the Departmental Safety Coordinator. These committees oversee activities at the Hillcrest Campus. Each committee is described below:

- **Chemical Safety and Surveillance Committee (CSSC).** The CSSC advises the Chancellor through the Vice Chancellor of Resource Management and Planning on all matters

relating to the safe use of hazardous chemicals. The primary charge of the CSSC is to reduce risks associated with hazardous chemicals and establish policies and procedures that meet or exceed applicable norms; monitor new regulations; and implement adopted policies and procedures for use of hazardous chemicals (UC San Diego 2017b).

- **Radiation Safety Committee (RSC).** The RSC advises the Chancellor through the Vice Chancellor of Resource Management and Planning on all matters relating to radiation safety and recommends such policies and procedures as it may deem appropriate to ensure an adequate radiation safety program. The RSC includes two subcommittees, the Human Exposure Review Committee (HERC) and Radioactive Drug Research Committee (RDRC). The RSC has the ultimate responsibility for the use of radioactive material at the Hillcrest Campus and is the ultimate reviewing and authorizing agent for the use of all ionizing radiation (UC San Diego 2017c).
- **Laser Safety Committee (LSC).** The Laser Safety Committee is advisory to the Chancellor through the Vice Chancellor of Resource Management and Planning on all matters relating to laser safety, for reviewing and approving all proposed uses of laser radiation, and for advice and guidance in carrying out the UC San Diego Laser Safety Program. The committee consists of at least five members, including the Laser Safety Officer (LSO) (UC San Diego 2017d).
- **Institutional Biosafety Committee (IBC).** The IBC advises the Chancellor through the Vice Chancellor of Resource Management and Planning on all matters related to the safe use of hazardous biological materials and organisms. The IBC establishes, monitors, and enforces policies and procedures that meet or exceed applicable norms or regulations for biohazardous materials and/or recombinant DNA, including gene transfer clinical trials. Any use of biohazardous materials and/or recombinant DNA must be reviewed and approved by the IBC (or the Biological Safety Officer operating within guidelines established by the IBC) (UC San Diego 2017e).
- **Institutional Animal Care and Use Committee (IACUC).** The IACUC Office is one of the four core offices of the Research Compliance and Integrity Program in Research Affairs, along with Export Control, Conflict of Interest, and Research Misconduct. The IACUC oversees the UC's animal care and use program and is responsible for reviewing all animal use protocols, ensuring compliance with federal regulations, inspecting animal facilities and laboratories, and overseeing training and educational programs (UC San Diego 2017f).
- **Environment of Care Committee (EOCC).** The EOCC is the safety committee for the Hillcrest Campus. The EOCC provides a multi-disciplinary forum for the collection, analysis and dissemination of information and the formulation of corrective and preventive action to manage risk to patients, visitors and personnel, and the environment. The EOCC also reviews the objectives, scope, performance and effectiveness of the following management programs: Safety, Security, Hazardous Materials and Waste, Fire

and Life Safety, Medical Equipment, and Utilities. It regularly reviews safety policies and procedures and makes revisions as necessary.

Laboratory Safety Manual

This manual is intended to help researchers recognize, evaluate, and control hazards in their laboratory. The manual includes federal and state health and safety standards and published practices, standards, and guidelines of nationally recognized health and safety groups. The UC San Diego Laboratory Safety Plan serves as a companion document to the Biosafety, Radiation, and Laser Safety Manuals (UC San Diego 2017g).

Biosafety Program

This program specifies the practices, procedures, and requirements for safe handling and use of biohazardous materials for research, clinical, and teaching activities at the Hillcrest Campus. It is the policy of UC San Diego that all research and teaching involving biohazardous materials be conducted in a safe manner in order to protect the greater community at large, as well as the academic community (UC San Diego 2017h).

Radiation Safety Manual

UC San Diego uses radioactive materials under a Broad Scope Radioactive Material License issued by the State of California. This manual represents the radiation safety program for all locations on that license, including the Hillcrest Campus (UC San Diego 2016a). Implementation of the radiation safety program ensures that all sources of ionizing radiation are handled in accordance with the official policies and procedures of the campus and governmental agency requirements. This manual also outlines directions for the proper handling and disposal of radioactive wastes, including, but not limited to, dry radioactive waste, liquid radioactive waste, and mixed biohazardous/radioactive waste.

Laser Safety Program

UC San Diego's Laser Safety Program describes institutional and employee responsibilities for the safe use of lasers and laser systems under UC San Diego campus jurisdiction. The program also provides administrative and engineering controls, requirements for safety training, and emergency procedures. Controls required by UC San Diego's Laser Safety Program are determined by the hazard classification of a laser or laser system and how and where it will be used. This program meets the requirements of the American National Standard for the Safe Use of Lasers (UC San Diego 2017i).

Radiation Safety Training

Individuals must receive radiation safety training prior to unsupervised work with radioactive material. Some courses available through UC San Diego include (UC San Diego 2017j):

- **Radiation Safety Seminar.** Required for anyone using radioactive materials. This course covers general radiation safety and radioactive waste management.
- **Annual Radiation Safety Refresher.** Required for anyone using radioactive materials and not able to attend an in-person refresher training. This course provides the most up-to-date program information to ensure exposures from the use of radioactive materials are kept as low as reasonably achievable.
- **Radiation: Sealed Source Training.** Required initial and refresher training for researchers who work with sealed sources.
- **Radiation P-32 Safety Seminar.** Required for researchers using Phosphorous 32 (P-32) > 10 millicurie (mCi) per experiment.
- **Radiation S-35 Safety Seminar.** Required for researchers using Sulfur 35 (S-35) > 10 mCi per experiment.
- **Dual Energy X-Ray Absorptiometry (DEXA) Scanner Radiation Training.** Required for researchers and health care providers operating DEXA scan x-ray equipment.

3.8.2 Regulatory Framework

Applicable federal, state, and local laws and regulations governing the generation, handling, transportation, and disposal of hazardous materials are described in the following sections.

3.8.2.1 Federal

Resource Conservation and Recovery Act

Enacted in 1976, the Resource Conservation and Recovery Act (RCRA) (40 CFR 239–282) is the primary federal law governing the disposal of solid and hazardous waste in the United States. RCRA was amended and strengthened by Congress in 1984 with the passing of the federal Hazardous and Solid Waste Amendments. These amendments to RCRA required phasing out land disposal of hazardous waste. RCRA has been amended on two occasions since Hazardous and Solid Waste Amendments: in 1992 with the passage of federal Facility Compliance Act, which strengthened enforcement of RCRA at federal facilities; and, in 1996, with the passage of the Land Disposal Program Flexibility Act, which provided regulatory flexibility for land disposal of certain wastes. Under RCRA, individual states may implement their own hazardous waste programs in lieu of RCRA as long as the state program is at least as stringent as federal RCRA requirements and is approved by the USEPA. As a generator of hazardous waste, UC San Diego is subject to RCRA requirements.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act (49 CFR, Part 397) was enacted in 1975 to protect against the risks to life, property, and the environment that are inherent in the transportation of hazardous material in intrastate, interstate, and foreign commerce. The U.S. Department of Transportation (USDOT) receives the authority to regulate the transportation of hazardous materials from the Hazardous Materials Transportation Act. Hazardous materials generated at UC San Diego that are transported off the site for disposal are subject to the Hazardous Materials Transportation Act.

Occupational Safety and Health Act

The federal Occupational Safety and Health Act (29 CFR 1910) is intended to ensure that employers provide their workers with a work environment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, or unsanitary conditions. Operation of this program is delegated to the state and operated by California OSHA (Cal/OSHA). These regulations apply to all UC San Diego employees. Standards are created by the National Institute for Occupational Safety as the research institution for OSHA. These standards are adopted at the state and local level and are enforced on the campus by Cal/OSHA and other agencies.

Public Health Security and Bioterrorism Preparedness and Response Act

Title 42, Part 73 of the Code of Federal Regulations, published in December 2002, implements the provisions of the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, which sets forth the requirements for possession, use, and transfer of select agents and toxins. The biological agents and toxins listed in this part have the potential to pose a severe threat to public health and safety, to animal health, or to animal products. Overlap select agents and toxins are subject to regulation by both the CDC and Animal and Plant Health Inspection Service. A few laboratories on campus use select agents and are therefore registered with the CDC. Biohazardous materials that are handled, stored, and disposed of by UC San Diego or other licensed contractors are subject to compliance with the requirements set forth in the Public Health Security and Bioterrorism Preparedness and Response Act.

Atomic Energy Act

The Atomic Energy Act established the Atomic Energy Commission to promote the "utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and security and with the health and safety of the public." Since the abolition of the Atomic Energy Commission in 1974, much of the Atomic Energy Act has been carried out by the NRC and the U.S. Department of Energy. When the USEPA was formed, however, the Atomic Energy Commission's authority to issue generally applicable environmental radiation standards was

transferred to USEPA. Other federal and state organizations must follow these standards when developing requirements for their areas of radiation protection. Radioactive materials that are handled, stored, and disposed of by UC San Diego or other licensed contractors are subject to compliance with the requirements set forth in the Atomic Energy Act.

Health Research Extension Act

The Health Research Extension Act of 1985 is implemented and supported by the U.S. Public Health Service Policy on the Humane Care and Use of Laboratory Animals and provides for the establishment of guidelines for the proper care and treatment of animals used in biomedical and behavioral research, by the Director of the NIH. The guidelines require animal care committees at each entity that conducts biomedical and behavioral research with funding from the NIH to ensure compliance with the guidelines. The UC San Diego IACUC meets this requirement for research on the campus.

Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (40 CFR 152–186), provided the USEPA with authority of pesticide labeling and establishing standards for certification of restricted pesticide application. The USEPA also has the authority to delegate pesticide enforcement authority to states by entering into cooperative agreements with state pesticide programs. Since 1975, California has had primary authority over pesticide enforcement within the state.

The USEPA uses its authority under FIFRA to regulate the distribution, sale, use, and testing of plants and microbes producing pesticidal substances. FIFRA regulations apply to UC San Diego research projects involving these substances. FIFRA also governs Hillcrest Campus pest control operations.

Agricultural Bioterrorism Protection Act

This law (7 CFR 331; 9 CFR 121) requires that entities that possess, use, or transfer agents or toxins deemed a severe threat to animal or plant health or products must notify and register with the Secretary of the USDA. USDA's Animal and Plant Health Inspection Service has been designated by the Secretary as the agency for implementing the provisions of the law for USDA. UC San Diego researchers using these agents are required to register with the USDA.

Centers for Disease Control and National Institute of Health Guidelines

The CDC and NIH have issued federal guidelines that address biological safety. Because research at UC campuses often involves federal funding, compliance with these guidelines becomes mandatory for most research. The CDC and the NIH have developed containment and handling guidelines for use in microbiological and biomedical laboratories. UC San Diego has adopted these guidelines as standard practice and instituted biosafety levels in its laboratories.

Biosafety Levels. Various biologically hazardous substances are used for research on campus. This biological research often involves the use of recombinant DNA molecules, infectious agents, parasites, and other biological agents including blood-borne pathogens. UC San Diego has adopted the most current guidelines set forth in the U.S. Department of Health and Human Services publications Biosafety in Microbiological and Biomedical Laboratories (CDC 2009) and NIH Guidelines for Research Involving Recombinant DNA or Synthetic Nucleic Acid Molecules (NIH 2016) to classify biohazardous agents and to determine the level of safety precautions that must be used. Four biosafety levels apply to biohazardous materials operations, depending on the risk group of the agent used. Biosafety Level 1 is for the least hazardous biological agents and Biosafety Level 4 is for the most hazardous biological agents. The Hillcrest Campus contains Biosafety Level 1 and 2 facilities. No Biosafety Level 3 or 4 facilities currently exist on campus.

Biological Safety Cabinets. Aerosol control of infectious agents or other biologically derived molecules is usually achieved by using a biological safety cabinet. There are currently three classes of biological safety cabinets, which are distinguished by their respective design, containment, and cleanliness capabilities, utilized at UC San Diego:

- Class I cabinets are similar to conventional laboratory hoods with an open-face and negative pressure design, but Class I cabinets exhaust through a high-efficiency particulate air (HEPA) filter.
- Class II cabinets, also referred to as laminar-flow biological safety cabinets, are effective in protecting operators from research materials as well as protecting research materials from external contamination. These cabinets are designed with an inward airflow to protect personnel, HEPA-filtered downward vertical laminar flow for product protection, and HEPA-filtered exhaust air for environmental protection.
- Class III cabinets are totally enclosed, ventilated cabinets of gas-tight construction. Operations in the cabinet are conducted through attached protective gloves.

Research Involving Recombinant DNA. The NIH Guidelines for Research Involving Recombinant DNA or Synthetic Nucleic Acid Molecules (NIH 2016) specifies practices for constructing and handling recombinant DNA molecules and organisms and viruses containing recombinant DNA molecules. In addition to Biosafety Levels for biohazardous materials, the guidelines identify containment at four Biosafety Levels for recombinant DNA research involving plants (BL1-P through BL4-P) and small laboratory animals (BL1-N through BL4-N), and containment practices for plants, microorganisms, and animals. Recombinant DNA experiments at Biosafety Level 1 pose no significant hazard and Biosafety Level 2 experiments pose minimal hazard. There are currently Biosafety Level 1 and 2 facilities at the Hillcrest Campus.

3.8.2.2 State

California Hazardous Materials Release Response Plans and Inventory Law

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires preparation of HMBPs and disclosure of hazardous materials inventories, an emergency response plan, and provisions for employee training in safety and emergency response procedures (see California Health and Safety Code, Division 20, Chapter 6.95, Article 1, and Title 19, Division 2, Chapter 4, Article 4, of the California Code of Regulations).

As discussed previously, as a large quantity generator of hazardous waste, the Hillcrest Campus is required to submit an HMBP to the local CUPA, the County DEH. Compliance with the hazardous materials programs at UC San Diego is verified through annual self-audits, with periodic random follow-up audits by the County DEH.

Underground Storage Tank Act

The UST monitoring and response program is required under Chapter 6.7 of Division 20 of the California Health and Safety Code and Title 23 of the California Code of Regulations. The program was developed to ensure that the facilities meet regulatory requirements for monitoring, maintenance, and emergency response in operating USTs. The County DEH is the local administering agency for this program. UC San Diego operates USTs on the Hillcrest Campus that are subject to this program.

California Occupational Safety and Health Act

In California, Cal/OSHA regulates worker safety under delegation from OSHA. Cal/OSHA enforces safety and health regulations governing employees, including those covering the handling of hazardous materials in the workplace. The regulations established in Title 8 of the California Code of Regulations are designed to protect workers from hazards associated with encountering hazardous materials at the work site. These regulations apply to all UC San Diego employees, including student employees and research assistants. The regulations require certain training, operating procedures, and protective equipment to be used at work sites that could encounter hazardous materials. Cal/OSHA's Process Safety Management Standard (8 CCR 5189) provides requirements for the prevention or minimization of consequences associated with employee exposure to an accidental release of certain hazardous materials.

Environmental Health Standards for the Management of Hazardous Waste Law

Title 22, Division 4.5, Chapter 11, Sections 66261.20–24, of the California Code of Regulations contain technical descriptions of characteristics that would classify wasted material, including soil, as hazardous waste. Specifically, a waste is considered hazardous if it is toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials),

or reactive (causes explosions or generates toxic gases) in accordance with the criteria established in Article 3. Article 4 lists specific hazardous wastes, and Article 5 identifies specific waste categories, including RCRA hazardous wastes, non-RCRA hazardous wastes, extremely hazardous wastes, and special wastes. When excavated, soils with concentrations of contaminants higher than certain acceptable levels must be handled and disposed of as hazardous waste. When demolished, structural features containing lead-based paint also can be considered hazardous waste, depending on concentrations, and must be handled and disposed of as hazardous waste. Wastes generated, handled, and disposed of by UC San Diego are subject to the requirements set forth in Title 22 of the California Code of Regulations.

General Industry Safety Orders – Control of Hazardous Substances Law

Title 8, Subchapter 7, Group 16, Article 109, Sections 5160–5199, of the California Code of Regulations establishes minimum standards for the use, handling, and storage of hazardous materials in all places of employment. Article 109 describes requirements including, but not limited to, emergency equipment in the workplace, measures to protect those engaged in the laboratory use of hazardous chemicals, cleanup operations or hazardous substance removal work, and process safety management practices. UC San Diego employees working with regulated chemicals and/or hazardous materials within laboratories and other facilities defined in Article 109 are subject to compliance with Title 8 of the California Code of Regulations.

California Fire Code

The California Fire Code (24 CCR 9) contains regulations consistent with nationally recognized accepted practices for safeguarding, to a reasonable degree, life and property from the hazards of the following: fire and explosion; hazardous conditions in the use or occupancy of buildings or premises; and, dangerous conditions arising from the storage, handling, and use of hazardous materials and devices. It also contains provisions to assist emergency response personnel. The California Fire Code and the California Building Code use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. UC San Diego is responsible for safely and securely managing chemical supplies and complying with the California Fire Code allowances in facilities under their purview.

Senate Bill 14

SB 14 is the Hazardous Waste Source Reduction and Management Review Act of 1989. SB 14, codified in California Health and Safety Code, Section 25244.12–25244.23, requires hazardous waste generators to seriously consider source reduction as the preferred method of managing hazardous waste. Source reduction is preferable over recycling and treatment options because source reduction avoids waste generation costs and management liability. Source reduction also provides the best protection for public health and the environment. SB 14 was amended in 2012

by SB 1018 to improve reporting requirements. UC San Diego has developed and implemented a hazardous waste source reduction program in accordance with this act.

Assembly Bill 2286

AB 2286, California Health and Safety Code, Section 25404, requires all regulated businesses and all regulated local government CUPAs to electronically report and submit required Unified Program information previously recorded on paper forms. This includes facility data regarding hazardous material regulatory activities, chemical inventories, USTs and aboveground storage tanks (ASTs), and hazardous waste generation. It also includes CUPA data such as inspections and enforcement actions. All businesses must submit and report Unified Program-related information to either the statewide CERS or to the local CUPA's reporting web portal. As discussed previously, EH&S is responsible for reporting applicable information to the Cal/EPA via CERS.

Emergency Response to Hazardous Materials Incidents

California has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local government, and private agencies. The Emergency Response Plan is administered by the Office of Emergency Services and includes response to hazardous materials incidents. The Office of Emergency Services coordinates the response of other agencies, including the Cal/EPA, the CHP, the CDFW, the RWQCB, the SDAPCD, and the SDFR. UC San Diego's Emergency Operations Plan for the Hillcrest Campus is consistent with the policies and procedures set forth in the California's Emergency Response Plan.

Medical Waste Management Act

In 1990, the California legislature adopted the Medical Waste Management Act (California Health and Safety Code, Sections 117600–118360), which provides for the regulation of medical waste generators, transporters, and treatment facilities. The California Department of Health Care Services has adopted statewide regulations covering medical waste treatment permits and shares regulatory authority with local programs that choose to enforce the requirements. Medical waste generated, stored, and disposed of by UC San Diego is subject to compliance with the Medical Waste Management Act.

California Radiation Law

California is an "agreement state" with respect to federal radiation law. The agreement is that the state will administer the NRC federal regulations found in Title 10 of the CFR. The California Department of Public Health (CDPH) is the agency responsible for administering the agreement. Under the agreement, the rules for California must be adequate to protect public health and safety and compatible with those of the NRC. The California rules are codified under Title 17 of the California Code of Regulations and Division 104 of the California Health and Safety Code. Under the California Radiation Control Law, the Radiologic Health Branch of the CDPH administers these

rules. The state's rules govern the receipt, storage, use, transportation, and disposal of sources of ionizing radiation and provide for the protection of users of these materials and the general public from radiation hazards. The CDPH controls the use of radioactive materials in California by issuing Radioactive Material Licenses to California users of radioactive materials and radiation-producing machines. Several types of licenses exist; UC San Diego has a Broad Scope Radioactive Materials License granted by the CDPH.

Food and Agriculture Code

Under Divisions 6 and 7 of the Food and Agriculture Code, Title 3 of the California Code of Regulations, the California Department of Pesticide Regulation is vested with primary responsibility to enforce pesticide laws in California. The County Agricultural Commissioner grants site-specific permits for use of restricted pesticides and conduct periodic on-site observations of application sites and field worker safety. UC San Diego personnel engaged in official duties relating to agricultural use of pesticides are exempt from the need to obtain an agricultural pest control advisor license, but Hillcrest Campus personnel handling or applying restricted pesticides or the supervising applicator must obtain a State Qualified Applicator Certificate.

Hazardous Materials Transportation

The State of California adopted the USDOT regulations for the movement of hazardous materials by motor vehicle; state regulations are contained in Title 13, Division 2, Chapter 6, of the California Code of Regulations. In addition, the State of California regulates the transportation of hazardous waste originating in the state and passing through the state (26 CCR). Both regulatory programs apply in California. The state agency with primary responsibility for enforcing state hazardous materials transportation regulations and responding to hazardous materials transportation emergencies is the CHP. Hazardous waste generated by the Hillcrest Campus is transported and disposed of in compliance with both regulatory programs.

California Environmental Protection Agency – Cortese List

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the state, local agencies, and developers to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. Government Code, Section 65962.5, requires the Cal/EPA to develop at least annually an updated Cortese List. The California Department of Toxic Substances Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information for the Cortese List.

3.8.2.3 Local (Non Regulatory)

San Diego International Airport Land Use Capability Plan

The SDIA is defined in the San Diego International Airport Land Use Capability Plan (ALUCP). According to the San Diego Regional Airport Authority,

> *ALUCPs provide guidance on appropriate land uses surrounding airports to protect the health and safety of people and property within the vicinity of an airport, as well as the public in general.*
>
> *An ALUCP focuses on a defined area around each airport known as the Airport Influence Area (AIA). The AIA is comprised of noise, safety, airspace protection and overflight factors, in accordance with guidance from the California Airport Land Use Planning Handbook published by the California Department of Transportation, Division of Aeronautics.*
>
> *The ALUCP has no jurisdiction over the operation of airports or over existing land uses, regardless of whether or not such uses are incompatible with airport activities. Once ALUCPs have been adopted by the ALUC, local agencies with land located within the AIA boundary for any of the airports must, by law, amend their planning documents to conform to the applicable ALUCP.*

County of San Diego Department of Environmental Health, Unified Program Facility Permit

All businesses in the County that conduct any of the following activities are required by AB 2286 to obtain and maintain a valid Unified Program Facility Permit through CERS: handle or store hazardous materials; are part of the California Accidental Release Prevention Program; generate or treat hazardous wastes; generate or treat medical waste; store at least 1,320 gallons of aboveground petroleum; and/or, own or operate USTs. A Unified Program Facility Permit has commonly been referred to as a Hazardous Materials Permit or a Health Permit. It is a permit issued by the County DEH to regulated facilities. The Unified Program is the consolidation of six state-regulated environmental programs into one program under the Cal/EPA. The goal of the program is to achieve consistency, consolidation and coordination in the regulation of the following six programs:

1. Aboveground Petroleum Storage Act
2. California Accidental Release Prevention
3. Hazardous Materials Business Plan
4. Hazardous Materials Management and Inventory Program
5. Hazardous Waste and Hazardous Waste Treatment Program
6. Underground Storage Tank Program

A CUPA is the agency responsible for the implementation and regulation of the Unified Program, and the County DEH has been the CUPA for San Diego County since 1996. The Hillcrest Campus currently has a Unified Program Facility Permit issued from the County DEH via CERS.

City of San Diego Industrial Wastewater Control Program

The City's Industrial Wastewater Control Program allows for the disposal of groundwater to the Metropolitan Sewerage System and its tributary systems from groundwater remediation projects, underground monitoring wells, underground tank removal projects, or construction dewatering projects. These discharges often contain pollutants from leaking USTs or fuel lines, surface spills or leaks, liquid waste impoundment areas, or decomposed organic matter.

3.8.3 Project Impacts and Mitigation

The following sections address various potential impacts relating to hazards and hazardous materials that could result due to the implementation of the proposed 2019 LRDP.

3.8.3.1 Issue 1: Transport, Use, and Disposal of Hazardous Materials

Hazards and Hazardous Materials Issue 1 Summary

Would implementation of the 2019 LRDP create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Impact: The proposed 2019 LRDP would result in increased transport, use, and disposal of hazardous materials that could pose a hazard to the public and environment; however, these activities would be comprehensively managed by UC San Diego pursuant to state and federal law and would not result in a significant hazard.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Impact Analysis

Operational Impacts

The 2019 LRDP would replace aging and obsolete buildings, including the existing hospital, and redevelop the Hillcrest Campus. The transport, use, and disposal of hazardous materials under the 2019 LRDP is expected to remain similar to the existing campus uses despite the increase in the square footage of the facility under the 2019 LRDP. While the amount and type of hazardous materials may vary, the general types of hazardous materials are not expected to substantially change due to the proposed 2019 LRDP because the types of land uses proposed are not expected to change from the existing condition. However, the 2019 LRDP would increase the residential population on the Hillcrest Campus. The 21 existing residential units on campus would be removed to allow for redevelopment of up to 1,000 new residential units by the planning horizon year 2035. Impacts are discussed in the following sections.

General Chemicals

Implementation of the 2019 LRDP would increase the total square footage of non-residential uses (inpatient care, outpatient care, clinical lab medical research, and health care support services facilities) by approximately 488,000 gross square feet by 2035. However, the Replacement Hospital would provide 70 fewer inpatient beds than the current hospital, which would likely decrease the total amount of hazardous materials generated by inpatient care uses.

Various chemicals that may be used may pose different levels of hazards in their use. Some substances, such as acetone, are flammable, while others, like cyanide and mercuric chloride, are toxic. Some nonradioactive chemicals have the potential for causing cancer or acute and chronic illnesses. The properties and health effects of chemical substances are unique to the individual materials, although they often can be grouped by chemical types. No classifications exist to rate the level of hazard posed by all substances under all circumstances. While some substances may present little hazard, others may be capable, in certain situations, of causing severe health effects. However, the types of hazardous chemicals generated, used, and disposed for medical-related uses at the Hillcrest Campus are not expected to change as a result of implementation of the 2019 LRDP. Inpatient care, outpatient care, and clinical research labs exist on campus currently and would continue to comply with all hazardous materials standards for UC San Diego described in the preceding sections. To minimize exposure to chemicals in the air, researchers and other workers would continue to take standard procedural precautions, such as working under fume hoods, when using chemicals likely to present exposure hazards. Fume hoods and other engineering controls would be required to meet Cal/OSHA requirements and fume hood ventilation rates are checked annually by EH&S. Proper use of the fume hoods and other engineering controls would keep indoor laboratory air toxics concentrations below the suggested guidelines of the American

Conference of Governmental Industrial Hygienist Threshold Limit Values and the legal limits of the Occupational Safety and Health Administration Permissible Exposure Levels.

Campus departments are primarily responsible for ensuring that safe work practices are followed. EH&S supports departments with this responsibility by reviewing proposed laboratory designs for nonstructural seismic safety concerns and compliance with Cal/OSHA requirements to provide appropriate protection for the workers. Current chemical handling training programs used to educate staff would continue with development of new facilities.

The various federal, state, and local agencies that monitor campus regulatory compliance require time to receive, interpret, and transmit changes to the regulated community. In turn, regulated entities such as UC San Diego require some time to receive proper notice, to understand changed laws and regulations, to acquire proper equipment, to inform campus workers, and to train or hire new staff to comply with the changes. Hence, compliance is an evolutionary and perpetual process. UC San Diego is committed to providing a safe environment for the Hillcrest Campus and the local community by implementing the increasingly complex laws and regulations regarding the use of hazardous materials.

The 2019 LRDP would increase on-campus residential uses by 979 net new residential units by the planning horizon year 2035 through the construction of Residential Buildings 1, 2, 3, and 4 (R-1, R-2, R-3, and R-4) (totaling approximately 950 units) and the Mixed-Use Residential/Wellbeing Center (totaling approximately 50 units). Operation of the 2019 LRDP would involve an unquantifiable, but limited, use of potentially hazardous materials typical of residential uses, including cleaning fluids, detergents, solvents, adhesives, sealers, paints, fuels/lubricants and fertilizers and/or pesticides for landscaping. The additional uses may result in an increase in hazardous chemical waste generation and disposal. However, these materials would be contained, stored, and used on site in accordance with manufacturers' instructions, applicable standards and federal, state, and local regulations. Compliance with applicable regulations would serve to protect against a significant and irreversible environmental change that could result from the accidental release of hazardous materials.

Compliance with hazardous waste storage and transportation regulations, and continuation of the programs and controls currently in place to manage hazardous wastes and to detect inadvertent releases of hazardous materials to the sanitary sewer and/or landfill, as mandated by state and federal laws, would minimize the hazards to workers, the public, and the environment. Treatment, storage, and disposal facilities are currently available with the capacity to accept and safely manage UC San Diego chemical waste. Therefore, implementation of the 2019 LRDP would result in a less than significant impact related to the use and disposal of hazardous chemical waste. The Hillcrest Campus would continue to implement all of these programs under the proposed 2019 LRDP as mandated by state and federal laws and regulations. Therefore, the potential impact of increased hazardous chemical materials use on the Hillcrest Campus would be less than significant.

Radioactive Materials

Implementation of the 2019 LRDP would increase the total square footage of non-residential uses (amount of inpatient care, outpatient care, clinical lab medical research, and health care support services facilities) by approximately 488,000 gross square feet by 2035. However, it is not anticipated that there would be a change in the typical dose level of radiation to which individual patients, medical staff, researchers, and other UC San Diego staff would be exposed.

Radiation poses a health risk to those who are exposed, but exposure can be prevented with proper protective equipment and procedures. Radioactive materials at UC San Diego are monitored closely. In accordance with the UC San Diego Broadscope Radioactive Materials License, prior to obtaining radioactive materials, each principal investigator must apply for a RUA from the RSC. The RUA specifies the particular radioisotopes to be used and maximum limits on the quantities possessed. The UC San Diego radiation safety program, which is required by the Radiation Control Law and documented in the Radiation Safety Manual, is designed to provide adequate protective measures against exposure for visitors, students, faculty, staff, and the community at large. The radiation safety program requires UC San Diego to perform documented surveys to detect surface contamination in areas where radioactive materials are used, including storage and waste facilities, and contains detailed information regarding radioactive waste storage guidelines and disposal methods (UC San Diego 2016a). In addition, EH&S's current maintenance processes for radioactive equipment would be extended to newly constructed facilities that would operate radioactive equipment, and the Radiation Safety Manual would be implemented and updated, as necessary, to reflect changes to the types, quantities, and locations of radioactive materials. These existing measures are designed to reduce the risk of illness and accidents. Continued implementation of these measures as mandated by state and federal law would occur as a result of the implementation of the 2019 LRDP. However, given that adequate safety controls, programs, plans, and procedures are mandated and in place to limit exposure to radiation from radioisotopes and radiation-producing machines, the potential for implementation of the 2019 LRDP to expose campus occupants to significant health or safety risks is low.

Storage and disposal of radioactive waste is strictly regulated at UC San Diego, and all radioactive waste must be labeled per the EH&S mandated storage guidelines and transferred to EH&S for disposal. Radioactive waste tags must be placed on all containers containing radioactive wastes, and appropriate protection and control measures, such as shielding, are used depending on the type of radioactive waste being disposed. EH&S removes radioactive materials from laboratories and takes them to the Environmental Management Facility to prepare them for eventual disposal by one of three methods. The material is (1) held for decay, then disposed of as nonradioactive, (2) transported off campus for decay and disposal, or (3) sewered (liquid form only) if conditions under 10 CFR 20.2003 are met. Radioactive waste generation, if not adequately managed, can pose health or safety threats analogous to those mentioned for radioactive materials use. The programs, controls, and

procedures currently implemented on campus provide safe handling, treatment, and disposal of radioactive waste. Because these measures would continue to be implemented as mandated with the implementation of the 2019 LRDP, the associated impact would be less than significant.

Biohazardous Materials

Implementation of the 2019 LRDP would increase the total square footage of clinical lab medical research use by approximately 172,000 gross square feet by 2035. However, it is not anticipated that the use and disposal of biohazardous materials on campus would substantially change or increase over current conditions because the increased amount of research space is minimal compared to existing conditions, and the number of hospital patients would not increase. The types of biological agents used in the future would also likely remain largely the same, although new research could create a need for new and different biological agents. The agents currently used on the Hillcrest Campus require laboratories operating at Biosafety Levels 1 and 2. Under the proposed 2019 LRDP, laboratories operating at these levels may increase; however, no BSL-3 or BSL-4 laboratories are anticipated. UC San Diego's Biosafety Level Practices Chart provides further detail regarding laboratory containment requirements and best practices. Regulatory requirements and the current campus guidelines and practices for controlling employee exposures to infectious agents would be followed and would minimize impacts outside of the research laboratories.

The Hillcrest Campus would continue to comply with existing health and safety practices as well as with federal and state regulations discussed previously, which would minimize the potential for adverse health effects related to biohazardous waste. For example, biohazardous waste generated would continue to be picked up by a licensed contractor for treatment off campus. Once treated, the waste would be disposed of as nonhazardous waste at a landfill. Biohazardous wastes that also contain hazardous chemical or radioactive waste would be categorized and handled as hazardous or radioactive. Generated wastes would be segregated, handled, labeled, stored, and transported to minimize direct or indirect exposure of personnel in accordance with federal and state regulations. Therefore, the impact of generation of biohazardous waste by laboratories would be less than significant.

Transport of Hazardous Materials and Waste

As discussed above, implementation of the 2019 LRDP would increase the total square footage of non-residential and residential uses on campus, thus increasing hazardous materials use and hazardous waste generation. Consequently, the transport of hazardous materials to and from the Hillcrest Campus would also increase. UC San Diego policy requires that packaging of chemicals to be transported on public roads conforms with all legal requirements, including those of the USDOT, CHP, CDPH, and County DEH, and to the guidelines of the International Civil Aeronautics Organization and the International Air Transport Association. All hazardous waste is picked up by EH&S or a licensed hazardous waste contractor, and hazardous waste generators

must package and label all hazardous wastes per UC San Diego policies and regulations. Under the 2019 LRDP, the Hillcrest Campus would continue to require compliance with these safety regulations, guidelines, and policies. Furthermore, the types of hazardous materials that would be transported are not expected to change as a result of the implementation of the 2019 LRDP because the types of medical-related services provided at the Hillcrest Campus would remain the same. Therefore, the impact of the increased transport of hazardous materials to and from the Hillcrest Campus would be less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact on the use, disposal, and transportation of hazardous materials to the public or environment with compliance of existing associated regulations, programs, practices, and procedures. No mitigation measures are required.

3.8.3.2 Issue 2: Accidental Releases

Hazards and Hazardous Materials Issue 2 Summary

Would implementation of the 2019 LRDP 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?

Impact: Construction activities associated with the proposed 2019 LRDP would potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials due to compliance with state and federal laws.

Mitigation: Demolition Procedure (HAZ-2A); Assessment and Remediation HAZ-2B); Contamination, Remediation, and Removal (HAZ-2C); Groundwater Pretreatment (HAZ-2D)

Significance Before Mitigation: Potentially significant impact

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would create reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Impact Analysis

Construction Impacts

The 2019 LRDP calls for the redevelopment of the Hillcrest Campus over five construction phases. Grading activities would also vary by phase and may require soils export or import. The details of each phase, including the amount of grading and excavation, are discussed in Chapter 2, Project Description.

Construction equipment that would be used has the potential to release oils, greases, solvents, and other finishing materials through accidental spills. Spill or upset of these materials could have the potential to impact surrounding land uses; however, federal, state, and local controls have been enacted to reduce the effects of such potential hazardous materials spills. Compliance with these requirements is mandatory as standard permitting conditions and would minimize the potential for the accidental release or upset of hazardous materials, ensuring public safety. Therefore, construction-related activities would not result in the release of hazardous materials into the environment.

Hazardous Materials Associated with Demolition

Phases 1A, 1B, 2B, and 4 would involve the demolition of nearly all of the existing structures on the Hillcrest Campus. Due to their age, numerous campus buildings are assumed to contain some form of asbestos or lead paint. Workers can be exposed through inhalation or ingestion of lead dust or asbestos particles when lead paint or asbestos material is disturbed or made friable by drilling, sanding, or other destructive processes. An unknown number of fluorescent light ballasts containing polychlorinated biphenyls are also present in some campus buildings. Building materials may also be contaminated as a result of radioactive or chemical hazardous materials use in the building resulting in spills or aerosol releases that may deposit contaminants on the floors or walls. Prior to deconstruction of the existing structures, various abatement activities would take place to remove hazardous materials and associated risk from the building, including asbestos, lead, biohazardous waste, pharmaceutical waste, and radioactive waste. The buildings identified in Table 2-6, Demolition and Construction by Phase, in Chapter 2 to be demolished would be decommissioned in conformance with the California Department of Public Health, Radiologic Health Branch. This branch may take up to 1 year to process the decommissioning report before releasing the property for deconstruction. Because the Hillcrest Campus is a generally old campus, a majority of the existing buildings predate current hazardous materials regulations. As a result, existing aging buildings to be demolished on the Hillcrest Campus would need to go through inspection to ensure proper hazardous waste abatement and removal. Therefore, the impact associated with upset or accidental release of asbestos, lead, biohazardous waste, pharmaceutical waste, and radioactive waste associated with demolition activities would be potentially significant.

Hazardous Materials Associated with Soil and Groundwater

As discussed in the Section 3.8.1.3, a release of approximately 800 to 900 gallons of diesel fuel occurred near two USTs on the Hillcrest Campus in December 1991. In addition, between September 17, 1998, and January 28, 1999, seven USTs were removed from the site under the supervision of County DEH. During the UST removal, cracks and perforations were observed along the bottom of four of the USTs. When the USTs were removed, approximately 1.5 feet of water and 1–2 inches of free product (believed to be diesel) were observed in the bottom of the excavation. Since the discovery of the leaking USTs, the subsequent analysis of soil and groundwater samples from the site indicated the presence of petroleum hydrocarbon constituents,

primarily gasoline. Groundwater monitoring is ongoing in this area and has detected concentrations of dissolved hydrocarbons.

The current contaminated area is located directly south of the existing CUP within a parking area between the existing CUP, Medical Library, North Annex Building, and the Theodore Gildred Facility. Groundwater in this area can be categorized into three general intervals: the "upper" zone is defined as occurring between 248 and 265 feet amsl, an "intermediate" zone is defined as occurring between 232 and 239 feet amsl, and the "lower" zone is defined as occurring between 212 and 225 feet amsl (Apex 2018).

The new north access driveway would be constructed in Phase 2A, and the Replacement Hospital would be constructed in Phase 3. Construction of these components would occur in portions of the delineated contaminated area associated with the 1991 spill and leaking USTs. Total earthwork in these two phases would generate approximately 389,000 cy of cut and 133,000 cy of fill. These numbers are primarily from the proposed Replacement Hospital (Phase 3), which would generate a large amount of cut due to subterranean levels. Though unlikely, the basement level of the proposed hospital is 266 feet amsl, which could be below the groundwater level. Therefore, dewatering may be required during construction. Therefore, there is a potential to encounter contaminated groundwater and soil during Phase 2A and Phase 3 during construction activities associated with the north access driveway and Replacement Hospital, respectively, that would result in a potentially significant impact. The potential would not occur during any other construction phases.

Operational Impacts

Under the proposed 2019 LRDP, UC San Diego would continue to implement existing campus health and safety practices and comply with federal, state, and local regulations related to the use, transport, and disposal of hazardous materials, as described under Issue 1, thus minimizing the potential for a release and providing for prompt and effective cleanup if an accidental release would occur. Furthermore, UC San Diego has prepared an Emergency Operations Plan for the Hillcrest Campus, which addresses the campus community's planned response to various levels of human-made or natural emergency situations including the release of hazardous materials. UC San Diego's HMBP for the Hillcrest Campus also addresses emergency and spill response procedures that include, but are not limited to, specific emergency response instructions, locations of personnel and equipment resources, specialty hazard instructions, and appropriate training. Thus, the proposed 2019 LRDP would not 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. Furthermore, UC San Diego would continue to comply with its comprehensive hazardous materials handling, storage, and disposal policies and procedures to minimize the potential risk of an accidental release. Impacts would be less than significant.

Mitigation Measures

Implementation of Mitigation Measure HAZ-2A would reduce the potential for the accidental release of hazardous materials associated with demolition activities to less than significant. Mitigation Measures HAZ-2B through HAZ-2D would reduce potential construction-related impacts from the release of hazardous substances from soil and groundwater during construction activities associated with the development of the north access driveway and Replacement Hospital to less than significant. These mitigation measures are as follows:

HAZ-2A: Demolition Procedure. Prior to the initiation of demolition activities, the UC San Diego Project Manager shall consult with EH&S regarding existing aging campus buildings, which shall be sampled and have laboratory tests completed for the presence of asbestos, lead, biohazardous waste, pharmaceutical waste, and radioactive waste. If any lead and/or asbestos is detected in the building material, a Remediation Plan shall be prepared in coordination with EH&S to adhere to the proper agency remediation guidelines (i.e., APCD, Cal/OSHA, USEPA, CDPH, NRC) followed by a clearance report. Prior to demolition of the campus buildings, a third-party consultant shall provide to the UC San Diego Project Manager the clearance report stating that the lead and/or asbestos concentrations are below Cal/OSHA permissible exposure limits.

HAZ-2B: Assessment and Remediation. During project planning, EH&S shall be consulted in order to identify if any past contamination, USTs, ASTs, or other contamination could potentially occur in areas to be impacted. If it is determined that contamination has potential to exist on a project site, the licensed contractor shall screen export soils generated during construction activities in the area of the known contamination to determine if contamination is present. If contamination is encountered and if it poses a risk to human health or the environment, actions shall be taken prior to any construction, pursuant to applicable regulations, to remove or otherwise remediate the contamination through appropriate measures such as natural attenuation, active remediation, and engineering controls. Assessment and remediation activities shall incorporate the following conditions:

1. All assessment and remediation activities shall be conducted in accordance with a work plan that is approved by the regulatory agency having oversight of the activities.
2. It may be necessary to excavate existing soil within the project site or to bring fill soils into the site from off-site locations. At sites that have been identified as being contaminated or where soil contamination is suspected, appropriate sampling and classification are required prior to disposal of excavated soil. Contaminated soil shall be properly disposed of at an approved off-site facility. Fill soils also shall be sampled to ensure that imported soil parameters are within acceptable levels.
3. Caution shall be taken during excavation activities near existing groundwater monitoring wells so that they are not damaged. Existing groundwater monitoring wells

may have to be abandoned and reinstalled if they are located in an area that is undergoing redevelopment.

HAZ-2C: Contamination, Remediation, and Removal. In the event that USTs not identified in consultation with EH&S or undocumented areas of contamination are encountered during construction or redevelopment activities, work shall be discontinued until appropriate health and safety procedures are implemented. Either the County of San Diego DEH or the SDRWQCB, depending on the nature of the contamination, must be notified regarding the contamination. Each agency and program within the respective agency has its own mechanism for initiating an investigation. The appropriate program (e.g., the DEH Local Oversight Program for tank release cases, the County DEH Voluntary Assistance Program for non-tank release cases, the RWQCB for non-tank cases involving groundwater contamination) shall be selected based on the nature of the contamination identified. The contamination remediation and removal activities shall be conducted in accordance with pertinent regulatory guidelines under the oversight of the appropriate regulatory agency.

HAZ-2D: Groundwater Pretreatment. Prior to groundwater dewatering activities, the contractor should consult with EH&S in the area of known contamination. Whenever possible, extracted groundwater should be discharged to surface waters under the current general National Pollutant Discharge Elimination System permit adopted by the SWRCB. However, to protect water quality in the San Diego area, the City recognizes that it may be necessary to accept discharges of extracted contaminated groundwater to the Metropolitan Sewerage System and its tributary systems. Prior to the necessary discharge of groundwater from dewatering activities for construction of the Replacement Hospital and north access driveway, the City would require groundwater sampling analytical results of a representative sample or multiple samples of the groundwater to be discharged. If determined that the discharged groundwater is contaminated, an application would be filed with the City. Prior to the start of construction, necessary pretreatment equipment would be installed, operated, and maintained during the length of dewatering activities in compliance with the terms of the permit and with the General and Specific Prohibitions outlined in the City's program. When discharges originate from sites contaminated with petroleum products (e.g., gasoline, diesel, AvGas, JP) or organic solvents, the permittee must provide pretreatment equivalent to the SWRCB's pretreatment technology standards for organics (carbon adsorption or air stripping). Additionally, if free product is present or expected, the pretreatment system must include a free product recovery system/method to prevent pass through, and the pretreatment equipment must be equipped with a feature, such as an automatic sensor with shut-off, that would cease all discharges to the sewer in the event of breakthrough (free product release from the recovery device). For the purposes of this requirement, free product is defined as an immiscible liquid phase hydrocarbon existing in the subsurface with a positive pressure such that it can flow into a well.

Pretreatment equipment may also be necessary to remove silt, sand, or other solid material from the wastewater prior to disposal. All pretreatment equipment must be in place and fully operational prior to commencing discharges to sewer.

3.8.3.3 Issue 3: Hazards to Nearby Schools

Hazards and Hazardous Materials Issue 3 Summary

Would implementation of the 2019 LRDP result in activities that emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?

Impact: Hazardous materials and waste would be handled within one-quarter mile of existing schools; however, the materials are not anticipated to occur in quantities that would pose a risk to occupants of the existing schools or the campus community.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would result in activities that emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed primary or secondary school.

Impact Analysis

Existing schools within 0.25 mile of the Hillcrest Campus include the San Diego Cooperative Preschool located at 4190 Front Street and Green Beans Preschool located at 4153 First Avenue. No proposed schools within 0.25 mile of the Hillcrest Campus are known at this time. While hazardous materials and waste could continue to be handled within 0.25 mile of an existing or proposed school as a result of implementation of the 2019 LRDP, and overall quantities may increase, these materials would still not exist in quantities significant enough to pose a risk to occupants of the nearby preschools or the campus community. As explained in the discussion for Issue 1, hazardous materials for medical, Level 1 and 2 research laboratories and residential uses are typically handled in small quantities. The potential consequences of accidental releases would be limited to a single building and in most cases are limited to the individual laboratory where the spill would occur, and people outside the buildings would not be exposed; therefore, the impact to those attending existing or proposed schools would be less than significant.

As discussed previously, implementation of the 2019 LRDP would increase the total square footage of non-residential and residential uses on campus, thus increasing hazardous materials use and hazardous waste generation. Consequently, the transport of hazardous materials to and from the Hillcrest Campus would also increase. However the transportation route would continue to be similar to existing condition, and the Hillcrest Campus would continue to comply with federal and state regulations pertaining to hazardous wastes, along with existing campus programs, practices, and procedures to ensure that risks associated with hazardous emissions or materials to existing or proposed schools located within 0.25 mile from the campus or along the transportation route would remain less that significant through proper handling procedures, disposal practices, and/or cleanup procedures.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact associated with hazards to existing or proposed schools located within 0.25 mile from the Hillcrest Campus; therefore, no mitigation measures are required.

3.8.3.4 Issue 4: Hazards From Nearby Airports

Hazards and Hazardous Materials Issue 4 Summary

Would implementation of the 2019 LRDP result in an aircraft safety hazard or excessive noise for people residing or working in the project area?

Impact: Activities from San Diego International Airport pose minimal safety hazards to people residing or working in the project area as a result of implementation of the 2019 LRDP.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would result in an aircraft safety hazard or excessive noise for people residing or working in the project area due to being located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport.

Impact Analysis

The Hillcrest Campus is located 1.5 miles southwest of the SDIA and is within the boundaries of the Airport Land Use Plan developed for SDIA. The Hillcrest Campus is located within the SDIA Airport Influence Area but not located in the Runway Protection Zone or the Safety Compatibility Zone. In addition, the Hillcrest Campus is located within the SDIA Airspace Safety Zone that

requires notification to the FAA if buildings over 200 feet are to be constructed. The 2019 LRDP proposes the redevelopment of the existing Hillcrest Campus over five construction phases as discussed in Section 3.8.3.2.

The maximum building height proposed on the Hillcrest Campus is not to exceed 200 feet, which does not surpass the obstruction standards of Part 77 for objects in navigable airspace, as determined by the FAA. Therefore, the 2019 LRDP does not contain features that would be potentially hazardous to air navigation. In accordance with the ALUCP, the construction of Residential Buildings 1, 2, 3, and 4 (R-1, R-2, R-3, and R-4) would require Overflight Notification Agreement due to their location within the SDIA Overflight Boundary Area. The 2019 LRDP is not located within the 60 A-weighted decibels (dBA) CNEL noise contour (San Diego Regional Airport Authority 2014). Therefore, the SDIA does not generate excessive noise levels at the Hillcrest Campus. See Section 3.11, Noise, for additional analysis.

The existing helipad is located on top of the 3-story Medical Offices North building at the intersection of West Arbor Drive and Front Street, across from existing residences. The 2019 LRDP would relocate the existing helipad from the Medical Offices North building, which would be demolished, to the top of the Replacement Hospital building. There were 531 helicopter landings at the existing helipad in 2017. Landings occurred in every month on every day of the week during the day and night, and no pattern emerged to predict when future landings would be more or less likely to occur.

Relocating the helipad to the middle of the Hillcrest Campus and elevating it several stories higher would increase the distance from the helipad to the nearest off-site residences. The 2019 LRDP proposes the construction of new residences, educational facilities, and a hospital bed tower on campus which would be similar to existing uses. Individual helicopter landings and takeoffs would continue to be a short-term, intermittent source of noise. However, implementation of the 2019 LRDP would not be expected to increase exposure to helicopter safety hazards because similar emergency services would be provided at the hospital as currently provided, although the total number of inpatient beds would decrease. The frequency of helicopter landings would continue to be determined by occurrence of emergencies rather than hospital operations.

Therefore, the 2019 LRDP would be consistent with the SDIA ALCUP and would not increase the number of helicopter flights on campus or result in an aircraft safety hazard for people residing or working in the project area. Potential impacts associated with aircraft safety hazards are considered less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact related to aircraft safety hazards; therefore, no mitigation measures are required.

3.8.3.5 Issue 5: Emergency Response and Evacuation Plans

Hazards and Hazardous Materials Issue 5 Summary

Would implementation of the 2019 LRDP impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact: 2019 LRDP construction-related road closures or detours could require alternate emergency response or evacuation routes on campus.

Mitigation: Emergency Services Notification (HAZ-5)

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would impair implementation of or physically interfere with an adopted emergency response place or emergency evacuation plan.

Impact Analysis

The Hillcrest Campus currently has an Emergency Operations Plan that addresses planned responses, instructions, and procedures to various levels of manmade or natural emergency situations for all campus staff, patients, students, and visitors. It provides information for building evacuation, emergency supplies, and related emergency contacts and information sources. Multiple emergency response regions are provided throughout the campus equipped to provide necessary supplies and trained personnel in the event of an emergency. In addition, as discussed above and in Section 3.13, Public Services, of this 2019 LRDP EIR, the SDFR recently expanded and rebuilt Fire Station 5, which will improve fire protection and emergency services to the Hillcrest Campus and the surrounding Uptown Community.

Construction Impacts

Implementation of the 2019 LRDP would include roadway improvements during the different phases of construction. Those improvements are summarized below by phase.

Phases 1A and 1B would construct the following roadway improvements:

- Widen Arbor Drive between Front Street and First Avenue and change to a two-way street.
- Add a new connection between Arbor Drive and Bachman Place.
- Widen Bachman Place from the new Arbor Drive connection to the existing Bachman Parking Structure to provide two southbound lanes and one northbound lane.

- Signalize the intersection of Front Street/Arbor Drive and provide the following lane geometry:
  - North Leg – one shared left/through/right-turn lane.
  - East Leg – one shared left/through/right-turn lane and one dedicated left-turn lane. This leg of the intersection would be converted from a one-way, westbound segment to a two-way segment.
  - West Leg – one shared right-turn/through lane and one dedicated left-turn lane.
- Signalize the intersection of First Avenue/Arbor Drive and provide the following lane geometry:
  - North Leg – one dedicated left-turn lane and one shared left/right-turn lane.
  - East Leg – one dedicated right-turn lane and one dedicated through lane.
  - South Leg – one shared right-turn/through lane, one dedicated through lane, and one dedicated left-turn lane.
  - West Leg – one shared through/left-turn lane. This leg of the intersection would be converted from a one-way, westbound segment to a two-way segment.

Phases 2A and 2B would include the following improvements:

- Widen Bachman Place from the Bachman Parking Structure to the Hillcrest Campus Boundary from two lanes to three lanes to provide two southbound lanes and one northbound lane.
- Construct the North Access Driveway at Bachman Place and signalize the intersection. Provide the following lane geometry:
  - North Leg – one shared right-turn/through lane and one through lane
  - South Leg – one dedicated through lane and one dedicated left-turn lane
  - West Leg – one dedicated right-turn lane and one dedicated left-turn lane

Phases 3 and 4 would include the following improvements:

- Close the north leg of the intersection of Front Street/Arbor Drive to vehicular traffic and provide the following lane geometry:
  - East Leg – one shared through/left-turn lane and one dedicated left-turn lane
  - West Leg – one dedicated right-turn lane and one dedicated through lane

Construction-related activities may require temporary partial lane or road closures and/or detours during construction that would interfere with an emergency response plan or emergency evacuation plan. Access to the existing hospital Emergency Department would be maintained throughout construction. In addition, a traffic control plan would be put in place to avoid impaired emergency response or evacuation during this time. If determined necessary, the Hillcrest Campus would also initiate notification of local emergency services to the campus. However, these

procedures are not mandated by law; therefore, the impact from lane closures during project construction is considered potentially significant.

Operational Impacts

Implementation of the 2019 LRDP would also include the demolition of almost all of the campus's current buildings. New construction would occur in areas that are currently provided access and would continue to include fire access consistent with applicable portions of the California Fire Code. Fire apparatus access throughout the Hillcrest Campus would continue to include roads that meet the code requirements for width, grade, clearance, turnouts, dead-end length, and turnarounds. Under the 2019 LRDP, the planned improvements to Bachman Place would improve access and reduce congestion to and from the Hillcrest Campus. The proposed First Avenue extension north of Arbor Drive would provide for new two-way traffic on this segment that would improve the accessibility to the Hillcrest Campus for emergency vehicles. Emergency vehicles would enter the campus at the First Avenue and Arbor Drive intersection, and then proceed north on First Avenue, past the Main Hospital turnaround. In addition, construction of the north access driveway would provide additional access to the campus. It would also serve as another emergency access route from the north, thereby strengthening the emergency response routes to the Hillcrest Campus.

Implementation of the 2019 LRDP would add approximately 1,646 on-campus residents. The Hillcrest Campus currently employs various fire protection measures to ensure adequate safety on campus. The campus would continue to implement its campus-wide Emergency Operations Plan, which addresses the campus community's planned response to emergency access on the campus and any necessary required evacuations. In addition, operation of the proposed 2019 LRDP would include the use of a new access road, a north access driveway that would provide an additional evacuation route for UC San Diego affiliates. Operational impacts associated with an adopted emergency response plan or emergency evacuation plan would be less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a temporary significant impact associated with construction-related road closures. Implementation of Mitigation Measure HAZ-5 as follows would reduce impacts to less than significant:

> **HAZ-5: Emergency Services Notification.** In the event that the construction of a project requires a lane or roadway closure on campus, prior to construction the contractor and/or Project Manager shall ensure that the Hillcrest Campus Fire Marshal and campus community at large are notified. If determined necessary by the Hillcrest Campus Fire Marshal, local emergency services shall be notified by the Fire Marshal of the closure.

3.8.3.6 Issue 6: Wildland Fires

Hazards and Hazardous Materials Issue 6 Summary

Would implementation of the 2019 LRDP expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Impact: Portions of the campus contain natural canyon areas, which lie within a very high fire hazard severity zone; however, implementation of fire protection measures, fuel management guidelines, and compliance with associated regulations would reduce impacts to a less than significant level.

Mitigation: No mitigation required.

Significance Before Mitigation: Less than significant

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Impact Analysis

Development under the proposed 2019 LRDP would involve the demolition and construction of structures including substantial excavation and grading. The 2019 LRDP would include new elements that could act as potential ignition sources for wildfires. These would include outdoor recreation space, open space areas, vegetation for landscaping, vehicles, and small machinery that could exacerbate wildfire risk and expose project residents to wildfire pollutants. Additionally, the Hillcrest Campus sits upon a mesa top surrounded to the north, west, and east by natural steep sloped canyons. These canyons pose a potential risk for wildfires due to the buildup of dry brush within these areas as well as significant amounts of trash and debris from illegal encampments. According to CAL FIRE's Fire Hazard Severity Zone Map of San Diego County (2009), these steep canyons surrounding the Hillcrest Campus, including those structures that border the canyons, lie within a local responsibility very high fire hazard severity zone. New residential uses would be constructed along the western boundary of the campus under the proposed 2019 LRDP adjacent to these natural canyon areas, which could expose its occupants to pollutants from wildfires.

In order to minimize these wildfire risks, the proposed 2019 LRDP would employ strategic fuel management techniques that include strategic ornamental landscaping on the mesa top and selective thinning on the canyon slopes. Fuel management activities would generally comply with the City's Brush Management Regulations (SDMC Section 142.0412) (City of San Diego 2019).

It would be composed of two zones equaling a total width of 100 feet measured from the building facade into the canyon area. Zone 1 would be at minimum 35 feet wide from the building and would also be used as a fire access lane in many places. Zone 1 would have a relatively level surface and any combination of hardscape and irrigated landscaping with low-fuel species that would be actively maintained to reduce fuel load. Zone 2 would consist of any remaining area necessary to reach the 100-foot minimum width (e.g., 65 feet wide if Zone 1 is 35 feet wide) and contain canyon vegetation that would be managed with selective thinning and pruning to reduce fuel load in accordance with SDMC Section 142.0412 while preserving natural habitat. The UC San Diego Fire Marshal would have the authority to adjust zone widths or requirements based on site conditions. In addition, new structures developed as a result of the proposed 2019 LRDP would comply with the California Building Code and California Fire Code as enforced by the Hillcrest Campus Fire Marshal, which would include ignition-resistant construction materials, automatic interior sprinklers, fire apparatus access, and emergency evacuation routes, among others.

UC San Diego would employ the following key fire protection measures as a part of the implementation of the 2019 LRDP:

- UC San Diego construction specifications would include a requirement that equipment (and trained personnel) be on site during project construction activities to extinguish small fires.
- Smoking would not be allowed in construction areas adjacent to unmaintained native vegetation areas.
- Ignition-resistant materials based on the latest California Building and Fire Codes, or other ways to fire harden structures (e.g., fire deflection walls, exterior sprinklers, ignition resistant landscape palette) would be considered during the planning of new buildings in fire prone areas of the campus.
- New buildings would be designed to include fire department access to the satisfaction of the Hillcrest Campus Fire Marshal.
- Water capacity and delivery of a reliable water source for firefighting operations and during emergencies would be confirmed during the planning of new buildings.
- One hundred-foot-wide fuel management zones adjacent to existing and planned buildings that abut natural or other significant fuel beds would be provided.
- The Hillcrest Campus would have a campus-wide no smoking policy.
- Fire apparatus access roads throughout the campus, including at least the minimum required unobstructed travel lanes, lengths, turnouts, turnarounds, and clearances, would be maintained.
- An emergency operations plan that includes readiness and evacuation planning information would continue to be maintained.

Additionally, implementation of the 2019 LRDP would involve redevelopment of an already developed area with added additional fire protection measures. These measures, incorporated into the design of the 2019 LRDP, would include the widening of Bachman Place and the construction of a new north access driveway. The north access driveway would extend from Bachman Place through the canyon into the northerly section of the campus near the Replacement Hospital and new residential uses. The enhanced streets would provide enhanced fire access to the Hillcrest Campus and act as firebreaks in preventing the uncontrolled spread of potential wildfires through the canyon landscape and provide the SDFR with direct access to fires in the canyon. See additional analysis in Section 3.17. Implementation of fire protection measures, fuel management regulations, and compliance with associated regulations would ensure impacts related to the exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires as a result of implementation of the 2019 LRDP would be less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact on wildland fires through implementation of fire protection measures, fuel management guidelines and compliance with associated regulations; therefore, no mitigation measures are required.

3.8.4 Cumulative Impacts and Mitigation

Hazards and Hazardous Materials Cumulative Issue Summary

Would implementation of the 2019 LRDP have a cumulatively considerable contribution to a cumulative hazards and hazardous materials impact considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Issue 1: Regional use, transport, and disposal of hazardous materials	Less than significant	Not cumulatively considerable
Issue 2: Exposure to accidental releases of hazardous materials	Less than significant	Not cumulatively considerable
Issue 3: Exposure of hazardous emissions or material to nearby schools	Less than significant	Not cumulatively considerable
Issue 4: Exposure of people from nearby airports	Less than significant	Not cumulatively considerable
Issue 5: Impair or interfere with emergency response and evacuation plans	Less than significant	Not cumulatively considerable
Issue 6: Exposure of people and structures to wildland fires	Less than significant	Not cumulatively considerable

3.8.4.1 Cumulative Issues 1 and 2: Transport, Use, Disposal, and Accidental Release of Hazardous Materials

The geographic context for the analysis of cumulative impacts relative to the transport, use and disposal of hazardous materials, and associated accidental releases, encompasses nearby facilities that regularly require the use of disposal of hazardous materials and the roadways and freeways used by vehicles transporting hazardous materials to and from the project area. Cumulative projects listed in Table 3-1, Cumulative Projects, in Chapter 3, Environmental Setting, Impacts, and Mitigation, include the construction of commercial and residential properties that would involve an unquantifiable, but limited, use of potentially hazardous materials typical of those uses. This could potentially result in a significant hazard to the public or the environment. Cumulative projects would be required to comply with regulations applicable to the use, disposal, and transportation of hazardous materials, including the RCRA; Hazardous Materials Transportation Act; and California Code of Regulations, Title 22 and Title 27, which would reduce the potential to result in a significant cumulative impact.

While the Hillcrest Campus would continue using varying amounts and types of hazardous materials in day-to-day activities and operations, the campus would also continue to implement existing campus health and safety practices and comply with federal and state regulations to minimize the potential for adverse health effects related to hazardous materials use, disposal and accidental release. As required by federal, state, and campus policy, particulate-borne air emissions such as bacteria, viruses, and some radioisotopes would continue to be controlled by efficient filtrations. Consequently, the contribution of the proposed 2019 LRDP to cumulative impacts would not be cumulatively considerable.

In addition, the presence of asbestos in older buildings could result in the risk of accidental release during demolition activities required for new construction. Mitigation Measure HAZ-2A would be implemented to ensure proper demolition procedure for existing aging buildings under the 2019 LRDP. Additionally, the potential to encounter contaminated groundwater and soil during construction activities would be mitigated with Mitigation Measures HAZ-2B through HAZ-2D. Cumulative projects would be subject to applicable federal, state, and local regulations that govern the transport, storage, use and disposal of hazardous substances. This would reduce the risks associated with an accidental release of hazardous materials from cumulative projects, and a potentially significant cumulative impact would not occur. Therefore, implementation of the proposed 2019 LRDP would not contribute to a significant cumulative impact.

3.8.4.2 Cumulative Issue 3: Hazards to Nearby Schools

Future development in the City may also involve hazardous emissions or the handling of acutely hazardous materials, substances, or wastes within 0.25 mile of an existing or proposed primary or secondary school. This includes the 3745 Third Avenue multi-family residential project, 4285 1/3

Goldfinch Street single-family residential project, and the 635 Robinson Avenue multi-family residential project. Cumulative projects would be required to comply with regulations applicable to the use, disposal, and transportation of hazardous materials. Any potentially significant impacts would be reduced to a less than significant level through compliance with applicable regulations. Therefore, cumulative projects would not result in a significant cumulative impact.

Under the proposed 2019 LRDP, UC San Diego would continue to comply with applicable hazardous materials and disclosure requirements for the handling, use, storage, and disposal of hazardous materials. Future development on and off campus would be required to comply with applicable laws and regulations pertaining to hazardous wastes, and risks associated with hazardous emissions or materials to existing or proposed schools located within 0.25 mile of future development would be eliminated or reduced through proper handling, disposal practices, and/or cleanup procedures. Furthermore, the materials would not be anticipated to occur in quantities significant enough to pose a risk to occupants of nearby schools or the campus community. Therefore, the proposed 2019 LRDP contribution to cumulative impacts associated with hazardous emissions or handling of hazardous materials within 0.25 mile of an existing or proposed primary or secondary school would not be cumulatively considerable.

3.8.4.3 Cumulative Issue 4: Hazards from Nearby Airports

The cumulative projects listed in Table 3-1 in Chapter 3 are all located in the general vicinity (less than 2 miles) of SDIA. Potential risks associated with development in the vicinity of SDIA would be a factor in any decision to approve or deny future development proposals. Land uses that may be impacted by the airport are reviewed and regulated through the ALUCP, the City, and the San Diego Regional Airport Authority. As a result, cumulative risks to future development associated with proximity to the SDIA would not result in a significant impact. The proposed 2019 LRDP's contribution would not be cumulatively considerable.

3.8.4.4 Cumulative Issue 5: Emergency Response and Evacuation Plans

The geographic context for the analysis of cumulative impacts to emergency response plans or emergency evacuation plans is the Hillcrest Campus and immediate surrounding City area. Cumulative projects have the potential to impair existing emergency and evacuation plans if they block evacuation or access roads, or if necessary off-site road improvements were to result in the closure of roads. Construction and operation associated with future development in the surrounding City could result in activities that could interfere with adopted emergency response or evacuation plans, such temporary construction barricades or other obstructions that could impede emergency access. Cumulative projects would be required to comply with the requirements of the SDFR and the City's traffic control requirements. Compliance with applicable regulations would ensure that cumulative projects do not result in a significant impact associated with the impairment of an emergency response and evacuation plan.

Implementation of the 2019 LRDP would require temporary road and lane closures. However, access to the existing hospital Emergency Department would be maintained throughout construction. In addition, a traffic control plan would be put in place to minimize impaired emergency response or evacuation during construction activities consistent with Mitigation Measure HAZ-5. The Hillcrest Campus would also initiate notification of local emergency services to the campus advising of upcoming road closures and required detours. The Hillcrest Campus has an adopted Emergency Operations Plan, which addresses planned responses, instructions, and procedures to various levels of manmade or natural emergency situations for all campus staff, students, and visitors. Fire apparatus access throughout the Hillcrest Campus would continue to include roads that meet the code requirements for width, grade, clearance, turnouts, dead-end length, and turnarounds. Under the 2019 LRDP, the planned roadway improvements would improve access and reduce congestion to and from the Hillcrest Campus. Therefore, the proposed 2019 LRDP's contribution to cumulative impacts associated with the interference of an adopted emergency response or evacuation plan would not be cumulatively considerable.

3.8.4.5 Cumulative Issue 6: Wildland Fires

The geographic context for the analysis of cumulative impacts related to risk of wildfire would be the City. The 2019 LRDP is located in a very high fire severity zone. However, most of the cumulative projects identified in Table 3-1 in Chapter 3 lie within a low fire hazard severity zone according to CAL FIRE, resulting in a low likelihood of fires, with the exception of Legacy International Center, which is downhill from the Hillcrest Campus to the north. Therefore, cumulative projects would not result in a significant cumulative impact associated with significant risk of loss, injury or death involving wildland fires.

According to CAL FIRE's Fire Hazard Severity Zone Map of San Diego County (2009), the steep canyons surrounding the Hillcrest Campus, including those structures that border the canyons, lie within a local responsibility very high fire hazard severity zone. Although the City has developed policies to manage the fire risk, existing and future residents and structures would continue to be at risk. However, under the 2019 LRDP, the Hillcrest Campus would put forth a fuel management strategy that complies with the City's Brush Management Regulations (SDMC Section 142.0412) (City of San Diego 2019), which would reduce wildland fire risks. In addition, implementation of the 2019 LRDP would not contribute to exacerbating the risk associated with wildfires because the land use redevelopment associated with the 2019 LRDP would be limited to already developed areas of the mesa. The only development within the canyon areas would be circulation-related improvements that would act as additional firebreaks. No structures would be located within the undeveloped canyon areas that are prone to fire. Therefore, the proposed 2019 LRDP's contribution to the regional cumulative impact is not cumulatively considerable.

3.8.5 CEQA Issues Where There Is No Potential for a Significant Effect

Would implementation of the 2019 LRDP result in activities located on a listed hazardous materials site compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or environment?

Development proposed under the 2019 LRDP would not be located on a listed hazardous materials site compiled pursuant to Government Code, Section 65962.5. Therefore, the 2019 LRDP would not result in activities located on a listed hazardous materials site compiled pursuant to Government Code, Section 65962.5, and would not create a significant hazard to the public or environment. There would be no impact.

3.8.6 References

Apex (APEX Companies). 2013. Corrective Action Plan UCSD Medical Center. April 19, 2013.

Apex. 2018. Semi Annual Groundwater Monitoring and Sampling Report UCSD Hillcrest Medical Campus First Half 2018. July 9, 2018.

CAL FIRE (California Department of Forestry and Fire Protection). 2009. Fire Hazard Severity Zone Map of San Diego County.

CDC (Centers for Disease Control). 2009. "Biosafety in Microbiological and Biomedical Laboratories." Accessed November 6, 2018. https://www.cdc.gov/biosafety/publications/bmbl5/bmbl.pdf.

City of San Diego. 2009. City of San Diego Fire Hazard Severity Zone Map. Accessed November 16, 2018. https://www.sandiego.gov/sites/default/files/legacy/fire/pdf/maps/grid19.pdf.

City of San Diego. 2016b. Uptown Community Plan. November 2016.

City of San Diego. 2019. "Section 142.0412: Brush Management." In San Diego Municipal Code. February 2019.

County of San Diego. 2016. Hazardous Materials Business Plan – Instructions and Template. Accessed January 10, 2019. https://www.sandiegocounty.gov/content/sdc/deh/hazmat/hazmat.html.

EDR (Environmental Data Resources, Inc.). 2018. EDR DataMap Area Study. August 28, 2018.

Moore, Kelvin. 2019. Conversation regarding waste disposal on the Hillcrest Campus. January 2, 2019.

NIH (National Institutes of Health). 2016. NIH Guidelines for Research Involving Recombinant DNA or Synthetic Nucleic Acid Molecules. Accessed November 6, 2018. https://osp.od.nih.gov/wp-content/uploads/2013/06/NIH_Guidelines.pdf.

Nuclear Energy Institute. 2014. Disposal of Commercial Low-Level Radioactive Waste. Accessed November 12, 2018. https://www.nei.org/Prints?printpath=/Master-Document-Folder/Backgrounders/Fact-Sheets/Disposal-Of-Commercial-Low-Level-Radioactive-Waste&classname=custom.document&pNm=FactSheets.

San Diego Regional Airport Authority. 2014. San Diego International Airport, Airport Land Use Compatibility Plan. May 1, 2014.

UC San Diego (University of California, San Diego). 2006. Health and Safety Policy. Accessed November 14, 2018. http://adminrecords.ucsd.edu/ppm/docs/516-1.html.

UC San Diego. 2014a. Asbestos: Notice to Employees (Connelly Act, 3713). Accessed November 14, 2018. https://healthsciences.ucsd.edu/careers/neo/professional-schools/Documents/Connelly_Act.pdf.

UC San Diego. 2014b. Emergency Operations Plan. Accessed November 14, 2018. https://blink.ucsd.edu/safety/emergencies/preparedness/get-ready/plan.html.

UC San Diego. 2016a. Radiation Safety Manual. Accessed November 14, 2018. https://ehs.ucsd.edu/rad/radmanual/RSM.pdf.

UC San Diego. 2016b. Hazardous Materials Business Plan.

UC San Diego. 2017a. UC San Diego Soils Management Policy. Accessed November 14, 2018. http://adminrecords.ucsd.edu/ppm/docs/516-27.pdf.

UC San Diego. 2017b. "Chemical Safety and Surveillance Committee." Accessed November 12, 2018. http://blink.ucsd.edu/sponsor/VCRMP/chemical.html.

UC San Diego. 2017c. "Radiation Safety Committee." Accessed November 12, 2018. http://blink.ucsd.edu/sponsor/VCRMP/radiation.html.

UC San Diego. 2017d. "Laser Safety Committee." Accessed November 12, 2018. http://blink.ucsd.edu/sponsor/VCRMP/laser.html.

UC San Diego. 2017e. "Institutional Biosafety Committee." Accessed November 12, 2018. http://blink.ucsd.edu/sponsor/VCRMP/biosafety.html.

UC San Diego. 2017f. "Institutional Animal Care and Use Committee Office." Accessed November 12, 2018. http://blink.ucsd.edu/sponsor/iacuc/index.html.

UC San Diego. 2017g. Laboratory Safety Manual. Accessed on November 12, 2018. http://blink.ucsd.edu/safety/research-lab/laboratory/.

UC San Diego. 2017h. "Biosafety Program." Accessed November 14, 2018. http://blink.ucsd.edu/safety/research-lab/biosafety/index.html#.

UC San Diego. 2017i. "Laser Safety Program: Overview." Accessed November 12, 2018. https://blink.ucsd.edu/safety/radiation/lasers/about.html.

UC San Diego. 2017j. "Radiation Safety Training." Accessed November 12, 2018 https://blink.ucsd.edu/safety/resources/training/radiation.html.

UC San Diego. 2018a. Personal Communications. Valerie Fanning. July 25, 2018.

UC San Diego. 2018b. University of California San Diego 2018 Long Range Development Plan, La Jolla Campus, Final Environmental Impact Report. Vol. 1. November 2018.

UC San Diego. 2019. Electronic communication with Ranjit Buch. UC San Diego EH&S. Regarding UC San Diego Hillcrest Campus. January 1, 2019.

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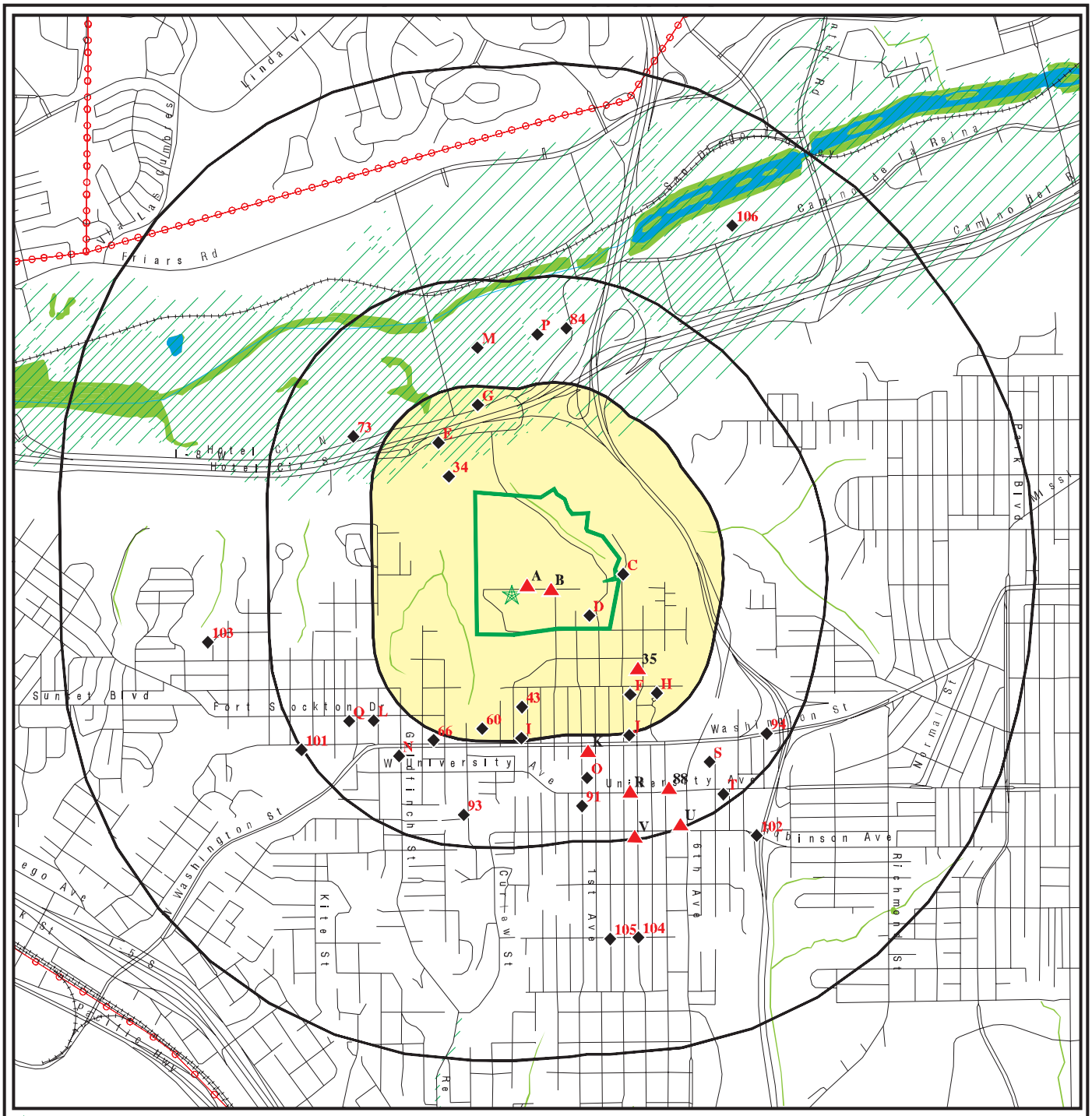

Source: EDR, Inc., 2017

Figure 3.8-1
Hillcrest Campus Underground Storage Tank (UST) Map

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3.9 Hydrology and Water Quality

This section of this 2019 LRDP EIR describes the existing hydrology and water quality conditions in the vicinity of the Hillcrest Campus and analyzes the potential physical environmental effects related to hydrology, drainage, erosion and sediment transport, and water quality that may occur due to implementation of the 2019 LRDP. The information in this section is summarized, in part, from information contained in the UC San Diego Hillcrest Campus 2019 LRDP Drainage Report prepared by Latitude 33 (Latitude 33 2019) (Appendix H). Impacts of the proposed 2019 LRDP on existing and future water supply sources, wastewater treatment, and storm water facilities are described and analyzed in Section 3.16, Utilities and Service Systems. Impacts associated with potential topsoil loss and erosion are addressed in Section 3.6, Geology and Soils.

3.9.1 Environmental Setting

The Hillcrest Campus lies within the San Diego River Hydrologic Unit (HU) of the San Diego region as defined by the San Diego Regional Water Quality Control Board (SDRWQCB) and shown on Figure 3.9-1, Regional Hydrological Setting – San Diego Hydrological Unit. The San Diego River HU is approximately 434 square miles and stretches east to west over a distance of roughly 52 miles. It originates near Santa Ysabel, in the Cuyamaca Mountains and eventually discharges to the Pacific Ocean near the community of Ocean Beach. As shown on Figure 3.9-1, the San Diego River HU is further divided into four distinct Hydrologic Areas (Lower San Diego, San Vicente, El Capitan, and Boulder Creek) based on local drainage characteristics. The Hillcrest Campus is located within the Lower San Diego Hydrologic Area, which drains into the San Diego River and discharges directly into the Pacific Ocean at Ocean Beach (Figure 3.9-2, Lower San Diego Hydrological Area) (SDRWQCB 2016a).

The prevailing winds and weather in San Diego are tempered by the Pacific Ocean, with the result that summers and winters are mild. Daily temperatures for San Diego range between 70°F and 85°F in the summer and 55°F to 65°F in the winter. Annual precipitation varies from 8 inches along the coast to over 18 inches inland, with San Diego averaging approximately 10 inches per year. Eighty-five percent of the rainfall occurs from November through March (UC San Diego 2016).

The Hillcrest Campus is situated on a mesa at the south rim of Mission Valley surrounded by steep canyons on the north and west. These canyons form the edge of the existing development and the practical limits of the Hillcrest Campus to the north, east, and west. The on-site elevation ranges between 150 and 300 feet above mean sea level. The Hillcrest Campus is located in FEMA Flood Zone X, which is outside of the 100-year and 500-year flood plain areas or any County-identified flood plain areas (SanGIS 2017).

3.9.1.1 Surface Water Drainage

As shown on Figure 3.9-3, Existing Hydrology Map, the drainage areas from the Hillcrest Campus generally drains into three distinct drainage points. Drainage basins are described below.

Eastern Drainage (Basin 1). The Eastern Drainage Basin contains many of the existing clinical research and administration buildings, including but not limited to the Medical Library, Multi-Purpose Facility, North Annex Replacement Facility, and Clinical Teaching Facility. This basin also contains many of the public streets that run through campus, including Dickinson Street, Front Street, First Avenue, and portions of Arbor Drive. Flow from this basin is collected in several distinct subdrainages, which ultimately discharge into an existing concrete swale that runs along the northeastern portion of the Hillcrest Campus. The swale runs north, from its inception just north of the Bachman Parking Structure to its connection to the existing City main just south of the Days Inn property.

Western Drainage (Basin 2). The Western Drainage Basin comprises the majority of the existing Inpatient Tower, the West Wing, portions of the off-site church parcel just south of campus, and the Arbor Parking Structure. Flow from this basin is generally collected within a series of storm drain inlets that concentrate flow into an existing 18-inch storm drain pipe that discharges into the City canyon west of the property, just north of the Arbor Parking Structure. This flow then travels through a natural channel within the canyon before draining onto the Legacy International Center project site within Mission Valley.

Southern Drainage (Basin 3). The Southern Drainage Basin contains the existing surface lot and several small structures just south of Arbor Drive. Runoff from this basin generally sheet flows onto City streets, where it is collected in storm drain curb inlets and drains south into the Hillcrest Campus drainage system along Front Street.

3.9.1.2 Receiving Waters

Receiving waters is a general term typically used to describe any water body, such as a creek, river, lake, bay, or ocean that receives runoff. In the context of this section, it refers to those water bodies that would receive runoff as a result of implementation of the 2019 LRDP. The main receiving water from the Hillcrest Campus is the San Diego River.

The beneficial uses designated by the RWQCB for the San Diego River are provided in Table 3.9-1, Applicable Beneficial Use Designations. These include: Municipal, Agriculture, Industrial Process Supply, Contact Water Recreation, Non-Contact Water Recreation, Warm Freshwater Habitat, Cold Freshwater Habitat, and Wildlife Habitat. The definitions for the beneficial uses designated for the San Diego River are provided in Table 3.9-2, Definitions of Applicable Beneficial Use Designations. In general, beneficial uses are those uses, users, or activities that benefit from the presence of the water and could be adversely impacted if water quality were degraded.

San Diego River

The San Diego River originates in the Laguna Mountains northeast of Santa Ysabel and winds southwest to the El Capitan Reservoir, and continues westerly through Lakeside, Santee, and Mission Valley. The river reaches Mission Valley near the Mission San Diego de Alcala where it turns westward to flow down Mission Valley. The river eventually drains into the Pacific Ocean in Ocean Beach. The Hillcrest Campus is located on a mesa approximately 0.5 mile south of the San Diego River. Surface runoff within the basins eventually drains into the San Diego River. The lower San Diego River from Lakeside to the Pacific Ocean is included on the CWA Section 303(d) list as impaired by enterococcus, fecal coliform, dissolved oxygen, manganese, nitrogen, phosphorus, total dissolved solids, and aquatic toxicity (SDRWQCB 2016b). Total Maximum Daily Loads (TMDLs), or pollution budgets, have been adopted for the lower San Diego River for bacteria to restore the health of the water body and ensure the protection of beneficial uses.

Table 3.9-1. Applicable Beneficial Use Designations

Inland Surface Waters – Lower San Diego River																					
Hydrologic Unit Basin Number	MUN	AGR	IND	NAV	PROC	GWR	FRSOH	POW	REC 1	REC 2	COMM	BIOL	EST	WARM	COLD	WILD	RARE	MAR	AQUA	MIGR	SPWN	SHELL
7.10	●	●			●				●	●				●	●	●						

Source: Project Cleanwater 2018.

Notes: Refer to Table 3.9-2 for definitions of the applicable beneficial uses.

● = Existing beneficial use

Table 3.9-2. Definitions of Applicable Beneficial Use Designations

Designation	Abbreviation	Definition
Municipal and Domestic Supply	MUN	Includes uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.
Industrial Process Supply	PROC	Includes uses of water for industrial activities that depend primarily on water quality.
Contact Water Recreation	REC 1	Includes uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water skiing, skin and SCUBA diving, surfing, white water activities, fishing, or use of natural hot springs.
Non-contact Water Recreation	REC 2	Includes the uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
Warm Freshwater Habitat	WARM	Includes uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

Table 3.9-2. Definitions of Applicable Beneficial Use Designations

Designation	Abbreviation	Definition
Cold Freshwater Habitat	COLD	Includes uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
Wildlife Habitat	WILD	Includes uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife, or wildlife water and food sources.

Source: SDRWQCB 2016a.

3.9.1.3 Water Quality

This section discusses the existing water quality of the runoff from the region, including the Hillcrest Campus property, and the measures that are currently being implemented to prevent or reduce pollutants from entering runoff.

Runoff is a term used to describe any water that drains or runs off of a defined land area into a waterway. Runoff can be the result of rain, in which case it is also sometimes referred to as storm water. Runoff can also result from various other sources or activities such as irrigation, hosing down of areas, wash water from cleaning, leaks in pipes, and air conditioner condensation. When runoff is not the result of natural precipitation, it is sometimes referred to as non-storm water. General hydrologic characteristics, land uses, and activities that involve pollutants have the greatest influence on the water quality runoff from a given area.

Constituents of concern (COCs) found in urban runoff include sediments, non-sediment solids, nutrients, pathogens, oxygen-demanding substances, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons, trash, pesticides, and herbicides.

Regional Water Quality

Runoff within the San Diego region, surrounding but not including UC San Diego, is managed and regulated under an NPDES Regional MS4 Permit (R9-2013-0001). This Regional MS4 Permit covers 39 municipal, county government, and special district entities (referred to jointly as Copermittees) located in the County, southern Orange County, and southwestern Riverside County, who own and operate large municipal separate storm sewer systems (MS4s) that discharge storm water (wet weather) runoff and non-storm water (dry weather) runoff to surface waters throughout the San Diego region.

The Regional MS4 Permit also incorporates mechanisms to identify and address highest priority water quality issues through the development of water quality improvement plans (WQIPs) for each Watershed Management Area (WMA) designated by the SDRWQCB (see Section 3.9.2.3).

The Hillcrest Campus is situated within the SDRWQCB-designated San Diego River WMA, which is coincident with the 434-square-mile San Diego River HU. The highest water quality

priority within the WMA is to reduce bacteria levels during both wet and dry weather conditions (City of San Diego 2018).

UC San Diego Water Quality

Runoff from UC San Diego is managed and regulated under its NDPES Phase II Small MS4 General Permit (2013-0001-DWQ) and associated Storm Water Management Program (see Section 3.9.2.2). The permit includes water quality objectives pertaining to campus operations and construction.

The Hillcrest Campus includes a variety of land uses and activities that have potential to produce pollutants that could adversely affect water quality. Table 3.9-3, Potential Pollutant Activity or Sources List and Applicable Best Management Practices, summarizes the activities and sources of pollutants for the Hillcrest Campus and their associated pollutants. If improperly managed, these pollutants can be deposited in areas such as streets, parking lots, and walkways, and when exposed to precipitation or non-storm water runoff can be washed downstream to the drainage system and receiving waters.

Measures, including site design, source control, and treatment BMPs that are currently implemented by UC San Diego to manage these activities and reduce the discharge of the pollutants, are documented in its Storm Water Management Plan (SWMP) (UC San Diego 2016). Site design BMPs, including structural controls to reduce runoff rates and volumes, are described in the UC San Diego Design Guidelines (UC San Diego 2018b).

Activity-specific source control BMPs are also described in UC San Diego's Storm Water Pollution Prevention Source Control Best Management Practices Handbook (UC San Diego 2019). Table 3.9-3 also presents BMPs developed by UC San Diego that address potential pollutants associated with specific outdoor activities. UC San Diego staff, faculty, students, contractors, and service providers are responsible for reviewing the Source Control Best Management Practices Handbook to ensure outdoor work activities, equipment, and materials storage practices do not result in a discharge to a storm drain and will not introduce pollutants to storm water flows during a rain event (UC San Diego 2019). UC San Diego has also prepared additional Storm Water Management Requirements for Construction Projects (UC San Diego 2014).

Storm water quality monitoring at UC San Diego is conducted in accordance with the NDPES Permit requirements (see Section 3.9.2.2) and the SWMP to ensure that BMPs effectively eliminate or reduce pollutants in runoff.

As required by UC San Diego's SWMP, if monitoring results are above the NPDES Permit limits and/or water quality objectives, UC San Diego would attempt to identify the source of the pollutant(s), review the BMPs that have been implemented to address the pollutant(s) and determine whether to change the existing BMPs or create new BMPs to address the COC(s).

Table 3.9-3. Potential Pollutant Activity or Sources List and Applicable Best Management Practices

Activity/Source	Potential Pollutants	UC San Diego Best Management Practice
Outdoor material storage and outdoor work areas	Oil and grease, metals, sediment, non-storm water discharge, bacteria, trash and debris, and vehicle equipment fluids	A01 – Housekeeping E01 – Employee Training
Outdoor spills	Dry weather flows, cleaning products, oil and grease, hazardous materials, and vehicle fluids	A02 – Spill Control and Cleanup E-01 – Employee Training
Loading dock management	Hazardous materials, non-storm water discharge, metals, oil and grease, trash and debris, and equipment and vehicle fluids	A04 – Loading Dock Management E01 – Employee Training
Outdoor washing/cleaning; includes equipment, vehicle, and boat washing/cleaning	Non-storm water discharge, total residual chlorine, oil and grease, vehicle and equipment fluids, bacteria, trash and debris, and sediment	B01 – Outdoor Washing/Cleaning E01 – Employee Training
Fueling operations	Oil and grease and vehicle fluids	B02 – Fueling Operations E01 – Employee Training
Equipment, vehicle and boat maintenance	Oil and grease, paint, and vehicle and equipment fluids	B03 – Equipment, Vehicle, and Boat Maintenance B04 – Preventable Maintenance E01 – Employee Training
Trash management	Bacteria, oil and grease, and trash and debris	C01 – Trash Management E01 – Employee Training
Hazardous materials management	Hazardous materials	C02 – Hazardous Materials Management E01 – Employee Training
Hazardous waste management	Hazardous waste	C03 – Hazardous Waste Management E01 – Employee Training
On-site transportation of materials/waste	Metals, oil and grease, vehicle fluids, hazardous materials and waste, and trash and debris	C04 – On-Site Transportation of Materials/Waste E01 – Employee Training
Food service management	Bacteria, oil and grease, non-storm water discharge, and trash and debris	C05 – Food Service Management E01 – Employee Training
Sanitary sewer overflows/sewer line blockages	Bacteria and non-storm water discharge	C06 – Sanitary Sewer Overflows and Cleanup E01 – Employee Training

Table 3.9-3. Potential Pollutant Activity or Sources List and Applicable Best Management Practices

Activity/Source	Potential Pollutants	UC San Diego Best Management Practice
Improper discharge into storm drains	Bacteria, oil and grease, sediment, non-storm water discharge, and trash and debris	D01 – Storm Water Conveyance System Management E01 – Employee Training
Landscape management: irrigation runoff, erosion, green waste	Non-storm water discharge, bacteria, nutrients, pesticides, fertilizers, sediment, and trash and debris	D02 – Landscape Management D13 – Erosion and Sediment Control E01 – Employee Training
Surface cleaning/pressure washing	Non-storm water discharge, total residual chlorine, bacteria, oil and grease, sediment, and trash and debris	D03 – Surface Cleaning/Pressure Washing E01 – Employee Training
Water utility line maintenance and repairs, fire hydrant and fire suppression system testing, water system flushing, and outdoor fountain, water tank, and emergency eyewash/shower maintenance	Non-storm water discharge and bacteria	D04 – Fire Sprinkler and Hydrant Testing/Flushing D10 – Maintenance on Equipment Containing Water D11 – Portable Water System Flushing D12 – Pools, Decorative Fountains, and Other Water Features E01 – Employee Training
Outdoor painting and sandblasting	Metals, non-storm water discharge, and paint/paint chips	D05 – Outdoor Painting and Sandblasting E01 – Employee Training
Non-storm water discharges/dry weather flows	Oil and grease, sediment, bacteria, total residual chlorine, and non-storm water discharge	D06 – Non-Storm Water Discharges/ Dry Weather Flows E01 – Employee Training
Integrated pest management	Pesticides and trash	D07 – Integrated Pest Management E01 – Employee Training
Building maintenance, repair, or remodeling	Non-storm water discharge, paint, hazardous materials, oil and grease, and trash and debris	D08 – Building Maintenance, Repairs, or Remodeling E01 – Employee Training
Parking lot and storage area maintenance	Oil and grease, vehicle fluids, sediment, and trash and debris	D09 – Parking Lot and Storage Area Management E01 – Employee Training

Table 3.9-3. Potential Pollutant Activity or Sources List and Applicable Best Management Practices

Activity/Source	Potential Pollutants	UC San Diego Best Management Practice
Maintenance on equipment or features containing water and flushing water systems	Bacteria, total residual chlorine, and non-storm water discharge	D10 – Maintenance on Equipment Containing Water D11 – Potable Water System Flushing or Chlorination D12 – Pools, Decorative Fountains, and Other Water Features E01 – Employee Training
Erosion prevention control	Sediment	D13 – Erosion and Sediment Control E01 – Employee Training
Employee Training	Storm water pollution awareness and behavior change	E01 – Employee Training
Construction activities	Non-storm water discharge, sediment, and trash and debris	UC San Diego Design Guidelines and/or project-specific Storm Water Pollution Prevention Plan (SWPPP) or Water Pollution Control Plan (WPCP) BMPs

Source: UC San Diego 2018a.

3.9.1.4 Tsunamis and Seiches

Tsunamis are seismically induced waves generated by sudden movements of the ocean bottom during earthquakes, landslides, or volcanic activity. Waves are often generated in the ocean at a point near the earthquake source by the sudden movement of the sea floor. When a tsunami finally reaches a distant coastline, it may appear as a rapidly rising or falling tide, a series of breaking waves, or a bore (a step-like wave with a steep breaking front). Reefs, bays, entrances to rivers, undersea features, and the slope of the beach all help to modify the tsunami as it approaches the shore. Tsunamis rarely become great, towering breaking waves and sometimes the tsunami may break far offshore or may not be visible at all.

The Pacific Ocean is located approximately 6 miles west of the Hillcrest Campus. The Hillcrest Campus is located outside the tsunami inundation area depicted on the City's Inundation Map (City of San Diego 2017). In addition, Lake Murray, the nearest, large in-land waterbody, is located approximately 8 miles northeast of the Hillcrest Campus outside of the range of influence of a seiche.

3.9.2 Regulatory Framework

Applicable federal, state, and UC regulations pertaining to hydrology and water quality are discussed below.

3.9.2.1 Federal

Clean Water Act

The CWA is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The key sections pertaining to water quality regulation are Sections 303, 401, 402, and 404. Other provisions of the CWA related to basin planning include Section 208, which authorizes the preparation of waste treatment management plans, and Section 319, which mandates specific actions for the control of pollution from nonpoint sources. Under the CWA, Congress recognized the primary responsibility and rights of states to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources. The SWRCB and its RWQCBs implement CWA Sections 303, 401, and 402 at the state level.

Section 303(d)

Under Section 303(d), states are required to identify "impaired water bodies" (those not meeting established water quality standards), identify the pollutants causing the impairment, establish priority rankings for waters on the list, and develop a schedule for development of control plans to improve water quality. The USEPA then approves the state's recommended list of impaired waters, or adds to and/or removes water bodies from the list. Each RWQCB must update the Section 303(d) list every two years. The Section 303(d) list identifies priorities for development of water

pollution control plans (WPCPs) for each listed water body and pollutant. The WPCPs triggered by the CWA Section 303(d) list are called TMDLs. The TMDL is a "pollution budget" designed to restore the health of a polluted body of water and ensure the protection of beneficial uses. The TMDL also contains the target reductions needed to meet water quality standards and allocates those reductions among the pollutant sources in the watershed (point sources, nonpoint sources, and natural sources) (40 CFR 130.2).

Section 401

Section 401 of the CWA allows for evaluation of water quality when a proposed activity requiring a federal license or permit could result in a discharge to waters of the United States. In California, the SWRCB and its nine RWQCBs issue water quality certifications. Each RWQCB is responsible for implementing Section 401 in compliance with the CWA and its water quality control plan (also known as a basin plan). Applicants for a federal license or that wish to conduct activities that may result in the discharge to waters of the United States (including wetlands) must also obtain a Section 401 water quality certification to ensure that any such discharge will comply with the applicable provisions of the CWA. Compliance with Section 401 is required for all projects that have a federal component and may affect state water quality.

Section 402

Section 402 of the CWA regulates point-source discharges to surface waters (other than dredge or fill material) through the NPDES program, administered by the USEPA. The NPDES program provides general permits (those that cover a number of similar or related activities) and individual permits for discharges to waters of the United States. This regulation is implemented at the state level and is described further below.

NPDES Permit Program – Phase I

In November 1990, under Phase I of the urban runoff management strategy, the USEPA published NPDES permit application requirements for municipal, industrial, and construction storm water discharges. The application requirements were directed at municipalities that own and operate separate storm drain systems serving populations of 100,000 or more, or that contribute significant pollutants to waters of the United States, and required such agencies to obtain coverage under municipal storm water NPDES permits.

Municipalities are required to develop and implement a jurisdictional runoff management program to address activities to reduce pollutants in urban runoff and storm water discharges that were contributing a substantial pollutant load to their systems. Rather than establishing numeric effluent, or discharge, limits, the USEPA established narrative effluent limits for urban runoff, including the requirement to implement appropriate BMPs.

The Phase I regulations were also directed at certain facilities that discharged storm water associated with industrial activity, and construction activities that disturb 1 or more acres. Only the industrial and construction activity components of the Phase I program are applicable to UC San Diego. The municipal regulations are not.

NPDES Permit Program – Phase II

The Phase II Final Rule, published in the Federal Register on December 8, 1999, requires NPDES permit coverage for storm water discharges from certain regulated small MS4s; and construction activity disturbing more than 1 acre of land. In addition to expanding the NPDES program, the Phase II Final Rule included minor revisions for certain industrial facilities. As with Phase I, the Phase II program requires the development and implementation of SWMPs to reduce pollutant discharges. The MS4 and construction components of the Phase II program are both applicable to UC San Diego.

Section 404

Section 404 of the CWA regulates the discharge of dredged and fill materials into waters of the United States, which include all navigable waters, their tributaries, and some isolated waters, as well as some wetlands adjacent to the aforementioned waters (33 CFR Part 328.3). Areas typically not considered jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water-filled depressions (33 CFR Part 328). Areas meeting the regulatory definition of waters of the United States are subject to the jurisdiction of the U.S. Army Corps of Engineers (ACOE) under provisions of the CWA Section 404. Construction activities involving placement of fill into jurisdictional waters of the United States are regulated by the ACOE through permit requirements. No ACOE permit is effective in the absence of the state water quality certification pursuant to Section 401 of the CWA.

3.9.2.2 State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act), also known as the California Water Code, is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the state must adopt water quality policies, plans, and objectives that protect the state's waters beneficial uses. State law defines beneficial uses as "domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (Water Code, Section 13050[f]). The Porter-Cologne Act sets forth the obligations of the SWRCB and RWQCBs pertaining to the adoption of water quality control plans and establishment of water quality objectives. Unlike the federal CWA, which regulates only surface water, the Porter-Cologne Act regulates both surface water and groundwater. The SWRCB and RWQCBs establish

water quality objectives for surface waters and groundwater, and have permitting and enforcement authority to prevent and control waste discharges that could affect waters of the state through the issuance of NPDES permits and waste discharge requirements (WDRs). The SDRWQCB also develops TMDLs for the San Diego region. Load reduction efforts for sediment, bacteria, and other constituents within the planning area are ongoing and implemented through WQIPs, municipal NPDES storm water permits and individual NPDES permits (e.g., NPDES permit for water treatment plant discharges).

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act of 2014 provides a framework to regulate groundwater for the first time in California's history. The intent of the law is to strengthen local groundwater management of basins most critical to the state's water needs with an understanding that groundwater is most effectively managed at the local level. The Sustainable Groundwater Management Act requires basins to be sustainably managed by local public agencies (e.g., counties, cities, and water agencies) who become groundwater sustainability agencies, or GSAs. The primary purpose of the GSAs is to develop and implement a groundwater sustainability plan to achieve long-term groundwater sustainability. In the County, the state has designated four of the County's basins as medium-priority and subject to the Sustainable Groundwater Management Act: Borrego Valley, San Diego River Valley, San Luis Rey Valley and San Pasqual Valley. Groundwater sustainable management plans for these basins are in preparation.

UC San Diego Storm Water Regulatory Program

UC San Diego manages storm water at the Hillcrest Campus in accordance with the following NPDES permits: (1) the Phase II Small MS4 General Permit (Non-traditional), and (2) the General Permit for Storm Water Discharges Associated with Construction Activity. These permits have been developed and adopted by the SWRCB and are regulated by the SDRWQCB. A description of each permit is further described below.

Phase II Small MS4 General Permit (Non-Traditional) (2013-0001-DWQ)

In 2013, the SDRWQCB adopted a revised NPDES Phase II Small MS4 General Permit that regulates MS4 discharges, which typically discharge water (and any potential pollutants) directly into streams, bays, and/or an ocean. The Phase II Small MS4 General Permit requires the development, implementation, and enforcement of a storm water management program designed to reduce the discharge of pollutants "to the maximum extent possible."

UC San Diego has prepared a comprehensive SWMP to comply with the General Small MS4 Storm Water Permit issued by the SWRCB under the Phase II NPDES requirements. The SWMP includes public education/outreach and participation; illicit discharge detection and elimination;

pollution prevention for daily campus operations; construction site storm water runoff control; and post-construction storm water management in new development and redevelopment.

It also identifies pollutant sources potentially affecting the quality and quantity of storm water discharges, provides BMPs for campus operational and construction activities implemented by UC San Diego staff and contractors, and provides measurable goals for the implementation of the SWMP to reduce the discharge of the identified pollutants into the storm drain system and associated waterways. BMPs include treatment controls; operating procedures; training and education; and practices to control site runoff, spill, leaks, and waste disposal. BMPs are required to be updated accordingly to comply with any additions and/or modifications to the NPDES permit requirement or site conditions.

Projects that create or replace more than 2,500 square feet of impervious surface are also subject to low-impact development (LID) measures, including runoff reduction, and post-construction storm water management requirements. Runoff reduction must be quantified through the state's water balance calculator and a Post-Construction Storm Water Management Checklist must also be completed by the UC San Diego Project Manager and submitted to EH&S. Projects that create or replace more than 5,000 square feet of impervious surface are considered to be a regulated project under UC San Diego's Storm Water Program and subject to additional requirements beyond the checklist, including the preparation of a hydrology/drainage study and a WPCP.

UC San Diego's SWMP, source control BMPs, and an inventory of the treatment controls that have been installed throughout the campus to prevent storm water pollution are included on UC San Diego's Storm Water Management Program webpage: http://stormwater.ucsd.edu.

A Program Effectiveness Assessment and Improvement Plan to meet the requirements of the Phase II MS4 Permit has also been prepared by UC San Diego (UC San Diego 2018a). The plan describes an approach for planning, monitoring, and assessing the effectiveness of UC San Diego's Storm Water Management Program. Based on the outcomes of the effectiveness assessment, modifications to program elements, BMPs, and policies are made as needed to better meet water quality objectives and permit obligations.

In 2017, statewide trash provisions were incorporated into the Phase II Small MS4 General Permit (Order No. 2013-0001-DWQ). As a result, UC San Diego will install, operate, and maintain Full Capture Systems for storm drains that capture runoff from identified Priority Land Uses (e.g., commercial areas, high density residential areas, and public transportation areas). Future projects that include Priority Land Uses may be required to install, operate, and maintain Full Capture Systems for storm drains that capture runoff from the Priority Land Use area. Full capture means 5 millimeter screen, certified by the state, installed to capture trash that enters the storm drain system.

General Construction Storm Water Permit

Construction projects on campus that disturb 1 acre or more are managed in accordance with the Construction Storm water Program Requirements identified in the General Permit, including developing and implementing a site-specific SWPPP, which emphasizes the use of appropriately selected, correctly installed and maintained pollution reduction BMPs that would prevent construction pollutants from contacting storm water and leaving the Hillcrest Campus. The SWPPP must:

- Identify pollutant sources associated with construction activities that may affect the quality of storm water discharges.
- Identify and prevent non-storm water discharges.
- Identify, construct, and implement storm water pollution prevention measures or BMPs to reduce or eliminate pollutants in storm water discharges from the construction site, both during construction and after construction is completed.

Storm water runoff from the construction site is monitored and analyzed based on the calculated risk level of projects implemented under the proposed 2019 LRDP, with special considerations for construction occurring adjacent to sensitive sites (e.g., biologically sensitive sites, sites that drain directly into streams, drainage courses). In addition, UC San Diego has identified areas of the campus that require an additional level of scrutiny above and beyond the calculated risk level, based on construction proximity to steep slopes, sensitive resources and/or open water. Throughout the construction period, a Qualified SWPPP Practitioner conducts and documents inspections and evaluations in writing as detailed in the SWPPP, including but not limited to, weekly site inspections, quarterly site inspections, pre-rain event inspections within 24 hours prior to a rain event, post-rain event inspections within 24 hours after a rain event, every 24 hours during an extended rain event (lasting longer than one day), and maintenance inspections. The contractor is responsible for preparing and then updating the SWPPP regularly to reflect changing construction conditions in the field and the weather. This work is also inspected by third-party consulting SWPPP auditors retained by UC San Diego and biological monitors (as necessary). Despite best efforts, if BMP sediment breeches in the limits of work occur adjacent to sensitive areas, UC San Diego requires its contractors in all cases to clean up promptly.

UC San Diego Design Guidelines

The UC San Diego Design Guidelines provide design criteria for UC projects for planning, design and construction (UC San Diego 2018b). Design requirements include avoiding disturbing areas of high erosion, and installing slope protection, energy dissipaters, and channel stabilizers as needed to minimize erosion and impacts to receiving waters.

Division II of the UC San Diego Design Guidelines requires storm water BMPs to be implemented in accordance with UC San Diego's NDPES Phase II Small MS4 General Permit (2013-0001-DWQ) and/or Storm Water Management Program. The guidelines also require construction

projects that disturb less than 1 acre and are not subject to Construction General Permit requirements to prepare a WPCP that depicts BMPs to be implemented during construction to reduce/eliminate discharges of pollutants to the storm drain conveyance system. Projects that create or replace more than 2,500 square feet of impervious surface are subject to LID measures, including runoff reduction, and post-construction storm water management requirements. Projects increasing impervious surfaces by 10,000 square feet or more are required to maintain the peak runoff at the pre-project rate for the 10-year, 6-hour storm event post-construction.

Compliance with the UC San Diego Design Guidelines is determined through review and approval from UC San Diego civil engineers as well as EH&S staff during the planning phase, design development phase, and construction document phase. Post-construction design reporting must also be completed.

UC Sustainable Practices Policy

The UC Sustainable Practices Policy, originally issued in 2004 and most recently updated in August 2018, establishes goals in nine areas of sustainable practices: green building, clean energy, transportation, climate protection, sustainable operations, waste reduction and recycling, environmentally preferable purchasing, sustainable foodservice, and sustainable water systems. Policy procedures require that UC San Diego's Water Action Plan (UC San Diego 2017) include a section on Storm Water Management that:

- Addresses storm water management from a watershed perspective in a location-wide, comprehensive way that recognizes storm water as a resource and aims to protect and restore the integrity of the local watershed(s);
- References the location's best management practices for preventing storm water pollution from activities that have the potential to pollute the watershed (e.g., construction; trenching; storage of outdoor equipment, materials, and waste; landscaping maintenance; outdoor cleaning practices; vehicle parking);
- Encourages storm water quality elements such as appropriate source control, site design (low impact development), and storm water treatment measures to be considered during the planning stages of projects in order to most efficiently incorporate measures to protect storm water quality;
- If feasible, cites relevant and current location storm water-related plans and permits in an appendix or reference list accompanying the Water Action Plan; and
- Includes, to the extent feasible, full cost evaluation of storm water management initiatives that offset potable water use.

3.9.2.3 Local

Water Quality Control Plan for the San Diego Basin

The Water Quality Control Plan for the San Diego Basin (Basin Plan) sets forth water quality objectives for constituents that could potentially cause an adverse effect or impact on the beneficial uses of water (SDRWQCB 2016a). The beneficial uses of the receiving waters relevant to the proposed 2019 LRDP are listed in Table 3.9-1. Specifically, the Basin Plan is designed to accomplish the following:

- Designate beneficial uses for surface and groundwaters;
- Set the narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy;
- Describe implementation programs to protect the beneficial uses of all waters within the region; and
- Describe surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan. The Basin Plan incorporates by reference all applicable SWRCB and RWQCB plans and policies.

The Basin Plan also identifies specific narrative and numeric water quality objectives for a number of physical properties (e.g., temperature, turbidity, and suspended solids); biological constituents (e.g., coliform bacteria); and chemical COCs, including inorganic parameters, trace metals, and organic compounds. Water quality objectives for toxic priority pollutants (i.e., select trace metals and synthetic organic compounds) also are identified in the Basin Plan.

Water Quality Improvement Plan for the San Diego River Watershed Management Area

The WQIP for the San Diego River Watershed is a comprehensive watershed-based program designed to improve surface water quality in the San Diego River WMA (City of San Diego 2018). It is a requirement of the MS4 Permit (Order R9-2013-0001, NPDES No. CAS0109266) for the San Diego Region issued on May 8, 2013. The WQIP outlines a framework to improve the surface water quality in the San Diego River WMA by identifying and prioritizing sources of storm water and non-storm water pollutants and/or stressors associated with discharges from storm water conveyance systems that cause or contribute to bacteria. On February 12, 2016, the SDRWQCB accepted an updated WQIP as meeting the requirements of the order.

3.9.3 Project Impacts and Mitigation

The following sections address potential impacts relating to hydrology and water quality that could result from implementation of the proposed 2019 LRDP.

3.9.3.1 Issue 1: Water Quality

Hydrology and Water Quality Issue 1 Summary

Would implementation of the 2019 LRDP violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater water quality?

Impact: Implementation of the 2019 LRDP would have the potential to generate pollutants during construction and post-construction activities; however, compliance with applicable regulations would ensure that downstream water quality is not impacted.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would violate any water quality standards or WDRs, or otherwise substantially degrade surface or groundwater quality. WDRs are developed as part of permits issued by the SWRCB or RWQCB.

Impact Analysis

Construction and operation activities associated with the proposed 2019 LRDP could result in an increase in potential discharge of pollutants to receiving waters, including waters designated as impaired for certain COCs. Hydromodification could increase storm water runoff and intensify erosion and the transport of sediments and other pollutants. Land use changes may also introduce new types of pollutants in storm water runoff.

Under the receiving waters limitation provisions of NPDES permits, discharges from sites must not cause or contribute to the violation of water quality standards in any receiving waters. Water quality standards are defined in various regulations, including the Basin Plan and NPDES permits.

With regard to general water quality impacts from storm water and other runoff, pollutants generated at the Hillcrest Campus from the construction and post-construction activities associated with the 2019 LRDP could adversely affect water quality in a variety of ways. A summary of the general adverse environmental effects that can result from the most common pollutant categories is provided below:

- **Sediments**. Sediments are soils or other surficial materials eroded and then transported or deposited by the action of wind, water, ice, or gravity. Sediments can increase turbidity, clog fish gills, reduce spawning habitat, lower the survival rates of young aquatic organisms, smother bottom dwelling organisms, and suppress aquatic vegetation growth.

- **Nutrients.** Nutrients are inorganic substances, such as nitrogen and phosphorus. They commonly exist in the form of mineral salts that are dissolved or suspended in water. Primary sources of nutrients in urban runoff are fertilizers and eroded soils. Excessive discharge of nutrients to water bodies and streams can cause excessive aquatic algae and plant growth. Such excessive production, referred to as eutrophication, may lead to excessive decay of organic matter in the water body, loss of oxygen in the water, release of toxins in sediment, and the eventual death of aquatic organisms.
- **Metals.** Metals are raw material components in non-metal products such as fuels, adhesives, paints, and other coatings. Primary sources of metal pollution in storm water are typically commercially available metals and metal products. Metals of concern include cadmium, chromium, copper, lead, mercury, and zinc. Lead and chromium have been used as corrosion inhibitors in primer coatings and cooling tower systems. At low concentrations that naturally occur in soils, metals are not toxic. However, at higher concentrations, certain metals can be toxic to aquatic life. Humans can be impacted from contaminated groundwater resources and bioaccumulation of metals in fish and shellfish. Environmental concerns regarding the potential for release of metals to the environment have already led to restricted metal usage in certain applications.
- **Organic Compounds**. Organic compounds are carbon based. Commercially available or naturally occurring organic compounds are found in pesticides, solvents, and hydrocarbons. Organic compounds can, at certain concentrations, indirectly or directly constitute a hazard to life or health. When rinsing off objects, toxic levels of solvents and cleaning compounds can be discharged to storm drains. Dirt, grease, and grime retained in the cleaning fluid or rinse water may also adsorb levels of organic compounds that are harmful or hazardous to aquatic life.
- **Trash and Debris**. Trash (such as paper, plastic, polystyrene packing foam, and aluminum materials) and biodegradable organic matter (such as leaves, grass cuttings, and food waste) are general waste products that may have a significant impact on the recreational value of a water body and aquatic habitat. Excess organic matter can create a high biochemical oxygen demand in a stream and thereby lower its water quality. Also, in areas where stagnant water exists, the presence of excess organic matter can promote septic conditions resulting in the growth of undesirable organisms and the release of odorous and hazardous compounds such as hydrogen sulfide.
- **Oxygen Demanding Substances**. This category includes biodegradable organic material as well as chemicals that react with dissolved oxygen in water to form other compounds. Proteins, carbohydrates, and fats are examples of biodegradable organic compounds. Compounds such as ammonia and hydrogen sulfide are examples of oxygen demanding compounds. The oxygen demand of a substance can lead to depletion of dissolved oxygen in a water body and possibly the development of septic conditions.

- **Oil and Grease**. Oil and grease are characterized as high molecular weight organic compounds. Primary sources of oil and grease are petroleum hydrocarbon products, motor products from leaking vehicles, esters, oils, fats, waxes, and high molecular-weight fatty acids. Introduction of these pollutants to the water bodies is typical due to the wide uses and applications of some of these products in municipal, residential, commercial, industrial, and construction areas. Elevated oil and grease content can decrease the aesthetic value of the water body, as well as the water quality.
- **Bacteria and Viruses.** Bacteria and viruses are ubiquitous microorganisms that thrive under certain environmental conditions. Their proliferation is typically caused by the transport of animal or human fecal wastes from the watershed. Excessive bacteria and viruses in water can alter the aquatic habitat and create a harmful environment for humans and aquatic life. The decomposition of excess organic waste causes increased growth of undesirable organisms in the water.
- **Pesticides.** Pesticides (including herbicides) are chemical compounds commonly used to control nuisance growth or prevalence of organisms. Excessive application of a pesticide may result in runoff containing toxic levels of its active component.

Construction Impacts

Development under the proposed 2019 LRDP would involve the net new construction of 1.6 million gsf over five specific phases and would have the potential to result in substantial additional sources of polluted runoff, which could have short-term impacts on surface water quality through activities such as demolition, clearing and grading, stockpiling of soils and materials, concrete pouring, painting, and asphalt surfacing. The details of each construction phase including the amount of demolition and grading is discussed in Chapter 2, Project Description.

Construction under the proposed 2019 LRDP would involve various types of equipment such as bulldozers, scrapers, backhoes, and other earth-moving equipment; dump trucks; cranes; trucks; concrete mixers; and generators. Stockpiled soils and other construction materials for use during later construction phases would be stored outdoors during construction. Pollutants associated with these construction activities that could result in water quality impacts include soils, debris, other materials generated during demolition and clearing, fuels and other fluids associated with the equipment used for construction, paints, other hazardous materials, concrete slurries, and asphalt materials.

These pollutants could impact water quality if they are washed off site by storm water or non-storm water, or are blown or tracked off site to areas susceptible to wash off by storm water or non-storm water. Depending on the location of the construction site at its discharges, pollutants are likely to drain into the San Diego River receiving water identified for the Hillcrest Campus, which is impaired by enterococcus, fecal coliform, dissolved oxygen, manganese, nitrogen,

phosphorus, total dissolved solids, and aquatic toxicity (SDRWQCB 2016b). Under these impairments, the receiving water cannot assimilate or accommodate additional loading of pollutants, and any increases would contribute to the impairment.

Due to the extent of construction anticipated under the proposed 2019 LRDP, which would include redevelopment of the mesa area, construction of a new north access driveway and widening of Bachman Place, implementation of the 2019 LRDP could result in significant short-term impacts to water quality from uncontrolled sediment and pollutants in storm water runoff from construction.

All construction projects and phases would be required to comply with various UC San Diego guidelines and policies, including the Storm Water Management Program, and other regulatory requirements related to storm water runoff to minimize the potential for pollutants to enter receiving waters. The UC San Diego Design Guidelines require that construction projects disturbing less than 1 acre, and are not subject to Construction General Permit requirements, prepare a WPCP that would reduce or eliminate discharges of pollutants to the storm drain conveyance system. In addition, construction projects that disturb more than 1 acre are required to comply with General Construction Storm Water Permit requirements, including the development and implementation of a SWPPP. The SWPPP must identify BMPs the discharger would use to protect storm water runoff from pollutants and the placement of those BMPs.

Construction-related BMPs established as part of UC San Diego's SWMP include, but are not limited to:

- Proper storage, use, and disposal of construction materials.
- Regular removal of sediment from surface runoff before it leaves the site by silt fences or other similar devices around the site perimeter with particular attention to protecting impaired water bodies listed on the 303(d) list for sediment and protecting downstream environmentally sensitive habitats such as wetlands.
- Protection of all storm drain inlets on site or downstream of the construction site to eliminate entry of sediment.
- Stabilization of cleared or graded slopes.
- Diversion of runoff from uphill areas around disturbed areas of the site.
- Prevention of tracking soil off site through use of a gravel strip or wash facilities at exit areas.
- Protection or stabilization of stockpiled soils.
- Continual inspection and maintenance of all specified BMPs through the duration of construction, with special emphasis before and after rain events.

Prompt cleanup of BMP sediment breeches in the limits of work adjacent to sensitive areas The General Construction Storm Water Permit also requires inspection, monitoring, and reporting. Corrective action within 72 hours is required for any issue of non-compliance identified during

monitoring and inspections or sooner in construction zones adjacent to sensitive areas and/or in the case of another imminent rain event.

With the continued implementation of UC San Diego Design Guidelines, policies, and regulatory requirements, which include the implementation of construction-period BMPs that would address potential discharges of pollutants to storm water, any short-term water quality impacts during construction of individual projects under the proposed 2019 LRDP would be minimized to avoid potential violation of any water quality standard or waste discharge requirement, or otherwise substantially degrade water quality. Therefore, potential impacts would be less than significant.

Operational Impacts

Implementation of the proposed 2019 LRDP would result in land use changes and would have the potential to generate pollutants that could degrade the surface water quality of downstream receiving waters. Pollutant sources for the proposed 2019 LRDP would include landscaping, rooftops, parking/driveways, roadways, general use areas, and trash storage areas. In addition, implementation could also result in more routine operation and maintenance activities, thereby increasing instances of accidental spills and non-storm water discharges to storm drains, and non-storm water connections (e.g., sewer connections) that could result in the potential discharge of pollutants to storm drainage systems and associated receiving waters. Table 3.9-3 provides a summary of potential pollutants that could be generated by certain conditions and activities under existing conditions; these constituents are similar to those that could be produced under the 2019 LRDP. Proposed operations associated with the 2019 LRDP would be implanted in five development phases (see Figure 2-9, Conceptual Site Plan, in Chapter 2).

Development proposed under the 2019 LRDP would implement Site Design, Source Control, and Treatment Control BMPs to prevent operational pollutants from reaching receiving waters. Site Design BMPs, including LID measures, would reduce runoff or pollutants at the source. Source Control BMPs would eliminate post-project runoff and control sources of pollutants. Implementation of the following site design BMPs would result in a reduction in the volume of storm water runoff and pollutants generated by Hillcrest Campus operations:

- **Tree Planting and Preservation.** Trees planted to intercept rainfall and runoff can be used as storm water management measures that provide additional benefits beyond those typically associated with trees, including energy conservation, air quality improvement, and aesthetic enhancement. Typical storm water management benefits associated with trees include interception of rainfall, reduced erosion, increased infiltration and treatment of storm water.
- **Rooftop and Impervious Area Dispersion.** Impervious area dispersion refers to the practice of effectively disconnecting impervious areas from directly draining to the storm drain system by routing runoff from impervious areas such as rooftops (through

downspout disconnection), walkways, and driveways onto the surface of adjacent pervious areas. The intent is to slow runoff discharges, and reduce volumes. Dispersion with partial or full infiltration results in significant volume reduction by means of infiltration and evapotranspiration.

- **Porous Pavement.** Permeable pavement is pavement that allows for percolation through void spaces in the pavement surface into subsurface layers. Permeable pavements reduce runoff volumes and rates and can provide pollutant control via infiltration, filtration and biodegradation processes. When used as a site design BMP, the subsurface layers are designed to provide storage of storm water runoff so that outflow rates can be controlled via infiltration into subgrade soils. Varying levels of storm water treatment and flow control can be provided depending on the size of the permeable pavement system relative to its drainage area and the underlying infiltration rates. Permeable pavement surfaces can be constructed from modular paver units or paver blocks, pervious concrete, porous asphalt, and turf pavers. Sites designed with permeable pavements can significantly reduce the impervious area of the 2019 LRDP. Reduction in impervious surfaces decreases the volume and can reduce the footprint of treatment control and flow control BMPs.
- **Green Roofs.** Green roofs are vegetated rooftop systems that reduce runoff volumes and rates, treat storm water pollutants through filtration and plant uptake, provide an additional landscape amenity, and create wildlife habitat.
- **Vegetated Swales/Bioswales.** Vegetated swales are shallow, open channels that are designed to remove storm water pollutants by physically straining/filtering runoff through vegetation in the channel. Swales are well-suited for use in linear transportation corridors to provide both conveyance and treatment via filtration. Swales can be located adjacent to roadways, sidewalks or parking areas. Roadway runoff can be directed into swales by small evenly spaced curb cuts into raised curbs. Placed alongside streets and pathways, vegetated swales can be landscaped with native plants which filter sediment and pollutants.

Measures for pollutant-generating activities and sources would be designed consistent with recommendations from the California Storm Water Quality Association Storm Water BMP Handbook for New Development and Redevelopment and the UC San Diego Design Guidelines and Storm Water Management Program. Treatment BMPs utilize treatment mechanisms with performance standards to remove targeted pollutants that have entered storm water runoff. The following is a description of the proposed post-construction measures for the operational phases of the 2019 LRDP:

Phase 1A

Phase 1A storm water improvements would include a 24-inch underground storm drain construction and localized inlets with connector pipes to the Bachman Place storm drain within

Arbor Drive and Bachman Place. Two retention basin also satisfying water quality treatment requirements would be installed: one located just east of Bachman Drive and one located at the existing bus turnaround. Treated runoff would discharge to the existing concrete swale just north of Bachman Place. Phase 1A storm water improvements would also include the construction of a new 24-inch storm drain pipe along the frontage of the Outpatient Pavilion, ultimately tying into the new 24-inch storm drain within Arbor Drive.

Phase 1B

No new construction would occur in Phase 1B; therefore, only construction storm water management BMPs would be required during this phase. No permanent post-construction storm water improvements or BMPs would be required for Phase 1B.

Phase 2A

Phase 2A storm water improvements would include the abandonment of the existing northerly canyon drainage outlets during the construction of the new north access driveway and the construction of a new concrete swale. Curb inlets would be constructed along the proposed access road to treat runoff. On-site storm water detention and treatment basins would be constructed near proposed Residential Buildings 1 and 2 (R-1 and R-2) or provided through vaults placed within the road. In addition, curb inlets would be installed along Front Street to treat discharged flows.

Phase 2B

Storm water improvements associated with the widening of Bachman Place from the Bachman Parking Structure to Hotel Circle South would include upsizing existing roadway culverts and installing new inlets treated with water quality control devices within Bachman Place.

Phase 3

To adequately convey runoff from the new hospital area, a new 24-inch storm drain system would be constructed along the portion of the First Avenue extension to convey drainage north. A new 24-inch storm drain would be constructed under the existing staircase, along the northern hillside, ultimately tying into the drainage built in the new access road. A water quality treatment basin would be constructed near the new hospital.

Phase 4

No new construction would occur in Phase 4, only demolition. Therefore, only construction storm water management BMPs would be required during this phase. No permanent post-construction storm water improvements or BMPs would be required for Phase 4.

Phase 5

Storm water runoff from Residential Buildings 3 and 4 (R-3 and R-4) would be conveyed by a new 18-inch storm water drain to a new water quality treatment basin. The basin would be

constructed on the site of the existing Arbor Parking Structure. Drainage from the water quality basin would ultimately discharged to the existing headwall located in the existing western canyon via a new 18-inch storm water drain. UC San Diego also has existing programs in place to monitor and evaluate the effectiveness of these BMPs and to implement changes to guidelines or BMPs to further address water quality issues. Refer to Figure 3.9-4, Post-Construction Hydrology Map, for an illustration of the hydrology with implementation of the 2019 LRDP.

With the incorporation of the proposed site design, source control, and treatment control BMPs and the continued implementation of UC San Diego Design Guidelines, SWMP and other regulatory requirements, water quality impacts associated with changes in storm water runoff would be minimized to avoid potential violation of any water quality standard or WDR and would not otherwise substantially degrade water quality. Therefore, the proposed 2019 LRDP's impact would be less than significant.

Mitigation Measures

The proposed 2019 LRDP would not result in a significant impact regarding the violation of any water quality standard or WDR or otherwise substantially degrade water quality; therefore, no mitigation is required.

3.9.3.2 Issue 2: Site Drainage and Hydrology

Hydrology and Water Quality Issue 2 Summary

Would implementation of the 2019 LRDP substantially alter the existing drainage pattern of a site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(i) Result in substantial erosion or siltation on- or off-site;

(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

(iii) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or

(iv) Impede or redirect flood flows?

Impact*:* Implementation of the 2019 LRDP could substantially alter drainages and hydrology; however, compliance with applicable regulations would ensure it would not result in flooding, exceedance of the existing storm water drainage system, or erosion.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact to drainage or hydrology if it would:

- 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, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would result in substantial erosion or siltation on or off site;
- Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or
- 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 impede or redirect flood flows.

Impact Analysis

The change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow, and groundwater flow) caused by land disturbance activities such as vegetation removal or grading, and other land use changes such as drainage modifications and changes in impervious surfaces is called "hydromodification." Hydromodification intensifies the erosion process and the transport of sediments and may result in increased storm water runoff flow and volumes, and discharges to receiving waters.

Construction Impacts

Land-disturbing construction activities associated with implementation of the 2019 LRDP, such as vegetation clearing; grading and excavation of project sites; and construction of new building foundations, roads, driveways, and trenches for utilities, could result in localized alteration of drainage patterns and temporarily increase erosion and sedimentation in the construction area. Construction activities associated with each phase are discussed in Chapter 2.

Temporary ponding and/or flooding could also result from construction activities from temporary alterations of the drainage system (reducing its capacity of carrying runoff) or from the temporary creation of a sump condition due to grading. Alterations may temporarily result in increased erosion and siltation if flows were substantially increased or routed to facilities or channels without capacity to carry the additional flow.

All construction phase activities implemented under the 2019 LRDP would be required to comply with UC San Diego Design Guidelines, UC Sustainable Practices Policy, and additional Storm Water Management Requirements for Construction Projects, which have been developed in part to reduce the potential adverse effects associated with construction activities.

Projects that would disturb less than 1 acre during construction, and that are not subject to NPDES Construction General Permit requirements, would be required to prepare a WPCP that depicts erosion and sediment BMPs to be implemented during construction to minimize potential impacts. Projects that would disturb more than 1 acre would be subject to NPDES Construction General Permit requirements, including the preparation of a SWPPP and implementation of BMPs to reduce the likelihood of alterations in drainage and adverse effects associated with hydromodification, such as the following:

- **Minimizing Disturbed Areas.** Clearing of land is limited to that which would be actively under construction in the near term, new land disturbance during the rainy season is minimized, and disturbance to sensitive areas or areas that would not be affected by construction is minimized.
- **Stabilizing Disturbed Areas.** Temporary stabilization of disturbed soils is provided whenever active construction is not occurring on a portion of the site, and permanent stabilization is provided by finish grading and permanent landscaping.
- **Protecting Slopes and Channels.** Outside of the approved grading plan area, disturbance of natural channels is avoided, slopes and crossings are stabilized, and increases in runoff velocity caused by the 2019 LRDP is managed to avoid erosion to slopes and channels.
- **Controlling the Site Perimeter.** Upstream runoff is diverted around or safely conveyed through the 2019 LRDP and is kept free of excessive sediment and other constituents.
- **Controlling Internal Erosion.** Sediment-laden waters from disturbed, active areas within the site are detained.

With the continued implementation of UC San Diego Design Guidelines, policies, and regulatory requirements, which include the implementation of erosion and sediment control BMPs, any short-term impacts resulting from alterations of drainage and hydrology during construction would be less than significant.

Operational Impacts

As described in Chapter 2 of this 2019 LRDP EIR, UC San Diego anticipates approximately 1.6 million gsf of net new development would occur under the proposed 2019 LRDP over five construction phases. The 2019 LRDP would primarily involve redevelopment of the existing developed areas of the campus, along with some new construction in canyon areas and along existing roadways. Implementation of the 2019 LRDP would potentially affect the rate of surface

runoff, absorption or infiltration rates, and drainage patterns. The rate of surface runoff is how quickly water that is not absorbed travels within a drainage system to receiving waters. An absorption rate is the time required for pervious ground to absorb rain water. Drainage patterns are the footprint of travel of unabsorbed rain water from high elevations to lower elevations. Additional development can increase surface runoff rates by creating more impervious surfaces such as pavement and buildings where none were before. Impervious surfaces do not allow percolation of the water down into the soil. Water is instead forced directly into storm drain systems or streams, where increases in erosion and siltation could result, as well as increased flood risks. These alterations could also result in exceeding the existing capacity of storm water facilities if substantial drainage is rerouted or storm water flow or velocities are substantially increased.

Hydromodification could increase storm water runoff and intensify erosion and the transport of sediments and other pollutants. Land use changes may also introduce new types of pollutants in storm water runoff. The various pollutants potentially generated at the Hillcrest Campus could adversely affect water quality in a variety of ways. Implementation of the proposed 2019 LRDP would result in land use changes which would result in an impervious surface of approximately 43 percent (26 acres), which is an approximate 6 percent reduction over the existing condition.

To evaluate the potential hydromodification impacts associated with the implementation of the 2019 LRDP, a hydrologic analysis of the campus and existing storm water drainage system was conducted (Latitude 33 2019). The analysis was performed to evaluate changes from existing conditions to full buildout of the 2019 LRDP.

Table 3.9-4 shows the existing flow rates during various flood years (see Figure 3.9-3).

Table 3.9-4. Existing Flow Rates during Flood Years

Basin	Basin Description	Area (acres)	Q10 (cfs)	Q100 (cfs)
1	Eastern Drainage	68.6	115.7	140.7
2	Western Drainage	42.1	61.2	76.7
3	Southern Drainage	1.5	2.4	3.0

Source: Latitude 33 2019.
Notes: cfs = cubic feet per second

Table 3.9-5, Post-Construction Subarea Basin Storm Water Flow Characteristics for Various Flood Years, shows the post construction flow per phase rates over various flood years (see Figure 3.9-4).

Existing erosion would be mitigated in the future by abandoning existing hillside outlets. Where canyon discharge is maintained, outlet erosion control devices would be provided or flows would be conveyed within conveyance pipes to hardlined channels. Prior to discharge, development phases would intercept and route storm water through basins providing outlet flow control and treatment.

Table 3.9-5. Post-Construction Subarea Basin Storm Water Flow Characteristics for Various Flood Years

Basin	Basin Description	Area (acres)	Q10 (cfs)	Q100 (cfs)
Phase 1A				
1	Eastern Drainage	68.6	107.9	136.4
2	Western Drainage	42.1	61.2	76.7
3	Southern Drainage	1.5	2.4	3.0
Phase 1B				
1	Eastern Drainage	68.6	109.2	136.7
2	Western Drainage	42.1	61.2	76.7
3	Southern Drainage	1.5	2.3	2.9
Phase 2A				
1	Eastern Drainage	68.6	103.2	129.1
2	Western Drainage	42.1	61.4	77.0
3	Southern Drainage	1.5	5.0	6.3
Phase 2B				
1	Eastern Drainage	68.6	111.0	139.1
2	Western Drainage	42.1	61.6	77.3
3	Southern Drainage	1.5	5.0	6.3
Phase 3				
1	Eastern Drainage	68.6	115.0	144.2
2	Western Drainage	42.1	61.6	77.3
3	Southern Drainage	1.5	5.0	6.3
Phase 5				
1	Eastern Drainage	68.6	115.9	145.2
2	Western Drainage	42.1	56.8	71.6
3	Southern Drainage	1.5	5.0	6.3

Source: Latitude 33 2019.

Notes: cfs = cubic feet per second

No modeling was completed for Phase 4 due to no changes in the storm drain system

To further reduce flows, as described in Section 3.9.2.1, each phase of construction would include structural BMPs for infiltration or biofiltration. Infiltration BMPs are structural measures that capture, store and infiltrate storm water runoff. These BMPs are engineered to store a specified volume of water and have no design surface discharge (underdrain or outlet structure) until this volume is exceeded. These types of BMPs may also support evapotranspiration processes, but are characterized by having their most dominant volume losses due to infiltration. Campus development would implement BMPs that are designed to retain on site the pollutants produced from a 24-hour, 85th percentile storm (volumetric criteria) or runoff produced from a rain event equal to at least 0.2 inch per hour intensity (flow-based criteria).

In areas where retention BMPs for the full volume on site are not feasible, the 2019 LRDP would utilize biofiltration BMPs for the remaining volume not retained. Biofiltration BMPs are shallow basins filled with treatment media and drainage rock that treat storm water runoff by capturing and detaining inflows prior to controlled release through minimal incidental infiltration, evapotranspiration, or discharge via underdrain or surface outlet structure. Treatment would be achieved through filtration, sedimentation, adsorption, biochemical processes and/or vegetative uptake. Biofiltration BMPs can be designed with or without vegetation, provided that biological treatment processes are present throughout the life of the BMPs via maintenance of plants, media base flow, or other biota-supporting elements. Typical biofiltration components include a media layer with associated filtration rates, drainage layer with associated in-situ soil infiltration rates, underdrain, inflow and outflow control structures, and vegetation, with an optional impermeable liner installed on an as-needed basis due to site constraints.

With the incorporation of the proposed BMPs and continued implementation of UC San Diego Design Guidelines, policies, SWMP and other regulatory requirements, impacts associated with changes in the rate of surface runoff, absorption or infiltration, and drainage patterns would be minimized. Therefore, implementation of the proposed 2019 LRDP would result in less than significant impacts associated with drainage and hydrology alteration and additional sources of storm water runoff.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact regarding the alteration of drainages and hydrology; therefore, no mitigation is required.

3.9.3.3 Issue 3: Water Quality Control Plan or Sustainable Groundwater Management Plan

Hydrology and Water Quality Issue 3 Summary

Would implementation of the 2019 LRDP conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact: Implementation of the 2019 LRDP would have the potential to generate pollutants during construction and post-construction activities; however, compliance with applicable regulations would ensure that it would not conflict with or obstruct the implementation of the San Diego Basin Plan.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact Analysis

The Hillcrest Campus is located within the San Diego River HU of the San Diego region as defined by the SDRWQCB and is further located within the Lower San Diego Hydrologic Area (SDRWQCB 2016a). The Lower San Diego Hydrologic Area drains into the San Diego River and subsequently discharges directly into the Pacific Ocean at Ocean Beach. The major receiving water for the Hillcrest Campus is the San Diego River. The Hillcrest Campus is not located in the San Diego River Valley Groundwater Basin Groundwater Sustainability Agency Boundary. Therefore, there is no sustainable groundwater management plan prepared for the Hillcrest area.

The designated beneficial uses for the San Diego River are provided in Table 3.9-1. These include Municipal, Agriculture, Industrial Process Supply, Contact Water Recreation, Non-Contact Water Recreation, Warm Freshwater Habitat, Cold Freshwater Habitat, and Wildlife Habitat. The highest water quality priority within the San Diego River WMA is to reduce bacteria levels during both wet and dry weather conditions (City of San Diego 2018).

As discussed in Section 3.9.3.1, construction and operation activities associated with the proposed 2019 LRDP could result in an increase in potential discharge of pollutants to receiving waters, including waters designated as impaired for certain COCs. Hydromodification could increase storm water runoff and intensify erosion and the transport of sediments and other pollutants.

Construction Impacts

Construction activities associated with each phase are discussed in Section 3.9.3.1. Construction under the proposed 2019 LRDP would involve various types of equipment such as bulldozers, scrapers, backhoes, and other earth-moving equipment; dump trucks; cranes; trucks; concrete mixers; and generators. Pollutants associated with these construction activities that could result in water quality impacts include soils, debris, other materials generated during demolition and clearing, fuels and other fluids associated with the equipment used for construction, paints, other hazardous materials, concrete slurries, and asphalt materials. Due to the extent of construction anticipated under the proposed 2019 LRDP, implementation could result in significant short-term impacts to water quality impacts from uncontrolled sediment and pollutants in storm water runoff that could conflict with the policies of the Basin Plan.

In order to comply with the policies in the Basin Plan, all construction projects under the 2019 LRDP would be required to comply with the UC San Diego Design Guidelines, policies, SWMP

and other regulatory requirements related to storm water runoff to minimize the potential for pollutants to enter receiving waters. As discussed previously, the UC San Diego Design Guidelines require construction projects that would disturb less than 1 acre, and are not subject to Construction General Permit requirements, to prepare a WPCP that would reduce or eliminate discharges of pollutants to the storm drain conveyance system. In addition, construction projects that disturb more than 1 acre would be required to comply with General Construction Storm Water Permit requirements, including the development and implementation of a SWPPP. The SWPPP must identify BMPs that the discharger would actively use to protect storm water runoff from pollutants and the placement of those BMPs to ensure storm water would not leave active construction sites. Construction-related BMPs are discussed in Section 3.9.3.1.

With the continued implementation of UC San Diego Design Guidelines, policies, and regulatory requirements, which include the implementation of construction-period BMPs to address potential discharges of pollutants to storm water, any short-term water quality impacts during construction of individual projects under the proposed 2019 LRDP would be minimized and would not cause a conflict with or obstruct implementation of the San Diego Basin Plan. Therefore, potential impacts would be less than significant.

Operational Impacts

Implementation of the proposed 2019 LRDP would result in the redevelopment of the Hillcrest Campus that would have the potential to generate pollutants that could degrade the surface water quality of downstream receiving waters. Pollutant sources for the proposed 2019 LRDP would include landscaping, rooftops, parking/driveways, roadways, general use areas, and trash storage areas. In addition, implementation of the 2019 LRDP could also result in more routine operation and maintenance activities, thereby increasing instances of accidental spills and non-storm water discharges to storm drains, and non-storm water connections (e.g., sewer connections) that could result in the potential discharge of pollutants to storm drainage systems and associated receiving waters. Table 3.9-3 provides a summary of potential pollutants that could be generated by certain conditions and activities under existing conditions; these constituents are similar to those that could be produced under the 2019 LRDP. Therefore, operation of the 2019 LRDP could result in significant long-term water quality impacts from uncontrolled pollutants in storm water runoff that could conflict with the policies of the Basin Plan.

As discussed in Section 3.9.3.1, the 2019 LRDP requires implementation of Site Design, Source Control, and Treatment Control BMPs to prevent pollutants from reaching receiving waters for each proposed construction phase. Site Design BMPs, including LID measures, would reduce runoff or pollutants at the source. Source Control BMPs would eliminate post-project runoff and control sources of pollutants. Treatment control BMPs would utilize treatment mechanisms with performance standards to remove targeted pollutants that have entered storm water runoff.

With the incorporation of the proposed Site Design, Source Control and Treatment Control BMPs and the continued implementation of UC San Diego Design Guidelines, policies, SWMP, and other regulatory requirements, water quality impacts associated with changes in storm water runoff would be minimized and would not conflict with or obstruct implementation of the Basin Plan. Therefore, the impact is considered less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact regarding the conflict or obstruction of the implementation of a water quality control plan or sustainable groundwater management plan; therefore, no mitigation is required.

3.9.4 Cumulative Impacts and Mitigation

Hydrology and Water Quality Cumulative Issue Summary

Would implementation of the 2019 LRDP have a cumulatively considerable contribution to a cumulative hydrology and water quality impact considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Issue 1: Violate or substantially degrade water quality	Less than significant	Not cumulatively considerable
Issue 2: Site drainage and hydrology	Less than significant	Not cumulatively considerable
Issue 3: Conflict or obstruct the implementation of a water quality control plan or sustainable groundwater management plan	Less than significant	Not cumulatively considerable

The geographic context for the cumulative impact analysis concerning hydrology and water quality is the San Diego River HU, within which the Hillcrest Campus is located (Figure 3.9-1). This HU is composed of HAs: Lower San Diego, San Vicente, El Capitan, and Boulder Creek. The analysis accounts for all anticipated cumulative growth within this geographic area, including development proposed under the 2019 LRDP, development anticipated in applicable local planning documents, and known development projects within the San Diego River HU, described in Table 3-1, Cumulative Projects, in Chapter 3, Environmental Setting, Impacts, and Mitigation.

3.9.4.1 Cumulative Issue 1: Water Quality

Urban development within the San Diego River HU would increase impervious areas and activities that generate pollutants, and consequently could result in additional water quality impacts from storm water runoff to receiving waters in the HU. Existing water quality impairments or problems within receiving waters in the San Diego River HU are described in Section 3.9.1.2.

As is the case for UC San Diego, most future development projects in the San Diego region would be subject to NPDES Phase I and II regulations, which would require that LID measures be implemented and source control and nonpoint source BMPs be employed to control potential effects on water quality and that storm water treatment systems be incorporated into projects to collect sediment and other pollutants. Further, there are several other regional and local initiatives that are being implemented to meet water quality objectives, reduce pollutant loads, address high-priority pollutants and improve surface water quality in impaired waters, such as the San Diego River WMAs. These efforts are further described in Section 3.9.2.3.

As described in the preceding sections, water quality impacts from the implementation of the proposed 2019 LRDP would be considered less than significant. Because other projects in the region are subject to similar regulatory requirements associated with storm water runoff and there are several ongoing efforts to remedy water quality issues in receiving waters, cumulatively significant water quality impacts would not occur. Thus, the proposed 2019 LRDP would not result in any impacts that would cause a cumulatively considerable incremental contribution to a significant cumulative impact related to water quality. The cumulative impact would be less than significant.

3.9.4.2 Cumulative Issue 2: Site Drainage and Hydrology

Construction of projects considered in the cumulative analysis would involve grading and other earthmoving activities that could result in temporary and short-term localized soil erosion. However, these site-specific impacts are not expected to combine with the effects of other regional activities because compliance with UC San Diego Design Guidelines, SWMP and associated BMPs, including construction site BMPs, would control erosion and construction-related contaminants at each construction site. Construction-related impacts from the proposed 2019 LRDP and other projects considered in the cumulative analysis would be temporary and short term, and each project's construction activities would be localized. Therefore, the cumulative effects to hydrology would be less than significant and not cumulatively considerable.

Urban development within the San Diego River HU and associated hydromodification could result in flooding, drainage systems capacity issues, and erosion and sedimentation problems throughout the HU. However, most future development projects in the San Diego region would be subject to similar design guidelines, such as the City's Hydraulic Design Manual, and the same NPDES storm water permit requirements as UC San Diego, including minimizing the area of impervious surfaces, implementing LID measures, and reducing runoff from project sites so that increases in peak flows and flow durations would be minimized, and controlling sources of storm water pollutants during project operations.

These existing requirements would serve to provide adequate hydromodification management and sufficiently reduce the impact associated with potential erosion and sedimentation within the region. Therefore, the proposed 2019 LRDP would not result in a cumulatively considerable

incremental contribution to a significant cumulative impact related to hydrology and drainage. The cumulative impact would also be less than significant.

3.9.4.3 Cumulative Issue 3: Water Quality Control Plan or Sustainable Groundwater Management Plan

As described in the preceding sections, the Hillcrest Campus is not located in the San Diego River Valley Groundwater Basin Groundwater Sustainability Agency Boundary. Therefore, there is no sustainable groundwater management plan prepared for the Hillcrest area. In addition, the 2019 LRDP would not conflict with the San Diego Basin Plan. Because other projects in the region are subject to similar regulatory requirements associated with storm water runoff, cumulatively significant water quality impacts that would conflict with a Water Quality Certified Professional Program would not occur. Thus, the proposed 2019 LRDP would not result in any impacts that would cause a cumulatively considerable incremental contribution to a significant cumulative impact that would conflict with the San Diego Basin Plan. The cumulative impact would be less than significant.

3.9.5 CEQA Issues Where There Is No Potential for a Significant Effect

The following section discusses the other Standards of Significance related to Hydrology and Water Quality contained in Appendix G of the CEQA Guidelines wherein the proposed 2019 LRDP was determined not to cause a significant effect.

Would the 2019 LRDP substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

No removal of groundwater is proposed, as the 2019 LRDP would use potable and recycled water supplied by the City's Public Utilities Department through existing and future lines on the Hillcrest Campus. The City receives deliveries of imported water from the San Diego County Water Authority to satisfy potable water demand. Under the proposed 2019 LRDP, the implementation of LID measures that promote, rather than interfere with, the infiltration of groundwater would be required for all development or redevelopment projects greater than 2,500 square feet. In addition, the buildout condition of the 2019 LRDP would reduce impervious surfaces across the Hillcrest Campus by 6 percent, which would potentially increase groundwater recharge. Consequently, no adverse impacts to groundwater supplies or recharge would occur. No additional analysis is required.

Would implementation of the 2019 LRDP result in activities in a flood hazard, tsunami, or seiche zone that would risk release of pollutants due to project inundation?

The Hillcrest Campus is not subject to inundation by tsunami or seiche. The Hillcrest Campus is located approximately 6 miles from the Pacific Ocean and is not located in a Tsunami Inundation

Area as determined by the City (City of San Diego 2017). In addition, a seiche is a phenomenon typically associated with land locked bodies of water, none of which occur near the campus. The closest inland water body to the site is Lake Murray located approximately 8 miles northeast of the Hillcrest Campus. In addition, according to 2017 SanGIS data, the Hillcrest Campus is located in FEMA Flood Zone X, which is outside of the 100-year and 500-year flood hazard areas or any County-identified flood hazard areas (SanGIS 2017). Therefore, implementation of the 2019 LRDP would not release pollutants due to inundation caused by a flood hazard, tsunami or seiche.

3.9.6 References

City of San Diego. 2017. "Tsunami Inundation Map." Accessed December 2018. https://www.sandiego.gov/ohs/resources/preparedness/tsunami.

City of San Diego. 2018. San Diego River Watershed Management Area Water Quality Improvement Plan. March 14, 2018. Accessed April 2019. http://www.projectcleanwater.org/download/san-diego-river-sdr-water-quality-improvement-plan-wqip/.

Latitude 33. 2019. UC San Diego Hillcrest Campus 2019 LRDP Drainage Report. June 7, 2019.

Project Clean Water 2018. "San Diego River WMA." Accessed November 2018. http://www.projectcleanwater.org/san-diego-river-wma/.

SDRWQCB (San Diego Regional Water Quality Control Board). 2016a. Water Quality Control Plan for the San Diego Basin. Amended May 17, 2016. Accessed April 2019. https://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/.

SDRWQCB. 2016b. Final California 2016 Integrated Report (303 (d) List/305(b) Report.

SanGIS (San Diego Geographic Information Source). 2017. San Diego Geographic Information Source Floodplain Data. Published May 6, 2017.

UC San Diego. 2014 Storm Water Management Requirements Construction Projects. August 2014.

UC San Diego. 2016. 2016 Storm Water Management Plan. October 2016. Accessed April 2019. https://blink.ucsd.edu/_files/safety-tab/environment/ucsd-storm-water-management-plan-october-2016.pdf.

UC San Diego. 2017. Water Action Plan, University of California, San Diego. December 20, 2013, updated December 2017. Accessed April 2019. http://sustainability.ucsd.edu/_files/ucsd-water-action-plan.pdf.

UC San Diego. 2018a. Storm Water Management Program Effectiveness Assessment and Improvement Plan. Updated June 2018.

UC San Diego. 2018b. UC San Diego Design Guidelines. October 5, 2018.

UC San Diego. 2019. Stormwater Pollution Prevention Source Control Best Management Practices Handbook. Updated 20182019. Accessed April 2019. https://blink.ucsd.edu/_files/safety-tab/environment/bmp-handbook-electronic-copy-2018.pdf.

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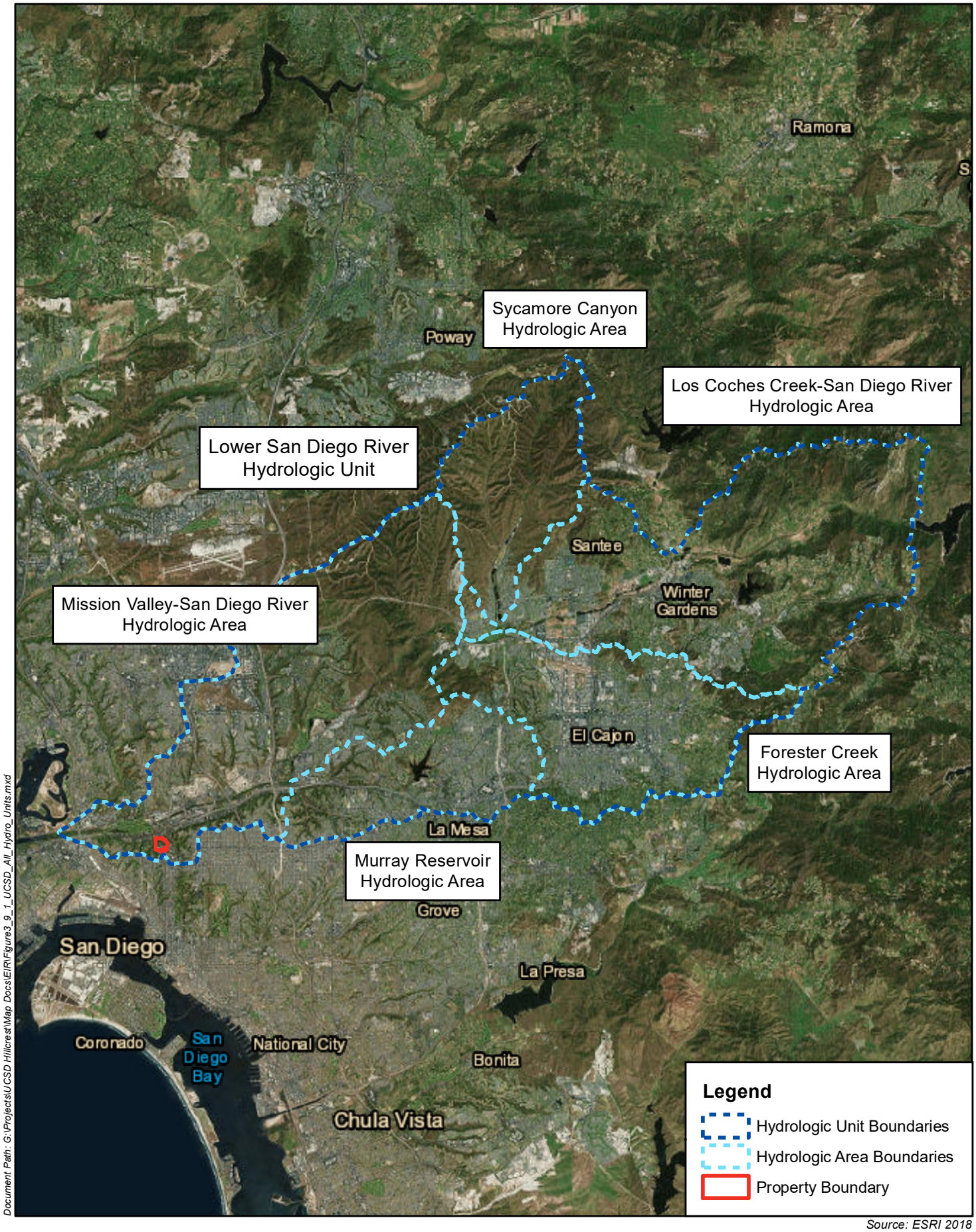

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Figure 3.9-1
Regional Hydrological Setting - San Diego Hydrological Unit

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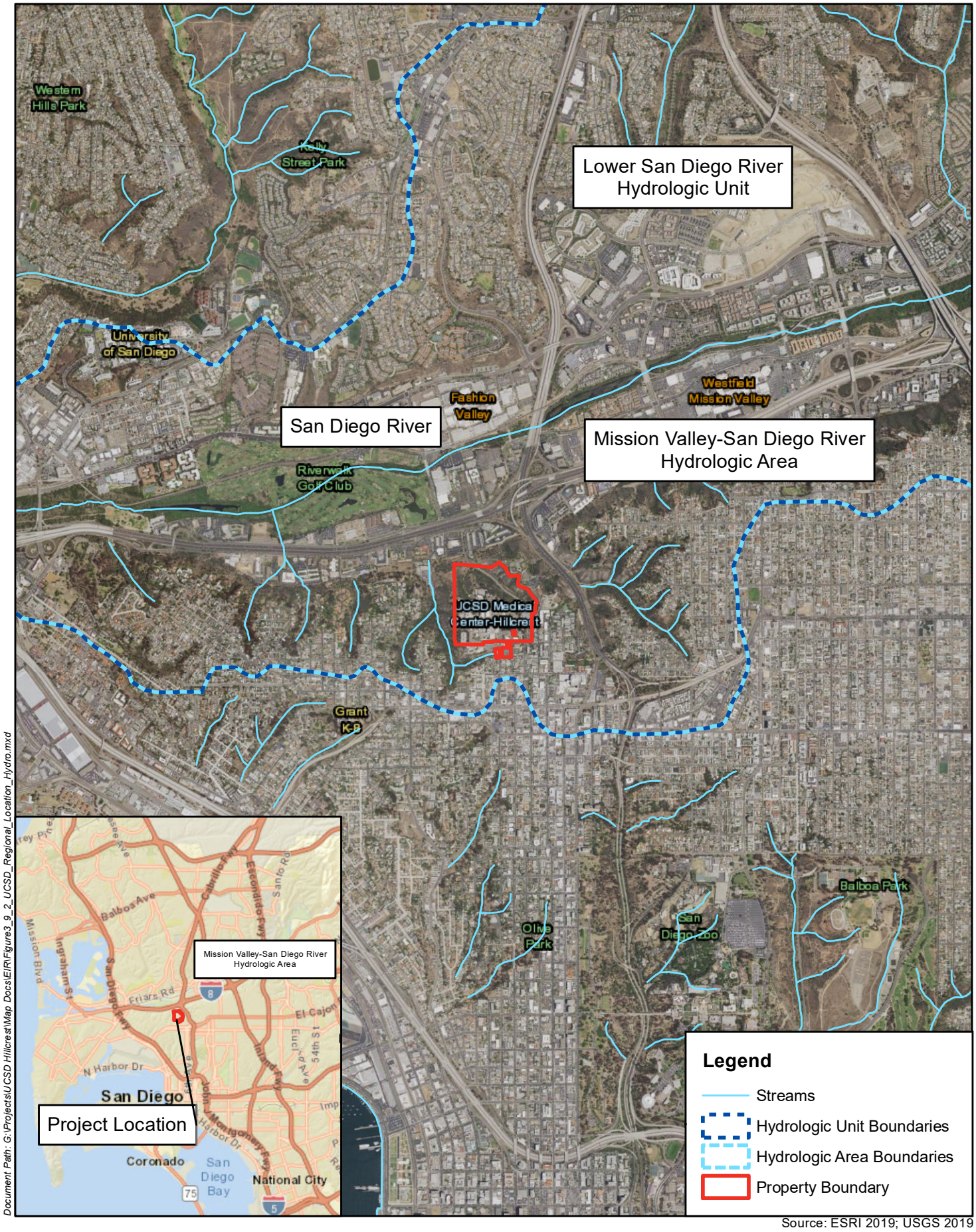

Figure 3.9-2
Lower San Diego Hydrological Area

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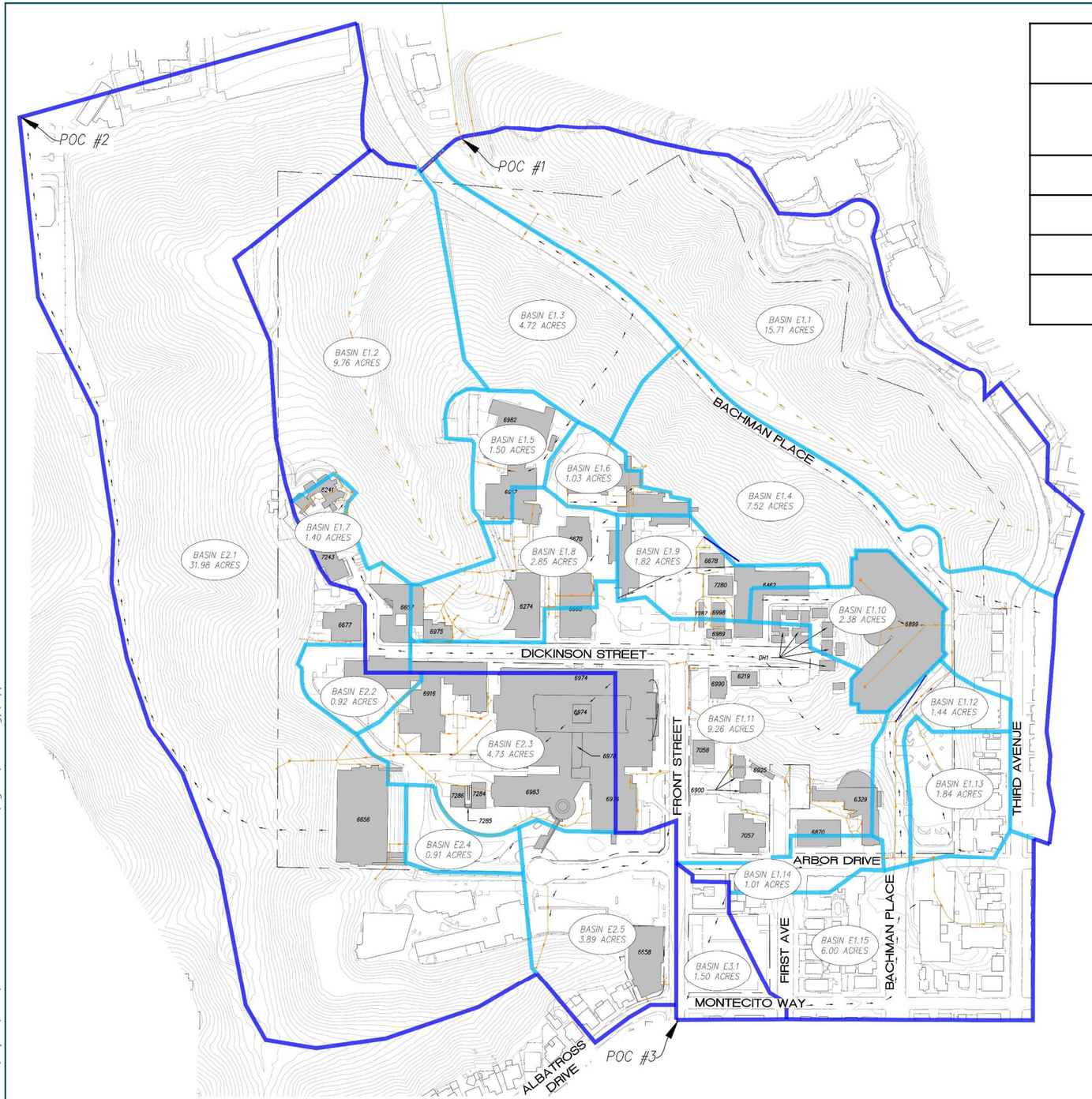

POINT OF COMPLIANCE FLOW RATES			
POC #	AREA (AC)	EXISTING Q10 (CFS)	EXISTING Q100 (CFS)
1	68.61	115.70	140.7
2	42.10	61.2	76.7
3	1.48	2.4	3
TOTAL	112.19	179.3	220.4

EXISTING BUILDING W/ CAAN NUMBER — 1234

PROPOSED BUILDING W/ PARCEL NUMBER — AB–1

CAMPUS BOUNDARY

EXISTING HYDROLOGY BASIN BOUNDARY

EXISTING HYDROLOGY BASIN SUB–BOUNDARY

EXISTING STORM DRAIN

DIRECTION OF FLOW

BASIN NUMBER & AREA — BASIN E1.1 3.00 ACRES

0 150 300
Feet

N

Source: Latitude 33 2019.

Figure 3.9-3
Existing Hydrology Map

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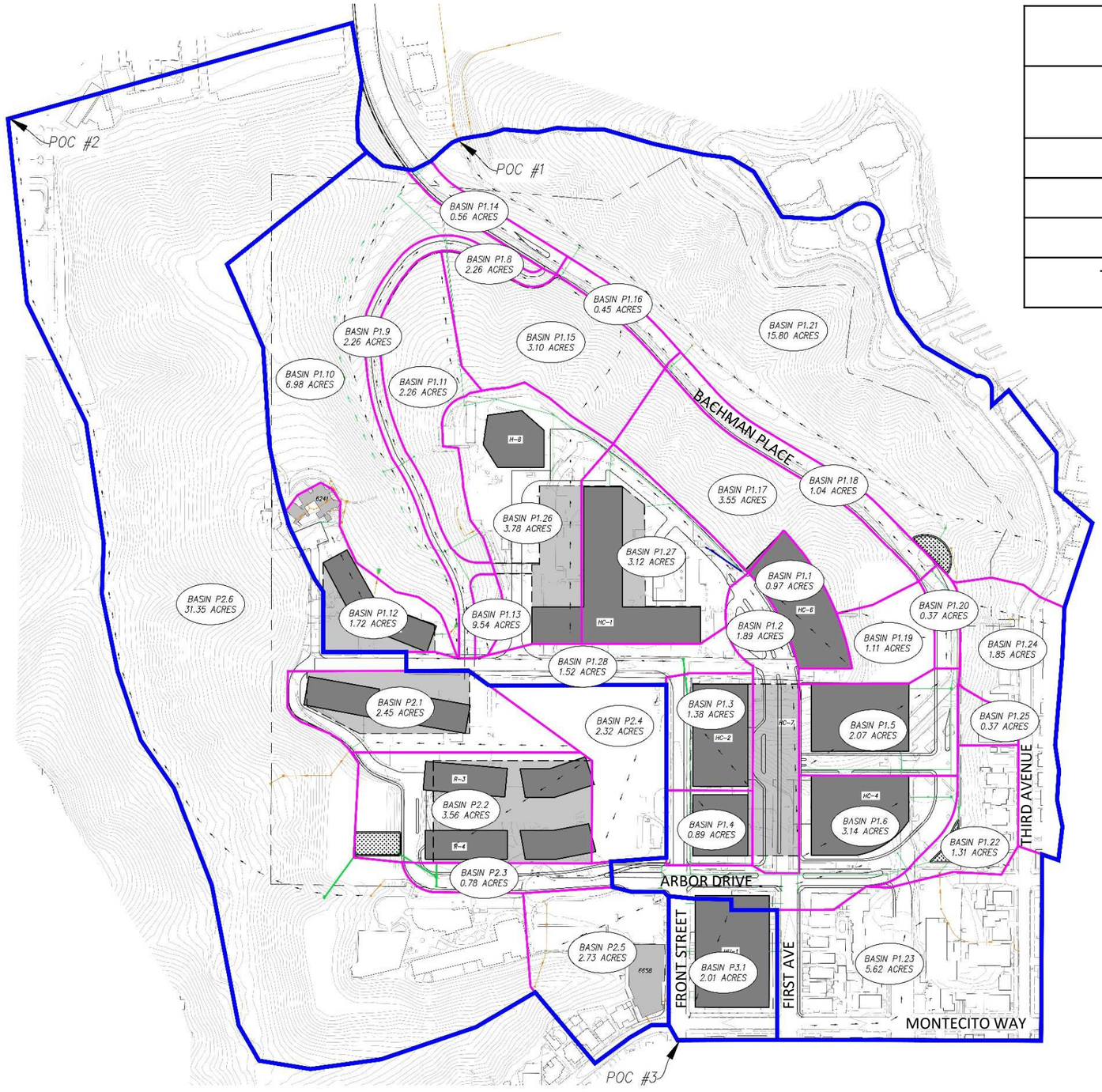

POINT OF COMPLIANCE FLOW RATES

POC #	AREA (AC)	PROPOSED Q10 (CFS)	PROPOSED Q100 (CFS)
1	67.01	115.9	145.2
2	43.18	56.8	71.6
3	2.01	5	6.3
TOTAL	112.20	177.7	223.1

EXISTING BUILDING W/ CAAN NUMBER — 1234

PROPOSED BUILDING W/ PARCEL NUMBER — AB-1

CAMPUS BOUNDARY

EXISTING HYDROLOGY BASIN BOUNDARY

EXISTING HYDROLOGY BASIN SUB-BOUNDARY

EXISTING STORM DRAIN

PROPOSED HYDROLOGY BASIN SUB-BOUNDARY

PROPOSED STORM DRAIN

DIRECTION OF FLOW

BASIN AREA — BASIN E1.1 3.00 ACRES

0 150 300

Feet

Source: Latitude 33 2019.

Figure 3.9-4
Post-Construction Hydrology Map

Path: I:\Projects\UCSD\1700539001 UCSD Hillcrest LRDP EIR\Figures\3.6 Geology\Support Files

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3.10 Land Use and Planning

This section describes the existing land uses on the Hillcrest Campus and the surrounding communities, as well as local land use plans, policies, and regulations. This section also analyzes the new land use districts, relevant land use changes associated with plan implementation, and compatibility of future development under the proposed 2019 LRDP for the Hillcrest Campus with existing land uses and applicable plans, policies, and regulations. In addition, this section addresses the potential to physically divide an established community or conflict with any applicable plans, policies, or regulations of an agency with jurisdiction over the proposed 2019 LRDP. Section 3.3, Biological Resources, evaluates the 2019 LRDP's potential to conflict with an applicable habitat conservation plan or natural community conservation plan.

3.10.1 Environmental Setting

3.10.1.1 Existing Campus Land Uses

As described in Chapter 2, Project Description, of this 2019 LRDP EIR, the existing Hillcrest Campus land uses within the proposed 2019 LRDP area are composed of inpatient, outpatient, research and instruction, office and support, housing, and CUP (Figure 2-1, Existing Building Use for the Hillcrest Campus). As of 2017, the Hillcrest Campus's existing total development includes approximately 1.1 million gsf, not including parking (see Table 2-1, Existing and Proposed Long Range Development Plan Campus Programs). This section describes the existing land uses on the Hillcrest Campus.

Inpatient

Hospital inpatient services make up the largest gross square footage of the total campus building area and are located primarily in the center of the campus. The majority of inpatient admissions come through the Emergency, Trauma, Medicine, Surgical, and Psychiatric Departments at the Hillcrest Campus. Inpatient services are located in several buildings clustered within the center of the campus: the main hospital building, otherwise known as the Inpatient Tower; the West Wing; and the Tower Link. These inpatient facilities are composed of original buildings that date back to the 1960s and major additions and renovations from the 1990s. As the most visually dominant campus building, the 11-story Inpatient Tower contains over one-third of the campus's total building square footage and houses nearly 60 percent of the campus's daily population. Inpatient services total approximately 480,000 gsf and compose approximately 43 percent of the campus footprint.

Outpatient

Unlike the Hillcrest Campus's inpatient activities, outpatient activities are more scattered across the campus. While inpatient services have always been a core component of the campus's larger mission, first as a County Hospital and later as a university-operated hospital, the campus's

outpatient services have greatly increased in the last five decades. Outpatient services currently total 215,000 gsf and compose approximately 19 percent of the campus footprint.

Research and Instruction

The Clinical Teaching Facility serves as the heart of the campus's academic activities. Constructed in 1978, the building sits along the campus's northern canyon edge. The building is made up of three distinct wings connected by exterior corridors and is set back from Dickinson Street. Surrounded by canyons, lawns, and mature shade trees with seating areas for study, gathering, and quiet refection, the Clinical Teaching Facility's design evokes a more collegiate tone than any of the other buildings on campus. Today, the Clinical Teaching Facility serves as an important facility for the School of Medicine, both in terms of research activities and classroom/teaching experiences. Research and instruction activities total 190,000 gsf and compose approximately 17 percent of the campus footprint.

Office and Support

Office and support services on the campus are disbursed between several locations and buildings. The Multi-Purpose Facility, the North Annex Replacement Facility, and the Medical Library are the primary office buildings on the campus. Nearly all other office and support facilities are modular trailers that are distributed around the campus. Office and support totals 160,000 gsf and encompasses approximately 15 percent of the campus footprint.

Housing and Long-Term Stay

The Bannister Family House, located at the most northwestern corner of the campus mesa overlooking Mission Valley, provides a home away from home for the families of patients undergoing long-term care with UC San Diego Health. In addition to providing 12 long-term stay residential units, the facility also offers family oriented programming for all of its residents. Bannister Family House is one of few campus buildings that is expected to remain on campus through the horizon of this LRDP. The campus also currently contains 21 additional residential units located in small, single-story structures at the eastern end of Dickinson Street. Housing and short-term stay totals 25,000 gsf and encompasses approximately 2 percent of the campus footprint.

Central Utility Plant

Infrastructure and support services on campus are primarily located within the CUP at the northern edge of the campus mesa, just below the Facilities Engineering Building, which houses campus facilities shops, storage, and offices. The CUP totals 40,000 gsf and encompasses approximately 4 percent of the campus footprint.

3.10.1.2 Existing Adjacent Land Uses

The Hillcrest Campus occupies approximately 62 acres along the northern edge of the Uptown Community in the City, south of I 8, and roughly 2.5 miles north of Downtown. The Hillcrest Campus is nearly 13 miles south of UC San Diego's main campus in La Jolla. The campus itself is located atop a mesa that overlooks I-8 and Mission Valley. Refer to Figure 3.10-1, Existing Land Uses, for an illustration of land uses that currently surround the Hillcrest Campus. The neighborhood is dominated by the Scripps Mercy Hospital campus and the Hillcrest Campus, surrounded primarily by residential uses, the majority being multi-family. Multi-family buildings are more contemporary, reflecting a combination of mid-century, late Modern and Post-Modern styles. The medical buildings have an institutional character that distinguishes them from other development in the neighborhood, and there is a much higher occurrence of free-standing parking garages, many of which have been sited in canyons to reduce the apparent mass. The character of the pedestrian focus varies according to the surrounding use. The residential areas generally have a pedestrian focus with street trees, while the hospital areas have a more vehicular access focus. The block pattern is similar to the neighborhood just north of Washington Street, with long north–south blocks with mid-block alleys. Approaching the canyons, the block dimensions begin to shift, first losing the mid-block alley, and then morphing into large-scale development parcels and curvilinear cul-de-sacs that respond to the topography at the canyon interface. The scale of the residential streets in the area is similar to the residential portions of Mission Hills, with narrow, intimate streets. With the exception of Bachman Place, which extends north through the area to Mission Valley, the streets in the neighborhood provide for internal circulation with the only other external connection being to Washington Street.

The Uptown Community Plan (City of San Diego 2016) includes a residential density range of 1 dwelling unit/acre for parks, open space, and recreation land use designations, to as high as 109 dwelling units/acre for the residential and commercial employment, retail and services land uses. Similarly, high-density residential development, up to a maximum of 73 dwelling units/acre, is allowed under the existing Mission Valley Community Plan in the residential land use designation. The Final Draft of the Mission Valley Community Plan Update (June 2019) identifies even higher density up to 109 dwelling units/acre; however, this plan has not been adopted. Commercial land use designations allow hotel uses, but not residential. Some of the adjacent land uses are briefly described below and are grouped according to their location relative to the campus areas.

North

The plan area immediately north of the Medical Complex neighborhood is the Mission Valley Community Plan Area. Directly to the north of the Hillcrest Campus is a sloped canyon area and north of that is development along Hotel Circle South, which includes mostly hotel uses and restaurants. North of Hotel Circle South is I-8 and beyond that is a more diverse region of Mission Valley with more hotels, a golf course, commercial retail shopping malls, multi-family residential

and office uses. The San Diego River also runs through the center of Mission Valley. I-8 and Bachman Canyon along the northern boundary of the Hillcrest Campus create barriers to access between the Mission Valley Community and the campus. However, the Mission Valley Community is accessible from the campus via Bachman Place.

East

Land uses immediately east of the Hillcrest Campus include a mix of single and multi-family residential uses, canyon areas and medical-related uses. The neighborhood to the east of the Medical Complex neighborhood is University Heights, also located in the Uptown Community Plan Area but physically separated from the Medical Complex neighborhood by State Route 163. University Heights is a predominantly single-family, low-rise residential neighborhood, with multi-family residential located along and nearby to the major north–south streets west of Park Boulevard. Despite its relatively low profile, University Heights is one of Uptown's denser neighborhoods due to a higher concentration of multi-family units. Residential buildings are typically one to two stories.

South

Land uses to the south of the Hillcrest Campus include single and multi-family residential, medical-related and commercial uses. Directly southeast of and within the Medical Complex neighborhood, is the Scripps Mercy Hospital campus, which also provides essential medical services. South of the Medical Complex neighborhood is the Hillcrest neighborhood, a vibrant mixed-use residential area with an eclectic mix of Craftsman, Bungalow, Prairie, and Mission and Spanish Revival residential architecture. Hillcrest includes the primary commercial core of Uptown, which is concentrated around the intersection of Fifth Avenue and University Avenue, and extends several blocks east, west, and south. This area is also marked by the iconic Hillcrest gateway sign, at University and Fifth Avenues, serving as a key neighborhood identity feature. Hillcrest is known as a pedestrian-oriented commercial center, and is also the center of community-wide activity with active, walkable streets, mixed-use buildings and retail, office, and entertainment activities. The two neighborhoods are fused together by Washington Street, a four-lane boulevard with a mix of pedestrian-oriented, neighborhood retail uses including restaurants, grocery stores, banks, hair salons, and coffee shops.

West

Immediately to the west of the Hillcrest Campus is Dove Canyon, which creates a geographic barrier between the Hillcrest Campus and the neighborhood of Mission Hills. West Arbor Drive, West Montecito Way, Falcon Street, and Eagle Street start in Mission Hills and extend east into the Hillcrest Campus. Mission Hills is a residentially focused neighborhood consisting of predominantly single-family homes, with Washington Street as the primary corridor providing access through the neighborhood. The main commercial core is located along Washington Street,

with another smaller neighborhood-serving commercial area located at the intersection of West Lewis and Stephens Streets. Higher density, multi-family buildings are located north of Washington between Eagle and Ibis Streets.

3.10.2 Regulatory Framework

State and local (non-regulatory) regulations pertaining to land use and planning are discussed below.

3.10.2.1 State

University of California

UC San Diego is part of the UC, a constitutionally created entity of the State of California, with "full powers of organization and government" (Cal. Const. Art. IX, Section 9). The UC requires that each campus maintain an up-to-date LRDP. An LRDP is a comprehensive land use plan that guides the physical development of the campus. The 2019 LRDP would be the third long range plan for the Hillcrest Campus. The proposed 2019 LRDP would replace the existing 1995 LRDP, which reinforced many of the core principles outlined in the previous 1978 LRDP. The 1995 LRDP proposed future acquisition of 4 additional acres to facilitate campus expansion, including both infill sites and sites beyond the existing campus boundaries. Some of the parcels identified in the 1995 LRDP have since been acquired, though the relatively small size of the parcels has limited their impact on overall increases in campus development capacity. The process of periodically updating an LRDP provides the UC Regents an opportunity to make certain that physical plans remain solidly based on academic, research, and public service program goals.

3.10.2.2 Local (Non-Regulatory)

As a constitutionally created state entity, the UC is not subject to municipal regulations of surrounding local governments, such as the City's General Plan or land use ordinances, for uses on property owned or controlled by the UC that are in furtherance of the UC's education purposes. However, UC San Diego may consider, for coordination purposes, aspects of local plans and policies for the communities surrounding the campus when it is appropriate and feasible, but it is not bound by those plans and policies in its planning efforts. UC San Diego seeks to maintain an ongoing exchange of ideas and information and to pursue mutually acceptable solutions for issues that confront the Hillcrest Campus and its surrounding community. To foster this process, UC San Diego participates in, and communicates with, City and community organizations and sponsors various meetings and briefings to keep local organizations, associations, and elected representatives apprised of ongoing planning efforts and considers community input. Thus, UC San Diego has voluntarily reviewed the proposed 2019 LRDP's consistency with local land use plans (see Section 3.10.3.1 for the consistency review discussion). A summary of the local land use plans is provided below.

San Diego Association of Government's San Diego Forward: The Regional Plan

SANDAG's San Diego Forward: The Regional Plan (Regional Plan) is a regional transportation and sustainability plan that aims to provide a blueprint for a more livable, equitable, and innovative future (SANDAG 2015). It combines and updates two previous plans, the Regional Comprehensive Plan and the Regional Transportation Plan/Sustainable Communities Strategy, into one document that looks toward 2050. The Regional Plan covers a broad range of topics including air quality, borders and tribal nations, climate change, economic prosperity, emerging technologies, energy and fuels, habitat preservation, healthy communities, public facilities, shoreline preservation, transportation, and water quality.

The Regional Plan emphasizes the importance of choice of transportation in the future, such as biking, skateboarding, walking, riding a wheeled device, trolley, sprinter, COASTER, bus, or driving. It places special emphasis on active transportation, such as walking and biking, and reducing car use in order to minimize GHG emissions, diminish air pollution, and maximize public health. The Regional Plan also includes a Sustainable Communities Strategy, which identifies five main strategies to complement the goal of sustainability. The strategies are to focus on job growth and housing in urbanized areas with existing public transportation options, preserve open space, invest in a transit network that caters to everyone and includes many options, reduce GHG emissions, and address housing needs for all economic segments of the population, and to implement the Regional Plan through incentives and collaboration.

City of San Diego General Plan

The City's General Plan (City of San Diego 2008a) is a comprehensive, long-range vision document that sets forth the policy framework for how the City should plan for projected growth and development over the next 20 to 30 years. The City's General Plan (City of San Diego 2008a) emphasizes the need for maintaining the character of its communities, preserving its natural resources and amenities, and providing adequate public services. It emphasizes implementation of the City of Villages Strategy, which focuses on growing mixed-use activity centers that are pedestrian-friendly, centers of community that are multi-modal, and linked to the regional transit system. The strategy draws upon the character and strengths of the City's natural environment, neighborhoods, commercial centers, institutions, and employment centers. The strategy is designed to sustain the long-term economic, environmental, and social health of the City and its many communities. It recognizes the value of the City's distinctive neighborhoods and open spaces that together form the City as a whole.

The City's General Plan's (City of San Diego 2008a) strategic framework is a key component of the City's growth strategy to reduce GHG emissions because the strategy makes it possible for larger numbers of people to make fewer and shorter auto trips. The City of Villages strategy promotes a land use pattern that would help meet regional GHG emission targets by improving transportation

and land use coordination and jobs/housing balance, creating more transit-oriented, compact, and walkable communities, providing more housing capacity for all income levels, and protecting environmental resource areas.

Although the Hillcrest Campus is included within the boundaries of the City's Uptown Community Plan Area, it is not subject to any of the provisions in these plans though the campus aims to be compatible wherever feasible. These plans, however, do apply to the lands immediately adjacent to the Hillcrest Campus and are described further below.

Uptown Community Plan

The Uptown Community Plan was first adopted in 1988 and was updated on November 14, 2016. The City Council approved amendments to the 2016 Uptown Community Plan on June 12, 2018. The Uptown Community Plan Area comprises approximately 2,700 acres and is bounded by the steep hillsides of Mission Valley to the north; Park Boulevard and Balboa Park to the east; Old Town San Diego and I-5 to the west and south. The canyon systems define the community's urban form.

The Uptown Community is made up of six distinct neighborhoods: Middletown, Mission Hills, Medical Complex, University Heights, Hillcrest, and Bankers Hill/Park West. The Uptown Community Plan (City of San Diego 2016) identifies the Hillcrest Campus as a part of the Medical Complex neighborhood, stating that UC San Diego Medical Center – Hillcrest and Scripps Mercy Hospital occupy over 40 percent of the area dominating the neighborhood.

The Uptown Community Plan (City of San Diego 2016) serves as the zoning and land use development guide for the six Uptown Community neighborhoods. The 2016 plan calls for neighborhood-specific strategies to improve housing and transportation opportunities in the community, while enhancing its overall urban design character and preserving scenic resources.

Mission Valley Community Plan

The Mission Valley Community Plan Area comprises approximately 2,418 net acres and is located near the geographic center of the City. It is part of the San Diego River floodplain, generally bounded by Friars Road and the northern slopes of the valley on the north, the eastern banks of the San Diego River on the east, the southern slopes of the valley on the south, and I-5 on the west.

Located to the north of the Uptown Community, the Mission Valley Community is made up of the low-lying, linear-shaped area between two steep canyon walls, carved by the path of the San Diego River flowing west to the Pacific Ocean. Today, the area is notable for its many regional commercial and entertainment uses, including the Mission Valley Mall, Fashion Valley Mall, SDCCU Stadium, and the Riverwalk Golf Club. Driven in part by the City's desire to balance the ratio of jobs in Mission Valley with its housing units, the City has been in coordination with local community members to update the current Mission Valley Community Plan. The current Mission

Valley Community Plan was adopted by the City Council in 1984 and it was last amended in 2013. In 2015, the City, in coordination with local community members, began updating the Mission Valley Community Plan. In February 2019, a second Working Draft of the Mission Valley Community Plan Update was released for public review, followed by the Final Draft release in June 2019 (City of San Diego 2019). The public hearing process will begin in summer 2019.

City of San Diego Multiple Species Conservation Program

The City's MSCP Subregional Plan was approved in August 1998 (City of San Diego 1998) and is a regional conservation plan that is implemented through various local subarea plans, including the 1998 City's MSCP Subarea Plan (Subarea Plan). The intent of the MSCP is to provide strategies and regulations for preserving habitat and open space networks, and protecting overall biodiversity of the regional landscape. Though the Hillcrest Campus is surrounded by several swaths of multi-habitat plan areas and shares some similar landscape and habitat traits with the areas it abuts, the campus is not a party to the MSCP. Therefore, the Subarea Plan does not apply to the Hillcrest Campus (refer to Section 3.3 for more information). However, the intent of the 2019 LRDP is to promote open space and land use strategies that help to achieve similar outcomes intended by the MSCP.

3.10.3 Project Impacts and Mitigation

The following sections address various potential impacts relating to land use and planning that could result due to the implementation of the proposed 2019 LRDP.

3.10.3.1 Issue 1: Conflict with Applicable Land Use Plans, Policies, and Regulations

Land Use and Planning Issue 1 Summary

Would implementation of the 2019 LRDP 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?

Impact: Implementation of the 2019 LRDP would not result in inconsistencies with applicable land use plans, policies, or regulations.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would conflict with any applicable land use plan, policy, or regulation of an

agency with jurisdiction over the project (including but not limited to the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Impact Analysis

As a constitutionally created state entity, the UC is not subject to municipal regulations of surrounding local governments, such as the City's General Plan or ordinances, for land uses on property owned or controlled by the UC that are in furtherance of the UC's education purposes. The applicable land use plan for analysis in this 2019 LRDP EIR is the campus's LRDP.

2019 Long Range Development Plan

As previously discussed in Chapter 2, the purpose of the proposed 2019 LRDP is to replace the existing UC San Diego Medical Center – Hillcrest inpatient facilities by 2030 because it would need to meet more stringent seismic safety standards at that time. To avoid interrupting critical services, the new hospital must be constructed and in operation before the existing hospital can be removed. In addition, development of the proposed 2019 LRDP takes into account an industry-wide shift in health care toward outpatient care due to advances in health care technology, which has contributed to the need to create a new, cohesive Hillcrest Campus that would improve the interface and compatibility of the various land uses on the campus as well as with the surrounding community. This must be accomplished in a thoughtful and sustainable manner, while also responding to trends in health care, academic research, and demand for affiliate housing.

UC San Diego Health splits its program across both the Hillcrest and La Jolla Campuses, as well as smaller hubs for outpatient-based services. Core research facilities, along with the majority of its educational facilities are located in La Jolla, while other significant research project labs and clinical teaching and patient care activities are located at the Hillcrest Campus. This breakdown of the program is in part a reflection of the wide range of medical programs that a Level 1 Trauma Center requires.

UC San Diego Health has built a reputation for itself as a dynamic academic medical environment delivering world-class care and medical research breakthroughs, despite the existing outdated facilities at the Hillcrest Campus. With more recent university development focused almost exclusively at the La Jolla campus, this LRDP arrives at a critical moment for UC San Diego Health to reimagine the entire Hillcrest Campus for the first time as a new, cohesive, community-oriented medical campus that embraces its deep roots in the Hillcrest neighborhood.

The 2019 LRDP would provide framework for the Hillcrest Campus to achieve its academic, clinical research, and community health goals, and ultimately guide the physical transformation of the campus towards a more efficient, environmentally sensitive, and socially minded result. The 2019 LRDP proposes to redevelop the Hillcrest Campus with a new Replacement Hospital; modern buildings; and infrastructure with a mix of land uses, building forms, and open space.

The 2019 LRDP would allow for a total redevelopment of the campus through the creation of five new land use districts: Health Care, Residential, Mixed-Use, Open Space, and Canyon. Each would be defined by a distinct land use and development condition, while also contributing to a cohesive campus that aligns with the vision of the Hillcrest Campus to serve as a world-class, innovative, and community-integrated academic medical center that combines industry-leading research and high-quality patient care with community-driven programming and accessible open spaces. The land use districts are described in more detail below:

- **Health Care District.** The Health Care District would be the largest of the five development districts and cover the northeastern region of the campus mesa. The district is envisioned to function as a dynamic medical hub where patient care, nursing, clinical services, surgery, and associated support uses coalesce in a collaborative and supportive urban environment. While the existing campus's health care uses are scattered throughout the mesa, a more consolidated and intentional clustered arrangement would improve accessibility for patients and medical staff, and generate crucial opportunities for knowledge sharing across different medical service groups. All allowed uses within the district are primarily related to patient care, including inpatient and ambulatory services, nursing, clinical services, surgery, and affiliated uses, such as dining and food service, patient and visitor lounge areas, and office and administrative spaces. Allowed uses also include instruction and research and circulation uses such as parking for UC San Diego affiliates. Development in the district would consist of larger footprint structures up to 200 feet in height, which would be the same height or shorter than the existing hospital building. The 2019 LRDP proposes a future total Health Care District development buildout of up to 1,440,000 gsf. The types of facilities that would be allowed in the Health Care District include patient health services (inpatient and outpatient), health research and instruction, campus retail, campus support, developed open space, and circulation and parking.
- **Residential District.** The Residential District would include new multi-family development along with the existing Bannister Family House for long-term hospital patient and family housing. The Residential District would diversify the Hillcrest Campus's land use offerings by increasing housing and neighborhood-serving retail opportunities for the Medical Complex neighborhood. Development in the Residential District would consist of approximately 950 new multi-family residential units with ground floor space dedicated to retail, residential amenities, and parking. Overall development in the district would not exceed the height of the existing hospital, which is approximately 200 feet. The ultimate building height restriction would ensure clearance for emergency helicopters traveling to and from the hospital heliport. Providing additional housing units on campus also has the potential to help reduce daily vehicle trips to the campus and to integrate the walkable character of the surrounding

Hillcrest neighborhood into the campus itself. The housing would be provided for UC San Diego affiliates, including faculty, staff, and graduate students. UC San Diego affiliates may be allowed to have non-affiliates live with them. The types of facilities that would be allowed in the Residential District include multi-family residential, campus retail, long-term patient and family housing, developed open space, campus support, and circulation and parking.

- **Mixed-Use District.** This district calls for a distinctly mixed-use development character with recreation and meeting spaces co-located with multi-family residential development. The Mixed-Use District would also serve an important role as a visual gateway to the Hillcrest Campus, with urban design and land use gestures that would encourage people from surrounding neighborhood to consider the campus as a true community resource. A new mixed-use development at Montecito Way and First Avenue, west to Montecito Way and Front Street, and north to Arbor Drive would provide approximately 50 multi-family housing units above a Wellbeing Center and would offer new types of campus facilities that further UC San Diego's mission to deliver high quality patient-centered health care. The types of facilities allowed in the Mixed-Use District include wellness, multi-family residential, campus retail, developed open space, circulation and parking, and campus support.
- **Open Space District.** The Open Space District would be the campus's central publicly accessible open space and serve as the heart of campus life. As the front door to both the Health Care District and the Residential District, the Open Space District is envisioned to serve as space for mixing, where all types of campus users would cross paths in an open and welcoming setting. The types of facilities that would be allowed in the Open Space District include developed open space, including courtyards, planted areas with park benches, outdoor dining areas, areas to observe scenic vistas, and pedestrian and wheeled device paths; campus retail; and circulation.
- **Canyon District.** The Canyon District would be characterized by a largely natural landscape, with limited development or infrastructure allowed within its approximately 28 acres of native canyon area. The focus of this land use district would be driven by continued natural open space preservation because of the canyon's native vegetation and steep slopes. This district would also include wildfire management considerations due to adjoining development on the mesa top where the steep slopes meet the mesa edge. Ongoing preservation of the native canyon landscape and protection against adverse impacts from future campus development would be the main factors behind land use considerations for this district. Given the district's uniquely landscape-oriented role, the development and activities allowed in the Canyon District would include preserved open space with limited circulation, campus support, and utility infrastructure uses.

Table 2-3, Allowable Future Development Intensities and Land Uses by District, in Chapter 2 summarizes the allowed development intensities and uses for each new land use district included in the proposed 2019 LRDP.

Circulation Element

This element addresses both how people would get to and from the campus, and how they would move within the campus upon arrival. It considers travel experiences and levels of mobility for all mode types, and provides strategies for ensuring a navigable and integrated campus circulation system. In addition, the 2019 LRDP would call for a robust combination of parking and transportation demand management strategies to reduce the amount of vehicle travel to and from the campus. Improved multi-modal rights-of-way with enhanced pedestrian, bicycle, and other wheeled device accessibility, along with more efficient parking strategies, would transform the circulation experience for all campus users, while targeted improvements to existing UC San Diego alternative transportation types and ridesharing partnerships would seek to reduce overall vehicle circulation and emission levels on campus.

Open Space Element

This element covers the campus's different types of open space, their proposed locations, and their unique role within the campus's "active healing landscape." The redeveloped Hillcrest Campus would feature a range of open space types, with varying levels of intended programming and public access. New open space types include publicly accessible open spaces for recreation and community events, more contained spaces for quiet meditation, and preserved habitat areas that are not intended for human use. Open space would also serve as an important transitional element connecting the native canyon landscape to more developed parts of the campus. Distinct landscape treatment types would overlay all open spaces, ranging from the preserved native landscape to more highly urbanized streetscape environments. Together, this cohesive network of context-driven open spaces and landscapes would enhance the campus arrival experience and provide a visual contrast to the campus's dense built environment.

Utilities and Infrastructure Element

This element details the specific facilities and systems needed to accommodate changes in the campus's future development program, and offers strategies for achieving a more efficient and environmentally sustainable campus. The 2019 LRDP proposes a complete reconfiguration of the campus's existing land uses and circulation, which would necessitate a full overhaul of the campus's existing utilities and infrastructure system. This unique "reset" scenario is the first opportunity in nearly 60 years to devise a new campus-wide system that provides redundancy across its systems in case of emergency, improves infrastructure reliability, and promotes a more resilient and sustainable campus overall. The new system would co-locate utility uses within a single corridor to improve campus energy efficiency. The overarching concept for the Hillcrest Campus utilities and infrastructure system includes a combination of strategies related to building

energy performance, central plant reconfiguration, and overall campus site design. Altogether, these strategies seek to bring energy reliability and resiliency to the Hillcrest Campus and to ensure achievement of the UC's carbon neutrality goals per the UC Sustainable Practices Policy.

The proposed 2019 LRDP, if approved, would become the applicable Hillcrest Campus land use plan. The UC is the only entity with land use jurisdiction over Hillcrest Campus projects. Therefore, all development occurring consistent with the proposed 2019 LRDP would have no land use impact under this threshold. Nevertheless, the surrounding land use plans have been reviewed for this analysis because the campus is interested in redeveloping the campus in a way that is compatible with the objectives of relevant local plans to the extent feasible.

Consistency with Local Planning Documents

The review of local land use plans, including the City's General Plan, Uptown Community Plan, Mission Valley Community Plan, and SANDAG's Regional Plan, has indicated that the proposed 2019 LRDP would be generally consistent with the implementation of these plans, as summarized below. Any specific recommendations in these planning documents are advisory only because the Hillcrest Campus is regulated by a separate planning jurisdiction (the UC). However, specific recommendations for campus lands identified in various local planning documents are summarized below along with a project consistency analysis.

City of San Diego General Plan

The City's General Plan (City of San Diego 2008a) integrates 10 basic principles that describe the essential structure of the plan and reflect the core values that guide its development. The guiding principles focus on (1) an open space network, (2) diverse residential communities, (3) compact and walkable mixed-use villages, (4) employment centers, (5) an integrated regional transportation network, (6) high-quality, affordable, and well-maintained public facilities, (7) historic districts and sites, (8) balanced communities, (9) a clean and sustainable environment, and (10) a high aesthetic standard. These principles represent the "Core Values" that address the City's physical environment, economy, culture, and society. Because less than 4 percent of the City's land remains vacant and available for new development, the plan's policies represent a shift in focus from how to develop vacant land to how to reinvest in existing communities. Policies include those that support changes in development patterns to emphasize combining housing, shopping, employment uses, schools, and civic uses at different scales in village centers.

The General Plan Land Use and Community Planning Element (City of San Diego 2015a) provides policies to guide future growth and development into a sustainable Citywide development pattern of a City of Villages while maintaining or enhancing quality of life. The 2019 LRDP would create a new residential land use district with multi-family development that enlivens the campus and promotes a neighborhood-oriented land use character for the greater campus. It would also create a new mixed-use land use district to serve as a community-oriented gateway to the campus. The

open space areas would provide for outdoor areas for gathering, socializing, and circulating within the center of the campus.

The General Plan Urban Design Element (City of San Diego 2008b) includes urban design principles relating to the existing City form and achieving a compact and environmentally sensitive pattern of development envisioned in the City of Villages strategy. The redeveloped Hillcrest Campus would feature a compact, urban footprint to optimize strategic adjacencies between the campus's different medical programs and improve the patient experience. New multi-family residential development would be integrated within the campus to create a vibrant urban environment that complements the surrounding Hillcrest neighborhood and to allow UC San Diego affiliates to live where they work. The redeveloped Hillcrest Campus would follow the UC Sustainable Practices Policy, with innovative design methods that minimize environmental impacts and promote campus-wide resiliency. In addition, the 2019 LRDP proposes to integrate new developed open spaces on campus that improve the campus's landscape character, celebrate the surrounding natural canyon context, and provide more opportunities for community gatherings.

The General Plan Recreation Element (City of San Diego 2015b) provides policies to guide the City's vision and goals for park and recreation facilities Citywide and within individual communities. The Hillcrest Campus proposes to introduce a new kind of mixed-use, urban development to the Hillcrest area, with a holistic integration of health care, residential, open space and recreation amenities and neighborhood-serving commercial uses that extend the campus's vitality throughout the course of a day and week. Recreational amenities for residents, including swimming pools, club houses and community rooms, workout facilities, concierge service, and secured access are planned in the Residential District. The Mixed-Use District would also offer new forms of accessible community recreation space in proximity to multi-family residential development. The Open Space District would be the campus's central publicly accessible open space and serve as the heart of campus life, framed by campus retail and residential uses and pedestrian connections that proposes to offer an attractive and comfortable setting for lunchtime gathering, informal meetings, and opportunities for social interaction and innovation. Other Open Space District features would include publicly accessible parks, plazas, and pathways that improve the pedestrian environment and offer new forms of accessible community recreation space for all types of campus users. In addition, it would also provide more intensely programmed recreation spaces such as gardening plots, playgrounds, dog parks, and outdoor sport courts.

The purpose of the General Plan Mobility Element (City of San Diego 2015c) is to improve mobility through development of a balanced, multi-modal transportation network. The 2019 LRDP would help facilitate improved transit, vehicular, bicycle, and other wheeled device and pedestrian connectivity to and from the Hillcrest Campus. Proposed improvements include an enhanced transit stop along Front Street at Arbor Drive to connect the Hillcrest Campus and municipal routes, and overall improvements to on-campus pedestrian, bicycle, and other wheeled device

mobility. In addition, grade improvements at the intersection of Bachman Place and Arbor Drive would improve the utility of Bachman Place as a true secondary point of access to the campus by allowing vehicles traveling southward from Hotel Circle South to turn directly onto Arbor Drive from Bachman Place. With First Avenue and Bachman Place serving as arrival routes to the campus, the eastern segment of Arbor Drive would transform into a main arrival node for campus users. Further, Bachman Place would be widened to provide an additional travel lane and allow for new bicycle, other wheeled device, and pedestrian infrastructure and a multi-modal connection to the campus and the adjacent Medical Complex and Hillcrest neighborhoods.

As detailed previously, the 2019 LRDP would incorporate similar strategies to those found in the General Plan Land Use and Community Planning, Urban Design, Recreation, and Mobility Elements. With its innovative and compact urban footprint, open space areas, and transit improvements, the 2019 LRDP would be consistent with the guiding principles of the City's General Plan and its City of Villages strategy.

2016 Uptown Community Plan

The Uptown Community Plan (City of San Diego 2016) includes several guiding principles that encourage development diversity that maintains distinctive neighborhoods; promotes walkable neighborhoods and complete streets; supports open space networks linking local neighborhoods to the region; respects and preserves cultural and heritage resources; provides a balanced transportation network; and preserves, protects, and enhances the community natural landforms, including canyons and environmentally sensitive lands.

The Uptown Community Plan Land Use Element (City of San Diego 2016) includes policies that promote locating medium and high density residential development in selected areas with adequate design controls to ensure compatibility with existing lower density development and policies that promote concentrating medium and high-density housing on upper floors as part of mixed use development in commercial areas; adjacent to commercial areas, and; near transit and higher volume traffic corridors. The Hillcrest Campus is part of the Medical Complex neighborhood and is surrounded by areas designated for high density and office/commercial-designated land uses. The campus is also situated within a SANDAG smart growth opportunity area urban center with identified planned growth within this area, as shown on the Smart Growth Concept Map (SANDAG 2016). The 2019 LRDP proposes to create a new residential land use district with multi-family residential development to promote a more neighborhood-oriented land use character for the greater campus. The Residential District in the 2019 LRDP would prioritize residential mixed-use development to provide additional housing stock in one of San Diego's most walkable neighborhoods. Approximately 9 acres of the Hillcrest Campus would be dedicated to the Residential District to provide approximately 950 multi-family units. The 2019 LRDP also proposes to create a new Mixed-Use District that would serve as a community-oriented gateway to the campus with a mixture of ground-floor neighborhood amenities and approximately 50 multi-

family residential units. Providing UC San Diego affiliate housing units on campus would also help to reduce daily vehicle trips to the campus and to integrate the walkable character of the surrounding Hillcrest neighborhood into the campus itself.

The Uptown Community Plan (City of San Diego 2016) also includes Policy LU-2.15, which supports the intensification of existing hospital uses on institutionally designated areas rather than expanding into residential or commercial areas, and Policy LU-2.16, which supports institutional uses for appropriate development intensity and effects on visual quality and neighborhood character. Today, the Hillcrest Campus consists of approximately 62 acres of land with steep canyons and dense foliage covering three-quarters of its total perimeter. The remaining campus perimeter consists of a mixture of uses emblematic of the Hillcrest neighborhood: single-family detached and two- to three-story multi-family residential uses, places of worship, surface parking lots, and smaller medical offices and clinic buildings. The 2019 LRDP proposes to introduce an organizational use framework along with overall development character for four distinct land use districts to facilitate an increase of approximately 488,000 gsf of non-residential development, from 1.1 million gsf bringing the total amount of non-residential development to 1.6 million gsf (a 45 percent increase from existing conditions). This new non-residential development would replace over 90 percent of the campus's existing building stock, bringing about modern laboratories, medical offices, research centers, and state-of-the-art hospital facilities. The redevelopment would occur within the existing campus footprint using a cohesive architectural language throughout the campus to increase development intensity and density.

Several policies in the Uptown Community Plan Mobility Element (City of San Diego 2016) support improving pedestrian amenities to address challenges posed by the existing vehicular-based environment. The Mobility Element includes policies that are designed to improve existing roadway conditions by diversifying its streets to include multi modal elements and improving the overall safety for non-motorized vehicle use. Additionally, the Uptown Community Plan (City of San Diego 2016) supports an integrated bicycle network, to facilitate bicycling and help meet travel needs in the Uptown Community. The community plan includes policies that promote an enhanced bicycle network, including bicycle boulevards, which are identified as streets optimized for free-flowing bicycle traffic. These streets have enhanced safety measures, such as a separation from vehicular traffic, specialized paint, and priority signals that promote increased cycling rates among residents.

Based on the configuration of the proposed land use districts, the 2019 LRDP intends to improve pedestrian mobility within the campus footprint and would also improve pedestrian connectivity to and from the Hillcrest neighborhood, one of the most walkable neighborhoods in the City. The 2019 LRDP improvements to help facilitate pedestrian connectivity to and from Hillcrest include prioritized pedestrian routes that would serve as the main points of pedestrian access to the campus and wayfinding design elements, such as signage, public art, and special lighting installations, to

help orient the pedestrian. Enhanced sidewalks (at least 6 feet wide and lined with planting strips and shade trees) would improve the pedestrian experience on First Avenue and help to soften the hardscape, developed character of the mesa. New, well-marked routes for all levels of bicycle riders and for wheeled-device users on public and private campus ROWs would offer safe travel routes to and within the campus. New bicycle infrastructure flanking either side of the First Avenue extension would facilitate safer bicycle travel into the Health Care District by providing a dedicated and visible space for bicyclists that connects with existing and proposed City bicycle facilities beyond the campus's boundaries. The proposed Bachman Place widening would allow for new bicycle and pedestrian infrastructure that would transform the street into a multi-modal connection to the Hillcrest Campus and the adjacent Medical Complex and Hillcrest neighborhoods.

The Uptown Community Plan (City of San Diego 2016) includes an Urban Design Element to guide future development to ensure that the physical attributes that make Uptown unique would be retained and enhanced by design that responds to the community's particular context, such as its physical setting, market strengths, cultural and social amenities, and historical assets while acknowledging the potential for positive growth and change. Within this element, policies include protecting canyons and canyon views. The 2019 LRDP would incorporate architectural design elements, such as setbacks, stepbacks, and massing variation, throughout the Health Care District to screen and soften the appearance of development along the canyon edge and surrounding residential areas. Additionally, screening landscape elements for buildings along the edge of campus would help to soften the transition between surrounding lower intensity uses and minimize visual impacts along the canyon. Publicly accessible spaces and landscaping plays a significant role in how people experience the urban environment by providing an interface between the public and private realms. These spaces can provide needed open space for nearby residents, office workers, shoppers and visitors, especially when larger parks are not accessible, as is the case for most of the community's commercial and mixed-use areas. The Uptown Community Plan (City of San Diego 2016) includes policies to integrate semi-public outdoor spaces such as on-site plazas, patios, courtyards, paseos, terraces and gardens to address the public realm and support pedestrian activity and community interaction and to incorporate green roofs and vegetated roof systems along with gardens to help reduce solar heat gain.

Synonymous with these policies, the 2019 LRDP proposes an Open Space District that would feature a range of open space types, with varying levels of intended programming and public access. New open space types include publicly accessible open spaces for recreation and community events and more contained spaces for quiet mediation. The Open Space District would also serve as an important transitional element connecting the native canyon landscape to more developed parts of the campus. The preserved canyon landscape corresponds with the boundaries of the Canyon District and is envisioned to serve as a habitat preservation area and as a scenic resource to be enjoyed from a distance. Distinct landscape treatment types would overlay all open spaces, ranging from the preserved native landscape to more highly urbanized streetscape

environments. Together, this cohesive network of context-driven open spaces and landscapes would enhance campus arrival experience, and provide a visual contrast to the campus's dense built environment. Further, the 2019 LRDP would be designed to promote the use of shade trees, green roofs, and other types of vegetated ground cover throughout the campus mesa top to reduce urban heat island conditions. As demonstrated previously, the 2019 LRDP would be generally consistent with the applicable policies in the Uptown Community Plan.

Mission Valley Community Plan

Mission Valley is a thriving commercial center with a robust economic landscape dominated by commercial, retail, and mixed-use development that includes residential and retail. Mission Valley also includes several natural features such as the San Diego River, which runs parallel to and the north of I-8 and canyons directly south of I-8. The Circulation Element includes guidelines to reconfigure the pedestrian circulation landscape that includes pedestrian oriented linkages for continuity between the different land uses and into surrounding neighborhoods. Additionally, the Conservation Element identifies development guidelines aimed at protecting air, water, land, and energy resources. Recommended guidelines to improve air quality include developing safe bicycle and pedestrian connections between activity centers by properly designing these facilities with the street system and into other linkage systems. Water conservation guidelines include landscaping with native, drought-resistant vegetation.

Further, as previously discussed, in February 2019, a second Working Draft of the Mission Valley Community Plan Update was released for public review. In June 2019, the Final Draft was released, and the public hearing process is set to begin in summer 2019 (City of San Diego 2019). Due to the timing overlap of the Final Draft with the 2019 LRDP, it is worth highlighting some of the consistencies between the Final Draft and the 2019 LRDP. The Mobility Element of the Final Draft includes pedestrian and mobility network improvements that support the efficient movement of pedestrians, cyclists, transit riders, motorists, and goods. Several policies have been included to improve pedestrian mobility within Mission Valley such as removing barriers to create a continuous network of sidewalks and street crossings. As Mission Valley continues to grow, future roadway modifications would be required to accommodate additional trips and ensure the local roadway network operates efficiently. Roadway extensions and interchange modifications are planned to increase network connections, capacity, and efficiency.

Similar to the existing circulation network in the Mission Valley area, the existing circulation system in the Hillcrest Campus presents significant challenges, particularly for patients, visitors, and UC San Diego affiliates (staff, faculty, and students), as it is often difficult to navigate and requires transportation modes to take counterintuitive routes to get to destinations within the campus. One of the goals of the 2019 LRDP is to improve the roadway circulation network adjacent to and within the campus while minimizing traffic impacts to adjoining neighborhoods. The Bachman Place widening proposed in the 2019 LRDP would function as a viable north/south

connection between the Mission Valley Community and the Hillcrest Campus, as well as provide new bicycle, other wheeled device, and pedestrian infrastructure. The modifications to Bachman Place proposed in the 2019 LRDP would help to better facilitate an interconnectivity into and from the Mission Valley area. Bicycle and other wheeled device infrastructure from the Hillcrest Campus via Bachman Place is anticipated to connect to bike lanes in the proposed bicycle network in the Mission Valley area.

Additionally, sustainability is a critical component of all UC San Diego planning and development efforts, and the redevelopment of the Hillcrest Campus provides opportunities to align the physical campus with UC San Diego's broader sustainability goals. The proposed 2019 LRDP would integrate relevant sustainability goals from the UC Sustainable Practices Policy that cover the following key topics: green building design, clean energy, climate protection, sustainable transportation, sustainable building operations, zero waste, sustainable procurement, sustainable food services, sustainable water systems, and sustainability at UC Health systems. In comparison, the Mission Valley Community Plan Update (City of San Diego 2019) has made sustainability a key component of its plan with its goals of building development near transit, including solar in building design, and integrating Smart City infrastructure into the community. Therefore, as discussed previously, the 2019 LRDP would be generally consistent with the policies identified in the adopted 1984 Mission Valley Community Plan and the 2019 Final Draft.

San Diego Forward: The Regional Plan

The Regional Plan includes five building blocks that are accompanied by strategies to move toward sustainability and reducing GHG emissions. One of the building blocks includes supporting a land use pattern that accommodates the region's future employment and housing needs, and protects sensitive habitats, cultural resources, and resource areas. SANDAG developed a land use pattern model that accommodates 79 percent of all housing and 86 percent of all jobs within the urban area. More than 80 percent of new housing in the region is anticipated to be attached multi-family. The greatest employment density and building intensities would be within existing employment centers. The land use pattern also preserves about 1.3 million acres of land, more than half the region's land area. These open space lands include habitat conservation areas, parks, steep slopes, farmland, floodplains, and wetlands.

The proposed redevelopment at the Hillcrest Campus would redefine the academic medical campus experience with a unique mix of land uses, building forms, and open spaces that cater to the unique populations that depend on this regionally serving medical institution while also serving local community residents, workers, and visitors. The 2019 LRDP proposes to feature an innovative built environment where a critical mass of diverse health programming including emergency services, inpatient facilities, labs and clinics, and everyday wellness centers and an array of residential and community-serving commercial uses operate in proximity to one another but maintain separate identities and character within each "district." In addition, the 2019 LRDP is an urban redevelopment

project, located in a transit priority area, placing housing near the employment center of the community and protecting sensitive habitat on over one-third of the campus. The highly integrated land use arrangement would facilitate collaboration and more efficient circulation throughout the campus for all users. Active and virtual learning facilities, along with informal gathering places, would provide new settings for interdisciplinary learning experiences between different UC San Diego students, faculty, and researchers and would instill a culture of "lifelong learning." Further, the addition of housing and campus retail amenities would help instill a sustained vitality on campus that encourages interaction between members of both the UC San Diego community and the surrounding neighborhoods.

The proposed 2019 LRDP would support the Regional Plan by providing TDM strategies to reduce the amount of vehicle miles traveled to and from the campus and also improve overall traffic congestion in and around the Hillcrest Campus. Some ways include providing an increase in housing on campus for UC San Diego affiliates (faculty, staff, and students), an enhanced transit stop along Front Street at Arbor Drive to connect the Hillcrest Campus and municipal routes, and overall improvements to on-campus pedestrian, bicycle, and other wheeled device mobility. In addition, grade improvements at the intersection of Bachman Place and Arbor Drive would improve the utility of Bachman Place as a true secondary point of access to the campus by allowing vehicles traveling south from Hotel Circle South to turn directly onto Arbor Drive from Bachman Place. With First Avenue and Bachman Place serving as arrival routes to the campus, the eastern segment of Arbor Drive would transform into a main arrival node for campus users. Further, Bachman Place would be widened to provide an additional travel lane and allow for new bicycle, other wheeled device, and pedestrian infrastructure and a multi-modal connection to the campus and the Medical Complex and Hillcrest neighborhoods. These improvements, combined with the development of a more user-oriented circulation system, would facilitate efficient access to and from the Hillcrest Campus.

Therefore, the proposed 2019 LRDP would be generally consistent with the strategies and objectives of the Regional Plan.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact with regard to applicable land use plans, policies, and regulations; therefore, no mitigation is required.

3.10.4 Cumulative Impacts and Mitigation

Land Use and Planning Cumulative Issue Summary

Would implementation of the 2019 LRDP have a cumulatively considerable contribution to a cumulative land use and planning impact considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Issue 1: Conflicts with applicable land use plans, policies, and regulations	Less than significant	Not cumulatively considerable

3.10.4.1 Cumulative Issue 1: Conflict with Applicable Land Use Plans, Policies, and Regulations

This section evaluates the potential for the proposed 2019 LRDP to result in a significant contribution to a cumulative land use impact resulting from potential incompatibilities between future development and existing land uses and cumulative impacts associated with the approval of future development that conflicts with applicable land use plans or policies adopted for the protection of the environment.

The geographic context for the analysis of cumulative land use and planning impacts includes the nearby communities of Mission Hills, Hillcrest, and University Heights, which are neighborhoods in the Uptown Community Plan and the Mission Valley Community Plan. These surrounding neighborhoods contain a mix of land uses that include residential, mixed-used residential and retail, commercial, park and open space, and institutional uses. The analysis accounts for all anticipated cumulative growth within this geographic area, as represented by the full implementation of the Uptown Community Plan, the Mission Valley Community Plan, the City's General Plan, and the development of the related projects provided in Table 3-1, Cumulative Projects, found in Chapter 3, Environmental Setting, Impacts, and Mitigation.

Although the Uptown Community Plan and the Mission Valley Community Plan have no authority over the land uses on the Hillcrest Campus, they are relevant when considering the campus's consistency with policies that apply to adjacent land uses and for cumulative land use analysis.

It is anticipated that development of the identified cumulative projects and regional growth in general under the existing community plans would result in changes to the existing land use environment in the project area through the conversion of vacant, underused, or low-density uses to higher-density uses or through conversions of existing land uses, such as residential, to commercial or mixed-use. Such future off-site development would be required to be consistent with the City's General Plan, applicable community plans, the Regional Plan, or other planning

documents. In addition, all future projects would also be required to be developed in compliance with the City's Municipal Code, including the Land Development Code. These planning and regulatory documents would ensure off-campus development projects would substantially comply with zoning, density, development standards, design review, and, when applicable, conduct subsequent CEQA analysis to mitigate potential impacts. Therefore, implementation of the City's General Plan, Municipal Code, community plans, and the Regional Plan would ensure that future off-campus development would be substantially compatible with existing land uses as identified in the City's General Plan and community plans. A significant cumulative land use impact associated with conflicts with applicable land use plans, policies, and regulations would not occur. Therefore, the 2019 LRDP would not contribute to a significant cumulative land use impact.

3.10.5 CEQA Issues Where There Is No Potential for a Significant Effect

The following section discusses the other Standards of Significance related to Land Use and Planning contained in Appendix G of the CEQA Guidelines wherein the proposed 2019 LRDP was determined to not cause a significant effect.

Would the 2019 LRDP physically divide an established community?

The San Diego community has developed around the Hillcrest Campus. Implementation of the 2019 LRDP would not include development outside of the Hillcrest Campus Boundary, other than a few small parcels identified for acquisition that are within or adjacent to the existing campus. The 2019 LRDP would not cause incursion into, or division of, the surrounding communities. Therefore, implementation of the 2019 LRDP would not physically divide an established community. No impact would occur and no mitigation is required.

3.10.6 References

City of San Diego. 1998. Final Multiple Species Conservation Program, MSCP Plan. Accessed November 2018. http://www.sandiegocounty.gov/content/dam/sdc/pds/mscp/docs/SCMSCP/FinalMSCPProgramPlan.pdf.

City of San Diego. 2008a. City of San Diego General Plan. March 10, 2008.

City of San Diego. 2008b. "Urban Design Element." In City of San Diego General Plan. March 10, 2008.

City of San Diego. 2015a. "Land Use and Community Planning Element." In City of San Diego General Plan. Updated June 29, 2015.

City of San Diego. 2015b. "Recreation Element." In City of San Diego General Plan. Updated June 29, 2015.

City of San Diego. 2015c. "Mobility Element." In City of San Diego General Plan. Updated June 29, 2015.

City of San Diego. 2016. Uptown Community Plan. Accessed November 2018. https://www.sandiego.gov/planning/community/profiles/uptown.

City of San Diego. 2019. Mission Valley Community Plan Update. Final Draft. June 2019. Accessed June 2019. https://www.sandiego.gov/sites/default/files/missionvalleycpu_draft_053119_8.5x11_printversion_1.pdf.

SANDAG (San Diego Association of Governments). 2015. San Diego Forward: The Regional Plan. Accessed November 2018. http://www.sdforward.com/regionalplan.

SANDAG. 2016. "Smart Growth Concept Map: Downtown–Central San Diego Subregion." May 2016. Accessed May 2019. https://www.sandag.org/uploads/projectid/projectid_296_20553.pdf.

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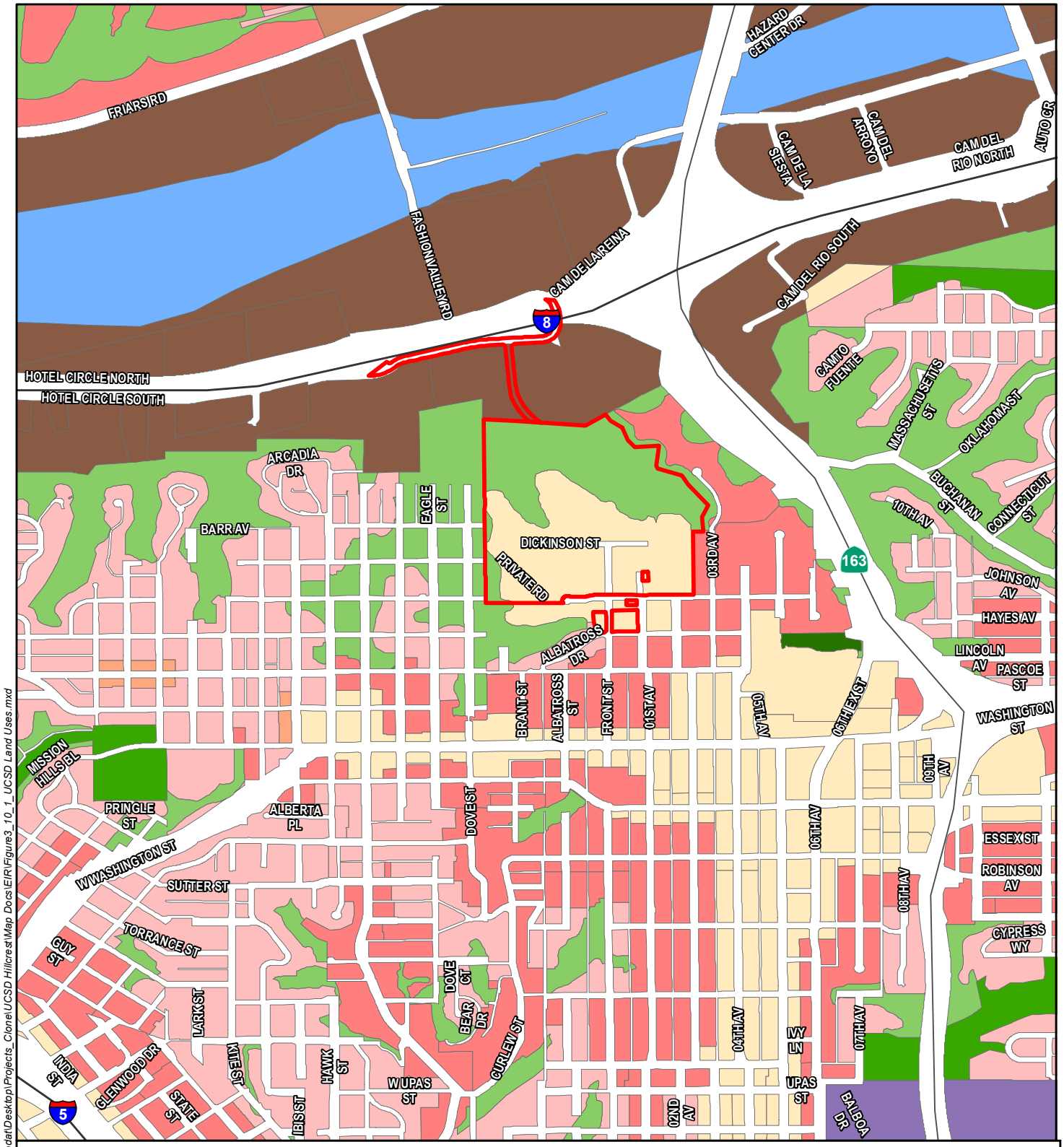

Legend

- Project Area
- Right of Way
- Commercial - Community
- Commercial - Neighborhood
- Commercial - Office
- Mission Valley Planned District
- Open Space - Conservation
- Open Space - Floodplain
- Open Space - Park
- Open Space - Residential
- Residential - Multiple Unit
- Residential - Single Unit
- Unzoned

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Sources: ESRI 2019, SANGIS

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Figure 3.10-1
Existing Land Uses

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3.11 Noise

This section of this 2019 LRDP EIR describes the existing and future noise environment in the project area by identifying and characterizing existing and planned noise sources and noise sensitive land uses (NSLU) within the proposed project vicinity. Additionally, this section reviews relevant federal, state, and local laws, ordinances, regulations, and statutes, and provides a determination of significance based upon local and state planning and regulatory guidelines to address potential noise impacts as a result of implementation of the 2019 LRDP with respect to changes in vehicular transportation noise, stationary noise, aviation noise, and project construction noise and vibration. A comprehensive noise and vibration technical report prepared by Harris for the proposed 2019 LRDP can be found in Appendix I of this 2019 LRDP EIR and is referred to herein as the Noise Technical Report (NTR).

3.11.1 Environmental Setting

3.11.1.1 Noise Basics

Quantification of Noise

Noise is commonly defined as unwanted sound. Sound pressure magnitude is measured and quantified using a logarithmic ratio of pressures, the scale of which gives the level of sound in decibels (dB). Sound pressures in the environment have a wide range of values and the sound pressure level was developed as a convenience in describing this range as a logarithm of the sound pressure. The sound pressure level is the logarithm of the ratio of the unknown sound pressure to a reference quantity of the same kind. To account for the pitch of sounds and the corresponding sensitivity of human hearing to them, the raw sound pressure level is adjusted with an A-weighting scheme based on frequency that is stated in units of decibels (dBA). Typical A-weighted noise levels are listed in Table 3.11-1.

Table 3.11-1. Typical A-Weighted Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 1,000 feet		
	— 100 —	
Gas lawn mower at 3 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		
Gas lawn mower, 100 feet	— 70 —	Vacuum cleaner at 10 feet

Table 3.11-1. Typical A-Weighted Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
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
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: Caltrans 2013a.
Note: dBA = A-weighted decibel

A given level of noise may be more or less tolerable depending on the sound level, duration of exposure, character of the noise sources, the time of day when the noise is experienced, and the activity affected by the noise. For example, noise that occurs at night tends to be more disturbing than that which occurs during the day because sleep may be disturbed. Additionally, rest at night is a critical requirement in the recovery from exposure to high noise levels during the day. In consideration of these factors, different measures of noise exposure have been developed to quantify the extent of the effects anticipated from these activities. For example, some indices consider the 24-hour noise environment of a location by using a weighted average to estimate its habitability on a long-term basis. Other measures consider portions of the day and evaluate the nearby activities affected by it as well as the noise sources. The most commonly used indices for measuring community noise levels are the Equivalent Energy Level (L_{eq}), and the Community Noise Equivalent Level (CNEL):

- **L_{eq}**, the Equivalent Energy Level, is the average acoustical or sound energy content of noise, measured during a prescribed period, such as 1 minute, 15 minutes, 1 hour, or 8 hours. It is the decibel sound level that contains an equal amount of energy as a fluctuating sound level over a given period of time.
- **CNEL**, Community Noise Equivalent Level, is the average equivalent A-weighted sound level over a 24-hour period. This measurement applies weights

to noise levels during evening and nighttime hours to compensate for the increased disturbance response of people at those times. CNEL is the equivalent sound level for a 24-hour period with a +5 dBA weighting applied to all sound occurring between 7:00 p.m. and 10:00 p.m. and a +10 dBA weighting applied to all sound occurring between 10:00 p.m. and 7:00 a.m. Similar to the CNEL, Ldn, the day-night average noise level, is a 24-hour average L_{eq} with a +10 dBA weighting applied to noise during the hours of 10:00 p.m. to 7:00 a.m. Ldn and CNEL are typically within one dBA of each other and, for most intents and purposes, are interchangeable.

The decibel level of a sound decreases (or attenuates) exponentially as the distance from the source of that sound increases. For a single point source such as a piece of mechanical equipment, the sound level normally decreases by about 6 dBA for each doubling of distance from the source. Sound that originates from a linear, or "line" source such as a heavily traveled traffic corridor, attenuates by approximately 3 dBA per doubling of distance, provided that the surrounding site conditions lack ground effects or obstacles that either scatter or reflect noise. Noise from roadways in environments with major ground effects due to vegetation and loose soils may either absorb or scatter the sound yielding attenuation rates as high as 4.5 dBA for each doubling of distance. Other contributing factors that affect sound reception include meteorological conditions and the presence of human-made obstacles such as buildings and sound barriers.

Noise Effects

Noise has a significant effect on the quality of life. An individual's reaction to a particular noise depends on many factors such as the source of the noise, its loudness relative to the background noise level, and the time of day. The reaction to noise can also be highly subjective; the perceived effect of a particular noise can vary widely among individuals in a community. Because of the nature of the human ear, a sound must be about 10 dBA greater than the reference sound to be judged as twice as loud. In general, a 5 dBA change in community noise levels is clearly noticeable, and a 3 dBA change is the smallest increment that is perceivable by most receivers. Generally, 1 to 2 dBA changes are not detectable. Although the reaction to noise may vary, it is clear that noise is a significant component of the environment, and excessively noisy conditions can affect an individual's health and well-being. The effects of noise are often only transitory, but adverse effects can be cumulative with prolonged or repeated exposure. The effects of noise on a community can be organized into six broad categories: sleep disturbance; permanent hearing loss; human performance and behavior; social interaction or communication; extra-auditory health effects; and general annoyance.

3.11.1.2 Environmental Vibration Basics

Vibration is defined as dynamic excitation of an elastic system, such as the ground or a structure, which results in oscillatory movement of the system (Caltrans 2013b). Typical human-made causes of earth borne vibration include trains and construction activities such as blasting, pile driving, and operation of heavy earth-moving equipment (FTA 2006). The resulting waves transmitted through solid material are referred to as structure-borne or groundborne vibration. Vibration energy spreads out as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source. The vibration levels inside a building depend on the vibration energy that reaches the building foundation and the characteristics of the building that affect propagation of the vibration through the building. A heavier building will typically experience lower vibration levels. The most common impact associated with vibration is annoyance resulting from the effects of vibration such as building movement, rattling of windows, shaking of items on shelves or walls, and rumbling sounds. In more extreme cases, building damage may occur. Because the effects of vibration elicit a greater response than the vibration itself, vibration is typically only perceptible to people inside buildings (FTA 2006).

Vibration levels are typically expressed in terms of the peak particle velocity (PPV) and root mean square (rms) amplitude, both in inches per second (in/sec). PPV is most appropriate for evaluating building damage potential. Caltrans estimates that continuous vibration levels of less than 0.08 PPV and single-event vibration levels of less than 0.12 PPV do not result in damage to even the most fragile historic buildings (Caltrans 2013b). PPV does not account for human response to vibration. The rms amplitude is used to represent average vibration amplitude, which accounts for the time it takes for the human body to respond to vibration signals. The rms amplitude is also given in decibel notation, referenced as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration relative to human response (FTA 2006).

The rumbling sound caused by the vibration of room surfaces is called groundborne noise. Like broadband noise, groundborne noise is measured in dBA. The sound level accompanying vibration is generally 25 to 40 dBA lower than the vibration velocity level in VdB. Due to the low-frequency components of groundborne noise, it sounds louder than broadband noise with the same noise level (FTA 2006). The background vibration velocity level in residential areas is usually around 50 VdB, which is below the 65 VdB threshold of human perception (FTA 2006).

3.11.1.3 Existing Noise Conditions

As described in Chapter 2, Project Description, the neighborhood immediately surrounding the Hillcrest Campus includes single-family detached and 2- to 3-story multi-family residential uses, worship centers, surface parking lots, and additional medical offices and clinic buildings, including Scripps Mercy Hospital. The property boundaries are generally defined on the northern, western, and most of the eastern sides of the campus by undeveloped, steep, sloped canyons, with slopes

east of Bachman Place generally composing the remainder of the eastern property line. The southern boundary is generally similar in nature with West Arbor Drive except for a portion of one city block bounded by First Avenue, Front Street, Montecito Way, and West Arbor Drive and a parcel in the southwestern corner of Front Street and Albatross Drive.

The existing Hillcrest Campus provides inpatient and outpatient services, as well as research and teaching uses, and limited housing. The campus is currently a source of general noise from human activity, such as pedestrian conversation, and nuisance noise such as doors slamming in parking lots and landscaping equipment. The existing hospital building, known as the Inpatient Tower, encompasses over one-third of the total building square footage. Outpatient activities encompass the second largest gross square footage with buildings scattered throughout the campus. Medical Offices North and Medical Offices South contain the bulk of outpatient services. Research and teaching covers a majority of the remaining building uses. Noise associated with the existing buildings consists primarily of heating, ventilation, and air conditioning (HVAC) equipment noise. Infrastructure and support services make up a small portion of the campus primarily located within the CUP.

An ambient sound level survey was conducted in April 2018, to quantify the noise environment within the project boundary and the surrounding vicinity. A total of four on-site and seven off-site noise measurements were taken on the existing campus and in the surrounding community. The noise measurement locations on and surrounding the Hillcrest Camps are shown on Figure 3.11-1, Ambient Sound Level Survey Locations at UC San Diego Hillcrest, and Figure 3.11-2, Campus CUP Noise Measurement Locations at UC San Diego La Jolla. In addition, an ambient noise level survey was conducted in December 2018 at the La Jolla Campus CUP to characterize CUP equipment noise. The La Jolla Campus CUP was selected because it has been recently been replaced with equipment similar to that proposed in the 2019 LRDP. All measurements were taken on weekdays (Tuesday or Thursday) during the daytime (between 9:00 a.m. to 4:00 p.m.) and were 16 minutes in duration.

Table 3.11-2 summarizes the measured Leq and noise sources for the daytime and nighttime monitoring locations.

Table 3.11-2. Ambient Sound Level Measurements (dBA)

Site	Location	Daytime Noise Sources	Date/Time	L_{eq}	L_{max}	L_{min}
Hillcrest Campus On-Site Locations						
1	Northern portion of Hillcrest Campus, near Dickinson Street	Birds, construction, pedestrian conversation, truck unloading, airplane flyover	4-5-2018/ 9:54 a.m.	57.0	71.3	53.6
2	Northwest corner of Hillcrest Campus, near Bannister Family House	Distant freeway noise, birds, pedestrian conversation, trucks and cars in nearby parking lot	4-5-2018/ 9:28 a.m.	58.3	75.9	54.7
3	Southern boundary of Hillcrest Campus, near West Arbor Drive	Helicopter flyover, birds, traffic on West Arbor Drive, pedestrian conversation, bicyclists, city bus pass-by	4-5-2018/ 10:27 a.m.	58.9	80.6	48.5

Table 3.11-2. Ambient Sound Level Measurements (dBA)

Site	Location	Daytime Noise Sources	Date/Time	L_{eq}	L_{max}	L_{min}
4	On top (level 6) of Bachman Parking Structure	Birds, HVAC systems, distant traffic on I-8, motorcycle pass-by	4-26-2018/ 9:15 a.m.	49.9	67.7	44.8
Hillcrest Campus Off-Site Locations						
1	Intersection of Montecito Way and Front Street	Vehicular traffic, pedestrian conversation, bicyclists, bus and motorcycle pass-by, birds, rooftop HVAC equipment	4-5-2018/ 10:51 a.m.	62.4	81.0	49.8
2	First Avenue between Montecito Way and West Arbor Drive	Birds, vehicular traffic, dogs, bus pass-by, pedestrian conversation, rooftop HVAC equipment	4-5-2018/ 11:12 a.m.	56.6	74.2	49.4
3	Third Avenue, east of existing parking structure	Birds, distant freeway noise	4-5-2018/ 1:16 p.m.	53.1	63.5	49.6
4	Intersection of Bachman Place and West Arbor Drive	Vehicle traffic, birds, pedestrian conversation	4-19-2018/ 2:27 p.m.	56.8	72.2	47.4
5	Bachman Place, south of Hotel Circle South	Traffic on I-8 and surrounding roadways, birds, wind	4-19-2018/ 2:52 p.m.	63.4	71.0	59.4
6	Parking lot east of Front Street and north of Washington Street	Pedestrians, security radio communication, vehicle traffic, HVAC systems, birds, scooter pass by, pedestrian conversation, wind, helicopter flyover, ambulance pass-by with siren	4-19-2018/ 2:00 p.m.	59.0	78.5	49.1
7	Neighborhood west of Hillcrest Campus at the intersection of Barr Avenue and Hawk Street	Pickup trucks leaving construction site, wind, birds	4-19-2018/ 3:22 p.m.	57.9	79.3	46.6
La Jolla Campus On-Site Locations						
1	Access road to the north of the CUP	CUP gas turbines, including distinctive high-pitched tone, bus and vehicle traffic, operation of access gate	12-11-2018/ 9:29 a.m.	69.1	74.5	67.8
2	Entrance to CUP where noise barrier ends	CUP cooling towers, including sound of steam and running water, truck backing up	12-11-2018/ 9:52 a.m.	71.1	89.7	67.4
3	York Lane, where CUP cooling towers are shielded by sound barrier	CUP cooling towers, including sound of steam and running water	12-11-2018/ 10:12 a.m.	63.8	79.7	62.0
4	Scholars Drive on the east side of the CUP	CUP gas turbines, including distinctive high-pitched tone, truck and car traffic	12-11-2018/ 10:33 a.m.	66.3	81.9	60.8

Source: Harris 2019.

Notes: L_{eq} = equivalent continuous sound level; L_{max} = maximum sound level; L_{min} = minimum sound level
Ambient measurements were 16 minutes in duration.

The results of the ambient noise survey reflect daytime noise levels that range between 50 dBA and 59 dBA L_{eq} within the 2019 LRDP. The primary noise sources in the project area are vehicles, pedestrian activity, and HVAC operation. Normally acceptable ambient community noise levels up to 70 dBA CNEL are considered compatible with hospitals (OPR 2017). As such, the ambient noise levels would generally be considered acceptable for hospital use.

Noise levels up to 65 dBA CNEL are conditionally compatible with single-family residences, up to 70 dBA CNEL are conditionally compatible with multi-family residential units, and up to 75 dBA CNEL are compatible with visitor accommodations. Noise levels up to 65 dBA CNEL are compatible with commercial, office, and retail land use. Based on the City noise compatibility guidelines, ambient noise levels measured north of the Hillcrest Campus are conditionally compatible with visitor accommodations and compatible with commercial uses (City of San Diego 2015). Noise levels east and west of the Hillcrest Campus are compatible with all uses. Noise levels south and southwest are conditionally compatible with all uses, but have the potential to exceed compatibility standards for residential uses near busy connecting roadways, such as Front Street and Washington Street. As such, ambient noise levels are generally consistent with existing land uses.

Noise levels at La Jolla Campus CUP were measured approximately 20 to 50 feet of the plant. The gas turbine and cooling towers were in operation at the time the measurements were taken, but the plant's chillers were not. Three of the seven cooling were in operation. UC San Diego campus staff have observed an intermittent, high-pitched tone from gas turbine operation near the La Jolla Campus CUP. This sound was audible during the noise survey. Noise levels vary from approximately 64 to 71 dBA, depending on proximity to equipment and sound barriers.

Transportation Noise Sources

Aviation

The nearest airport to the Hillcrest Campus is SDIA, located approximately 1.3 miles to the southwest of the Hillcrest Campus. SDIA is owned and operated by the SDCRAA. The airport served approximately 209,450 annual operations in 2017 (San Diego County Regional Airport Authority 2017). The Hillcrest Campus is located with the SDIA Airport Influence Area and Overflight Area, but is not located within the 60 dBA CNEL noise contour (San Diego County Regional Airport Authority 2014).

Additionally, UC San Diego Medical Offices North, located at the intersection of Front Street and Arbor Drive currently hosts the Hillcrest Campus's helicopter landing zone on its roof, which is an essential facility for the hospital's trauma center. According to Mercy Air and Reach, the helicopter operators, there were 531 helicopter landings at the hospital in 2017 (Hinton, pers. comm. 2018; Sanchez, pers. comm. 2018). Helicopter landings occurred when emergency service was required and did not follow a predictable pattern. Landings occurred in every month, on every day of the week, and during both day and nighttime hours. Landings were generally evenly spaced across months and days of the week, ranging from 5 percent of landings occurring in February to 11 percent in December, and 11 percent of landings occurring on a Monday to 17 percent on a Tuesday. Weekends did not experience a higher proportion of landings compared to weekdays. Sixty-one percent of landings occurred during the day (7:00 a.m. to 7:00 p.m.), 13 percent occurred during the evening (7:00 p.m. to 10:00 p.m.), and 26 percent occurred at night (10:00 p.m. to 7:00 a.m.).

Scripps Mercy Hospital, located approximately 0.25 mile southeast of the Hillcrest Campus, also includes a helicopter landing facility. Similar to the Hillcrest Campus, helicopter landings occur when emergency service is required and cannot be predicted.

Roadways

Vehicular traffic along roadways in the vicinity of the Hillcrest Campus contributes to the overall noise environment on the campus. Major corridors in the surrounding area include Hotel Circle South, located north of the Hillcrest Campus, serving traffic from I-8, and Washington Street, located south of the Hillcrest Campus, serving as a major arterial in the project area.

Table 3.11-3 shows the existing noise levels generated by the roadways surrounding the Hillcrest Campus.

Table 3.11-3. Existing Off-Site Roadway Noise Levels

Roadway	Segment	Existing Average Daily Trips	Noise Level at 50 Feet from Roadway Centerline (dBA CNEL)
Hotel Circle South	I-8 Eastbound Ramps to Bachman Place	14,670	67
	East of Bachman Place	14,360	67
Bachman Place	Hotel Circle to North Access Driveway (future)	9,830	66
	North Access Driveway (future) to Arbor Drive	10,650	66
Washington Street	India Street to University Avenue	26,620	74
	University Avenue to First Avenue	24,580	70
	First Avenue to Fourth Avenue	25,830	70
	Fourth Avenue to Fifth Avenue	30,800	70
	Fifth Avenue to Sixth Avenue	36,610	71
	Sixth Avenue to Richmond Street	40,100	72
	Richmond Street to Normal Street	30,660	74
Front Street	Arbor Drive to Washington Street	5,630	61
First Avenue	Arbor Drive to Washington Street	4,920	60
	Washington Street to University Avenue	5,020	60
	University Avenue to Robinson Avenue	5,970	61
Fourth Avenue	Washington Street to Robinson Avenue	10,080	63
Fifth Avenue	Washington Street to Robinson Avenue	10,880	64

Source: Harris 2019.

Notes: CNEL = community noise equivalent level; NA = not applicable

Noise levels are calculated at 50 feet from roadway centerline. Noise levels are based on traffic data provided by LLG (2019). Decibel levels are rounded to the nearest whole number.

As shown in Table 3.11-3, noise levels on all area roadways exceed the City's normally acceptable noise compatibility standard for residential land use and visitor accommodations, such as hotels (City of San Diego 2015). Noise levels on Hotel Circle South, Bachman Place, and Washington Street exceed 65 dBA CNEL, which is the conditionally compatible noise standard for single-family residences, and normally compatible noise standard for commercial, office, and retail land use. Noise levels on Washington Street exceed the conditionally compatible standard of up to 70 dBA CNEL for multi-family residences.

3.11.1.4 Nearby Sensitive Land Uses

Noise-Sensitive Land Uses

NSLU are land uses that may be subject to stress and/or interference from excessive noise, such as residences, schools, hospitals, libraries, parks, and places of worship. Industrial and commercial land uses are generally not considered sensitive to noise. The existing Hillcrest Campus is an NSLU, specifically the Inpatient Tower, Clinical Teaching Facility, Bannister Family House, and Dickinson housing cluster. These existing NSLU, with the exception of the Bannister Family House, would be demolished as part of the proposed 2019 LRDP. The nearest NSLU to the Hillcrest Campus are residences adjacent to the Hillcrest Campus on Arbor Drive. Single- and multi-family residential uses are located throughout the Medical Complex neighborhood. Scripps Mercy Hospital includes an inpatient bed tower but is located 0.25 mile east.

Vibration-Sensitive Land Uses

Land uses in which groundborne vibration could potentially interfere with operations or equipment, such as research, manufacturing, hospitals, and university research operations are considered vibration-sensitive (FTA 2006). The degree of sensitivity depends on the specific equipment that would be affected by the groundborne vibration. Excessive levels of groundborne vibration of either a regular or an intermittent nature can result in annoyance to residential uses. The Hillcrest Campus is a vibration-sensitive receptor, specifically the inpatient and outpatient facilities, and the research and instruction buildings. Surrounding residential, commercial, and religious land uses are not vibration sensitive. However, medical offices are located throughout the area and may be vibration sensitive. Scripps Mercy Hospital, located approximately one quarter mile southeast of the Hillcrest Campus, and is a vibration-sensitive use.

3.11.2 Regulatory Framework

Applicable federal and state regulations and local (non-regulatory) plans pertaining to noise are discussed below.

3.11.2.1 Federal

U.S. Environmental Protection Agency

The Noise Control Act of 1972 establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. Section 42 USC 4903, Federal Programs, states that federal agency activities that may result in emission of noise shall comply with applicable federal, state, interstate, and local requirements related to control and abatement of environmental noise. Additionally, the Noise Control Act states that it is the primary responsibility of state and local governments to control noise.

Federal Transit Administration

Although the Federal Transit Administration (FTA) standards are intended for federally funded mass transit projects, the impact assessment procedures and criteria included in the FTA Transit Noise and Vibration Impact Assessment Manual (FTA 2006) are routinely used for projects proposed by local jurisdictions. The FTA have published guidelines for assessing the impacts of groundborne vibration associated with rail projects, which have been applied by other jurisdictions to other types of projects. The vibration criteria established by the FTA in the Transit Noise Impact and Vibration Assessment is provided in Table 3.11-4.

Table 3.11-4. FTA Groundborne Vibration Impact Criteria

Land Use Category	Impact Levels (VdB)		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1: Buildings where vibration would interfere with interior operations	65	65	65
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

Source: FTA 2018.

Note: VdB = vibration decibels

Vibration levels are measured in or near the vibration-sensitive use.

[1] "Frequent Events" is defined as more than 70 vibration events of the same source per day.

[2] "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

[3] "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.

3.11.2.2 State

California Noise Control Act of 1973

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, find that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. The California Noise Control Act declares that the State of California has a

responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the state to provide an environment for all Californians free from noise that jeopardizes their health or welfare. Section 46050.1 of the Act mandates development guidelines for the preparation and content of noise elements.

California Noise Insulation Standards (CCR Title 24, Part 2, Chapter 12)

The UC has adopted the CBC as its building code for campus development. Chapter 12 of the CBC (Title 24 pf the California Code of Regulations) establishes standards for interior environments. Section 1207.4 of the code applies to dwelling or sleeping units and states that interior noise levels attributable to exterior source shall not exceed 45 dBA Ldn or CNEL (metric to be consistent with local general plan) in any habitable room. Section 1207.5 directs the reader to the California Green Building Standards Code, Chapter 5, Division 5.5, for additional sound transmission requirements for non-residential land uses. Section 5.507.4 stipulates two compliance approaches. The prescriptive method is utilized when occupied structures are planned within a 65 dB CNEL contour of an airport, railroad, highway traffic, or industrial noise source. In this case, the wall and roof-ceiling assemblies are required to achieve a composite sound transmission class rating of at least 50, or a composite outdoor-indoor transmission class rating of not less than 40. The performance method requires that the interior noise environment attributable to outdoor noise sources not exceed an hourly L_{eq} of 50 dBA.

State of California General Plan Guidelines

California Code of Regulations, Section 65302(f), requires that local land use planning jurisdictions prepare a general plan (OPR 2017); however, it is not required for UC campuses. In such general plan documents, the Noise Element is a mandatory component and may include general community noise guidelines developed by the California Department of Health Services, as well as specific planning guidelines for noise/land use compatibility developed by the local jurisdiction. Appendix D, Noise Element Guidelines, provides suggested land use compatibility guidelines that may be used by jurisdictions to development local land use compatibility standards. The state-recommended compatibility levels are provided in Table 3.11-5. The guidelines also include a recommended interior noise exposure of 45 dBA Ldn for residences and other places where people sleep (OPR 2017). Consistent with such guidance and as described in Section 3.11.2.3, the City has land use noise compatibility guidelines with respect to what are considered acceptable noise levels for various land uses.

Table 3.11-5. Land Use Compatibility for Community Noise Environments (dBA Ldn or dBA CNEL)

Land Use Category	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential-Low Density, Single-Family, Duplex, Mobile Homes	50–60	55–70	70–75	>75
Residential – Multiple Family	50–65	60–70	70–75	>75
Transient Lodging – Motel, Hotels	50–65	60–70	70–80	>80
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	>80
Auditoriums, Concert Halls, Amphitheaters	NA	50–70	NA	>65
Sports Arenas, Outdoor Spectator Sports	NA	50–75	NA	>70
Playgrounds, Neighborhood Parks	50–70	NA	67.5–75	>72.5
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–75	NA	70–80	>80
Office Buildings, Business Commercial and Professional	50–70	67.5–77.5	>75	NA
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	>75	NA

Source: OPR 2017.

Notes: NA = not applicable

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features have been included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable: New construction or development should generally not be undertaken.

3.11.2.3 Local (Non-Regulatory)

As a state entity, UC San Diego is not subject to local land use jurisdiction or related policies. Therefore, the following local requirements do not apply to the 2019 LRDP, but are being considered because potential inconsistencies with these requirements could be indicative of an underlying physical effect. The focus of this analysis will be on underlying environmental effects, rather than strict compliance with City regulations. In this way, the City's General Plan and Municipal Code provide a reference for determining whether the 2019 LRDP's impacts would be considered significant and have been incorporated into the Significance Thresholds.

City of San Diego General Plan

The Noise Element of the City's General Plan contains goals and policies related to environmental noise. NSLU as defined in the General Plan include, but are not limited to, residential uses, hospitals, nursing facilities, intermediate care facilities, child educational facilities, libraries, museums, and child care facilities. Table 3.11-6 presents the Noise Element guidelines for

determining acceptable and unacceptable community noise exposure limits for various land use categories in the City.

Table 3.11-6. General Plan Land Use Compatibility Guidelines

Land Use Category	Compatible	Conditionally Compatible	Incompatible
Parks and Recreational			
Parks, Active and Passive Recreation	55–70	70–75	75+
Outdoor Spectator Sports, Golf Courses; Water Recreational Facilities; Indoor Recreation Facilities	55–75	NA	75+
Agricultural			
Crop Raising and Farming; Community Gardens, Aquaculture, Dairies; Horticulture Nurseries and Greenhouses; Animal Raising, Maintain and Keeping; Commercial Stables	55–75	NA	75+
Residential			
Single Dwelling Units; Mobile Homes	55–60	60–65 (Indoor 45)	65+
Multiple Dwelling Units	55–60	60–70 (Indoor 45)	70+
Institutional			
Hospitals; Nursing Facilities; Intermediate Care Facilities; Kindergarten through Grade 12 Educational Facilities; Libraries; Museums; Child Care Facilities	55–60	60–65 (Indoor 45)	65+
Other Educational Facilities including Vocational/Trade Schools and Colleges and Universities	55–60	60–70 (Indoor 45)	70+
Cemeteries	55–75	NA	75+
Retail Sales			
Building Supplies/Equipment; Food, Beverages and Groceries; Pets and Pet Supplies; Sundries, Pharmaceutical, and Convenience Sales; Wearing Apparel and Accessories	55–65	65–75 (Indoor 50)	75+
Commercial Services			
Building Services; Business Support; Eating and Drinking; Financial Institutions; Maintenance and Repair; Personal Services; Assembly and Entertainment (includes public and religious assembly); Radio and Television Studios; Golf Course Support	55–65	65–75 (Indoor 50)	75+
Visitor Accommodations	55–60	60–75 (Indoor 45)	75+
Offices			
Business and Professional; Government; Medical, Dental and Health Practitioner; Regional and Corporate Headquarters	55–65	65–75 (Indoor 50)	75+

Table 3.11-6. General Plan Land Use Compatibility Guidelines

Land Use Category	Compatible	Conditionally Compatible	Incompatible
Vehicle and Vehicular Equipment Sales and Services Use			
Commercial or Personal Vehicle Repair and Maintenance; Commercial or Personal Vehicle Sales and Rentals; Vehicle Equipment and Supplies Sales and Rentals; Vehicle Parking	55–75	NA	75+
Wholesale, Distribution, Storage Use Category			
Equipment and Materials Storage Yards; Moving and Storage Facilities; Warehouse; Wholesale Distribution	55–75	NA	75+
Industrial			
Heavy Manufacturing; Light Manufacturing; Marine Industry; Trucking and Transportation Terminals; Mining and Extractive Industries	55–75	NA	75+
Research and Development	55–70	70–75 (Indoor 50)	75+

Source: City of San Diego 2015.

Notes: CNEL = community noise equivalent level; NA = not applicable

Compatible:

Indoor Uses: Standard construction methods should attenuate exterior noise to an acceptable indoor noise level.

Outdoor Uses: Activities associated with the land use may be carried out.

Conditionally Compatible:

Indoor Uses: Building structure must attenuate exterior noise to the indoor noise level indicated by the number (45 or 50) for occupied areas.

Outdoor Uses: Feasible noise mitigation techniques should be analyzed and incorporated to make the outdoor activities acceptable.

Incompatible:

Indoor Uses: New construction should not be undertaken.

Outdoor Uses: Severe noise interference makes outdoor activities unacceptable.

City of San Diego Noise Ordinance

Section 59.5.0404 of the City's Municipal Code, referred to as the Noise Ordinance, regulates construction noise. The Noise Ordinance prohibits noise generated by construction activities between the hours of 7:00 p.m. and 7:00 a.m. of any day and all day on Sundays and holidays. However, the City Noise Abatement and Control Administrator could permit construction at night where noise levels could be in excess of 75 dBA on a limited basis where nighttime construction is deemed necessary and the construction is found to be in the public interest. Additionally, construction noise levels at or beyond the property lines of any property zoned residential are not permitted to exceed an average sound level greater than 75 decibels during the 12-hour period from 7:00 a.m. to 7:00 p.m. Monday through Saturday.

3.11.3 Project Impacts and Mitigation

3.11.3.1 Issue 1: Exceed Noise Standards

Noise Issue 1 Summary

Would implementation of the 2019 LRDP result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact: Implementation of the 2019 LRDP would have the potential to generate substantial noise levels as a result of increases in traffic volumes, development of new stationary sources of noise, and increases in human activity throughout the Hillcrest Campus. The 2019 LRDP would also have the potential to result in temporary increases in noise levels during construction.

Mitigation: Construction Noise (NOI-1A); Mechanical Equipment Shielding (NOI-1B); Special Event Noise (NOI-1C); Interior Noise Levels (NOI-1D)

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Temporary significant and unavoidable impact during construction. Operational noise would be mitigated to a less than significant level.

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP would have a significant impact if it would result in the 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. A significant impact would occur if transportation, stationary, or construction noise as a result of 2019 LRDP implementation would exceed the criteria listed in Table 3.11-7.

Table 3.11-7. Summary of Applicable Noise Impact Significance Criteria

Noise or Vibration Source	Exterior and Interior Noise Level Criterion for NSLU	Substantial Increase in Noise Level
On-Campus NSLU[1]		
Transportation Noise Sources	Housing, Temporary Lodging, Inpatient Medical Care Facilities, Classrooms, Child Development Center, Libraries (and related Learning Spaces) exteriors: 65 dBA CNEL	> 3 dBA CNEL if existing noise level exceeds 65 dBA CNEL
	Housing, Temporary Lodging, Inpatient Medical Care Facilities interiors: 45 dBA CNEL	Not Applicable
	Classrooms, Child Development Center, Libraries (and related Learning Spaces) interiors: 50 dBA CNEL	Not Applicable
Stationary Noise Sources (e.g., HVAC equipment, utility plants, ventilated parking garages)	Housing, Temporary Lodging, Inpatient Medical Care Facilities, Classrooms, Child Development Center, Libraries (and related Learning Spaces) exteriors: 65 dBA CNEL	> 3 dBA CNEL if existing noise level exceeds 65 dBA CNEL
	Housing, Temporary Lodging, Inpatient Medical Care Facilities interiors: 45 dBA CNEL	Not Applicable
	Classrooms, Child Development Center, Libraries (and related Learning Spaces) interiors: 50 dBA CNEL	Not Applicable
Construction	Housing, Temporary Lodging, Inpatient Medical Care Facilities exteriors: 75 dBA L_{eq} averaged over a 12-hour period between 7:00 a.m. and 7:00 p.m. Monday through Saturday at any sensitive receptor	Not Applicable
Off-Campus Receptors[2]		
Transportation Noise Sources	Single-family residences, multi-family residences, schools, libraries, hospitals, day care, hotels, motels, parks, convalescent homes exteriors: 65 dBA CNEL	> 3 dBA CNEL if existing noise level exceeds 65 dBA CNEL
	Single-family residences, multi-family residences, schools, libraries, hospitals, day care, hotels, motels, parks, convalescent homes interiors: 45 dBA CNEL	Not Applicable
	Offices, Churches, Business, Professional Uses exteriors: 70 dBA CNEL	> 3 dBA CNEL if existing noise level exceeds 70 dBA CNEL
	Commercial, Retail, Industrial, Outdoor Spectator Sports Uses exteriors: 75 dBA CNEL	> 3 dBA CNEL if existing noise level exceeds 75 dBA CNEL

Table 3.11-7. Summary of Applicable Noise Impact Significance Criteria

Noise or Vibration Source	Exterior and Interior Noise Level Criterion for NSLU	Substantial Increase in Noise Level
Stationary Noise Sources (e.g., HVAC equipment, utility plants, ventilated parking garages)	Single-family residence: project generated 40 dBA L_{eq} (nighttime) or 65 dBA CNEL at residential property line	Not Applicable
	Multi-family residential (up to maximum density of 1/2000): project generated 45 dBA hourly L_{eq} at residential property line	Not Applicable
	All other residential: project generated 50 dBA hourly L_{eq} at residential property line	Not Applicable
Construction	75 dBA L_{eq} averaged over a 12-hour period between 7:00 a.m. and 7:00 p.m. Monday through Saturday at any residentially zoned property	Not Applicable

Source: Harris 2019.

Notes: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibel; HVAC = heating, ventilation, and air conditioning; NSLU = noise sensitive land use

[1] Exterior balconies and courtyards on campus are considered active use areas and are not noise sensitive.

[2] Consistent with the City's Noise Ordinance and CEQA Significance Thresholds.

Methodology

Impacts related to potential exposure to excessive noise levels as a result of project implementation are assessed based on a comparison of the land uses proposed in the 2019 LRDP to the noise levels generated by existing on-site land uses and off-site noise sources. Estimated noise levels are based on a variety of sources, including NTRs for similar facilities, such as the NTR prepared for the 2018 LRDP for the La Jolla Campus (AECOM 2018). Noise levels at a particular receptor from a stationary noise source are based on an attenuation rate of 6 dBA for every doubling of distance.

The potential for implementation of the 2019 LRDP to permanently increase ambient noise levels as a result of increased traffic noise is assessed using standard noise modeling equations adapted from the Federal Highway Administration (FHWA) noise prediction model. The modeling calculations take into account the posted vehicle speed, average daily traffic volume, and the estimated vehicle mix. Noise levels are estimated at locations 50 feet from the roadway centerline. Noise levels at distances further from the source than the specific receptor would be lower due to attenuation provided by increased distance from the noise source. The noise model assumes a line-source attenuation rate of approximately 3 dBA for every doubling of distance from the roadway.

Traffic data is provided in the project-specific Transportation Impact Analysis (TIA) prepared by LLG included as Appendix M to this 2019 LRDP EIR (LLG 2019). The potential for the 2019 LRDP to permanently increase traffic noise is addressed under the following scenarios: opening day (Year 2022), Interim Year 2025, and Buildout Year 2035. Interim Year 2025, which includes operation of Phases 1A through 2B, was selected because it is the interim year projected to

experience the highest traffic volumes on the most roadways. The Buildout Year 2035 scenario represents the overall worst-case scenario.

Impacts related to temporary increases in ambient noise levels from operation of construction equipment is assessed using estimates of sound levels from typical construction equipment provided by the FHWA in the Roadway Construction Noise Model (RCNM) (FHWA 2008), assuming an attenuation rate of 6 dBA per doubling of distance from the source.

Impact Analysis

The 2019 LRDP would have the potential to generate excessive noise levels as defined in Table 3.11-7, as a result of increases in traffic volumes, developing new stationary sources of noise, and by increasing human activity throughout the Hillcrest Campus. NSLU both on and beyond the Hillcrest Campus may be affected by the 2019 LRDP. Proposed NSLU associated within the Hillcrest Campus include the Replacement Hospital and residential development. Proposed potential noise generating land uses on site include the proposed CUP and HVAC systems on campus buildings. The 2019 LRDP would also have the potential to result in temporary increases in noise levels during construction.

Construction Impacts

Construction under the 2019 LRDP would generate noise that could expose nearby receptors to elevated noise levels that may disrupt communication and routine activities. The magnitude of the impact would depend on the type of construction activity, equipment, duration of the construction phase, distance between the noise source and receiver, and intervening structures. Sound levels from typical construction equipment range from 60 dBA to 90 dBA L_{eq} at 50 feet from the source (FHWA 2008). Noise from construction equipment generally exhibits point source acoustical characteristics. Strictly speaking, a point source sound decays at a rate of 6 dBA per doubling of distance from the source. The rule applies to the propagation of sound waves with no ground interaction.

Development under the proposed 2019 LRDP would involve the construction over five specific phases. The details of each construction phase are provided in Section 2.9, Construction Phasing, in Chapter 2, Project Description. The approximate construction area for each phase is shown in Figures 2-11A and 2-11B, Conceptual Grading Plan with Project Phasing, provided in Chapter 2. The construction timeframe for the entire buildout of the 2019 LRDP is expected to begin in 2019 and last for 14 years until buildout in 2033. Construction activities in all phases would involve grading and earthwork, as well as utilities installation, and surface improvements including paving and landscaping. All phases except Phases 1B and 4 would involve building construction and external/internal building work. Phases 1A, 1B, 2B, and 4 would require demolition. Pile driving is anticipated for shoring and/or building construction in Phases 1A, 2A, 2B, and 3.

A significant impact would occur if construction noise would result in a noise level that exceeds 75 dBA L_{eq} averaged over a 12-hour period (7:00 a.m. to 7:00 p.m.) Monday through Saturday at the nearest on-site residence or inpatient facility or off-site residence. Construction noise would be considered significant if would occur on a Sunday or holiday; however, this is not anticipated for the 2019 LRDP.

Construction Traffic Noise

This section addresses the potential for construction of the 2019 LRDP to temporarily increase ambient noise levels as a result of increased traffic noise. This analysis is based on the worst-case construction traffic scenario and consistent with the methods described in Section 3.2.3.2, Issue 2: Cumulative Increase in Criteria Pollutant Emissions, in Section 3.2, Air Quality. Construction is anticipated to result in an average of 894 worker passenger vehicle trips and 60 medium-duty vendor truck trips per day during all phases of construction and a maximum of 300 heavy-duty hauling trips per day. Some phases of construction are anticipated to experience fewer daily hauling trips than assumed in this analysis; therefore, this analysis is conservative (e.g., a worst-case scenario). Traffic volumes without construction and Year 2025 (Phase 2A/2B) volumes with construction are provided in the TIA prepared by LLG, which is included as Appendix M to this 2019 LRDP EIR (LLG 2019). For the remaining phases, construction trips were manually added to traffic volumes provided in the TIA for conditions without construction. A substantial temporary increase would occur if construction would result in an ambient noise level that would exceed the exterior land use compatibility criteria listed in Table 3.11-7. An impact would occur if ambient noise levels would exceed 65 dBA CNEL for on- and off-site sensitive receptors, or would result in an increase of more than 3 dBA if the roadway already exceeds the standard without the addition of construction traffic. Construction traffic is anticipated to primarily utilize Arbor Drive, Bachman Place, and Hotel Circle Drive to reach I-8. Arbor Drive is not included in the traffic study area. The segments of Front Street and First Avenue that intersection with Arbor Drive are included to represent impacts to Arbor Drive. The potential impact for each phase of construction is addressed below. The analysis is based on the scenarios provided in the TIA, which, as a worst-case scenario, groups together Phases 1A and 1B, Phases 2A and 2B, and Phases 3 and 4. Phase 5 is evaluated individually.

Phase 1A/1B Construction Scenario

Existing traffic volumes, with and without construction of Phase 1A/1B, are provided in Table 3.11-8. As shown in Table 3.11-8, Phase 1A/1B construction-related traffic would not result in an increase in noise level of more than 3 dBA CNEL along any roadway segment that currently exceeds 65 dBA CNEL, or cause a roadway segment to exceed 65 dBA CNEL. Therefore, construction under Phase 1A/1B would not result in a temporary significant impact related to traffic noise.

Table 3.11-8. Phase 1A/1B Construction Traffic Noise Levels

Roadway	Segment	Existing (dBA CNEL)	Existing + Phase 1A/1B Construction (dBA CNEL)	Increase in Noise Level	Significant Impact?
Hotel Circle South	I-8 Eastbound Ramps to Bachman Place	67	69	2	No
	East of Bachman Place	67	69	2	No
Bachman Place	Hotel Circle to North Access Driveway (future)	66	68	2	No
	North Access Driveway (future) to Arbor Drive	66	69	3	No
Front Street	Arbor Drive to Washington Street	61	65	4	No
First Avenue	Arbor Drive to Washington Street	60	65	5	No

Source: Harris 2019.

Notes: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibel

Noise levels are calculated at 50 feet from roadway centerline. Decibel levels are rounded to the nearest whole number.

Year 2022 with Phase 2A/2B Construction Scenario

The Year 2022 condition includes operation of project Phase 1A/1B. Traffic noise levels, with and without construction of Phase 2A/2B, are provided in Table 3.11-9. As shown in Table 3.11-9, construction traffic during Phase 2A/2B would not result in an increase in noise level of more than 3 dBA CNEL along any roadway that exceeds 65 dBA CNEL without construction traffic. However, construction traffic volumes would cause noise levels on Front Street and First Avenue to exceed 65 dBA CNEL. A temporary significant impact would occur during construction of Phase 2A/2B to the following segments:

- Front Street from Arbor Drive to Washington Street
- First Avenue from Arbor Drive to Washington Street

Table 3.11-9. Year 2022 + Phase 2A/2B Construction Traffic Noise Levels

Roadway	Segment	Year 2022 (dBA CNEL)	Year 2022 + Phase 2A/2B Construction (dBA CNEL)	Increase in Noise Level	Significant Impact?
Hotel Circle South	I-8 Eastbound Ramps to Bachman Place	67	69	2	No
	East of Bachman Place	67	69	2	No
Bachman Place	Hotel Circle to North Access Driveway (future)	66	68	2	No
	North Access Driveway (future) to Arbor Drive	67	69	2	No
Front Street	**Arbor Drive to Washington Street**	**63**	**66**	**3**	**Yes**
First Avenue	**Arbor Drive to Washington Street**	**63**	**66**	**3**	**Yes**

Source: Harris 2019.

Notes: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibel

Noise levels are calculated at 50 feet from roadway centerline. Decibel levels are rounded to the nearest whole number.

Year 2025 with Phase 3 or Phase 4 Construction Scenario

The Year 2025 condition compares traffic volumes with operation of project Phases 1A/1B and 2A/2B with and without traffic from Phase 3 or Phase 4 of construction. An interim operation scenario that includes operation of Phases 1A/1B, 2A/2B, and 3 is not available. Therefore, the Year 2025 condition with operation of Phases 1A/1B and 2A/2B represents the best available scenario for conditions with Phase 4 construction. Year 2025 traffic noise levels, with and without construction, are provided in Table 3.11-10, Year 2025 + Phase 3 or Phase 4 Construction Traffic Noise Levels. As shown in Table 3.11-10, Phase 3 or Phase 4 construction related traffic would not result in an increase in noise level of more than 3 dBA CNEL on any segment that would exceed 65 dBA CNEL without construction traffic, but would cause noise levels on Front Street and First Avenue to exceed 65 dBA CNEL. A temporary significant impact would occur during the construction of Phase 3 or Phase 4 to the following roadway segments:

- Front Street from Arbor Drive to Washington Street
- First Avenue from Arbor Drive to Washington Street

Table 3.11-10. Year 2025 + Phase 3 or Phase 4 Construction Traffic Noise Levels

Roadway	Segment	Year 2025 (dBA CNEL)	Year 2025 + Phase 3 or Phase 4 Construction (dBA CNEL)	Increase in Noise Level	Significant Impact?
Hotel Circle South	I-8 Eastbound Ramps to Bachman Place	68	69	1	No
	East of Bachman Place	67	69	2	No
Bachman Place	Hotel Circle to North Access Driveway (future)	67	69	2	No
	North Access Driveway (future) to Arbor Drive	67	69	2	No
Front Street	**Arbor Drive to Washington Street**	**64**	**67**	**3**	**Yes**
First Avenue	**Arbor Drive to Washington Street**	**64**	**67**	**3**	**Yes**

Source: Harris 2019.

Notes: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibel

Noise levels are calculated at 50 feet from roadway centerline. Decibel levels are rounded to the nearest whole number.

Year 2030 with Phase 5 Construction Scenario

The Year 2030 condition compares traffic volumes with operation of Phase 1 through Phase 4, with and without Phase 5 construction traffic. Year 2030 traffic noise levels, with and without the 2019 LRDP, are provided in Table 3.11-11. Noise levels are generally decreased under this scenario compared to the Year 2025 + Phase 3 or Phase 4 construction scenario because more existing buildings would be demolished by Phase 5. There would be less simultaneous operation of existing and proposed facilities under this phase; therefore, traffic volumes would be generally decreased. As shown in Table 3.11-11, construction-related traffic would not result in an increase in noise level of more than 3 dBA CNEL along any segment that would exceed 65 dBA CNEL without construction traffic but would cause noise levels on Front Street and First Avenue to exceed 65 dBA CNEL. A temporary significant impact would occur to the following segments during Phase 5 of construction:

- Front Street from Arbor Drive to Washington Street
- First Avenue from Arbor Drive to Washington Street

Table 3.11-11. Year 2030 + Phase 5 Construction Traffic Noise Levels

Roadway	Segment	Year 2030 (dBA CNEL)	Year 2030 + Phase 5 Construction (dBA CNEL)	Increase in Noise Level	Significant Impact?
Hotel Circle South	I-8 Eastbound Ramps to Bachman Place	68	69	1	No
	East of Bachman Place	67	69	2	No
Bachman Place	Hotel Circle to North Access Driveway (future)	66	69	3	No
	North Access Driveway (future) to Arbor Drive	67	69	2	No
Front Street	**Arbor Drive to Washington Street**	**62**	**66**	**4**	**Yes**
First Avenue	**Arbor Drive to Washington Street**	**62**	**66**	**4**	**Yes**

Source: Harris 2019.

Notes: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibel

Noise levels are calculated at 50 feet from roadway centerline. Decibel levels are rounded to the nearest whole number.

Construction Equipment Noise

Standard equipment, such as dozers, loaders, graders, backhoes, scrapers, and miscellaneous trucks would be used for construction of the 2019 LRDP. Noise levels from construction on the Hillcrest Campus were determined based on typical equipment noise levels determined by the RCNM (FHWA 2008). As similar construction practices are required for each phase, the worst-case construction fleet is assumed to be the same under each phase. Because pile driving activities are typically much louder than average construction equipment, worst-case scenarios with and without pile driving were calculated. Construction would normally take place between 7:00 a.m. and 7:00 p.m., Monday through Saturday, consistent with the construction hours of the City Noise Ordinance. The following analysis addresses normal daytime construction. Although specific instances are not known at this time, special circumstances may require occasional nighttime construction. A discussion of the potential impacts of nighttime construction follows the analysis of daytime construction.

The five noisiest pieces of construction equipment (concrete saw, excavator, dozer, grader and jackhammer) anticipated for any project construction activity, except pile driving, were assumed to operate simultaneously in the same location, and would have the potential to generate noise levels up to 87.5 dBA at 50 feet from the construction site. As such, normal construction activities would have the potential to exceed 75 dBA L_{eq} up to 210 feet from active construction. With pile driving, the five noisiest pieces of equipment (concrete saw, impact pile driver, dozer, grader and jackhammer) could generate noise levels up to 95.1 dBA at 50 feet from the construction area. Construction involving pile driving could exceed 75 dBA L_{eq} up to 500 feet from the construction

area. These estimates are conservative because construction equipment for a single construction project would likely be spread out over several acres and would not be operating all at once. Pile driving activities would not occur continuously, as such, the worst-case noise level of 95.1 dBA would not be the 12-hour average noise level for a day involving pile driving activities. Additionally, existing and new buildings would likely provide attenuation beyond the first row of buildings surrounding the construction area, so that the actual impact areas would not extend 210 feet, or 500 feet from pile driving activities. However, because the exact location and noise intensity of construction is unknown at this time, potential impacts are conservatively assumed to occur up to these distances. The potential for impacts to sensitive receptors during each phase of construction are addressed below.

Phase 1A/1B

The existing Inpatient Tower would be located within 210 feet of the construction area of Phase 1A/1B and would be exposed to normal construction noise. No additional on-campus NSLU would be located within 500 feet of Phase 1A/1B construction. The existing residences on Dickinson Street and First Street would be demolished in the first year of construction and would not be exposed to construction noise. Off-site residences southwest of the campus are located within 210 feet of the proposed construction area, including across Arbor Drive from the proposed Main Parking Structure. Hotel uses would be within 210 feet of the Bachman Place widening. Other residences to southwest, south, southeast, and east are located within 500 feet and would be exposed to normal construction and pile driving noise. A significant impact would occur to on- and off-campus receptors during normal construction and pile driving activities.

Phase 2A/2B

The existing Bannister Family House and Inpatient Tower are both located within 210 feet of the construction area of Phase 2A and would be exposed to normal construction and pile driving noise. Existing residences are located immediately surrounding the proposed Mixed-Use Residential/Wellbeing Center to be constructed on Arbor Drive during Phase 2A and would be exposed to normal construction and pile driving noise. Construction of the north access driveway would be within 500 feet of hotels on Hotel Circle South; however, pile driving is not anticipated to be required for access road construction. Additional off-site residences are located within 210 and 500 feet to the south, southwest, southeast, and east of the construction area and would be exposed to normal construction and pile driving noise. A significant impact would occur to on- and off-campus receptors during normal construction and pile driving activities.

Phase 3

The existing Inpatient Tower would be located adjacent to the construction area of Phase 3 and would be exposed to normal and pile driving construction noise. The Bannister Family House and new Residential Buildings 1 and 2 would be located within 500 feet and would be exposed to pile

driving noise. Due to its location in the northcentral area of campus, no off-campus residences would be located within 500 feet of Phase 3 construction activities and would not be exposed to normal construction or pile driving noise. A significant impact would occur to on-campus receptors during normal construction and pile driving activities.

Phase 4

Pile driving would not occur during Phase 4 of construction. No existing buildings where people normally sleep would be located within 210 feet of Phase 4 construction; however, the new hospital and residences in the new Residential Buildings 1 and 2, and the Mixed-Use Residential/Wellbeing Center would be within 210 feet of construction and would be exposed to normal construction noise. No off-site residences are located within 210 feet of the Phase 4 construction area. A significant impact would occur to on-campus receptors during normal construction activities.

Phase 5

Pile driving would not occur during Phase 5 of construction. The Replacement Hospital would be located adjacent to the construction area for the proposed Hospital Annex constructed in this phase. Existing Residential Buildings 1 and 2 would be adjacent to proposed circulation improvements, and construction of Residential Building 3 would be adjacent to existing Residential Building 2. The Replacement Hospital and existing Residential Buildings 1 and 2 would be exposed to normal construction noise. No off-site residences are located within 210 feet of the Phase 5 construction area. A significant impact would occur to on-campus receptors during normal construction activities.

Nighttime Construction

Nighttime construction is anticipated to occur occasionally in order to avoid daytime road closures, which would minimize traffic flow disruptions and maintain access to essential medical facilities, including emergency services. Nighttime construction would likely be more disturbing to on- and off-campus NSLU than daytime construction noise because it would occur during typical sleeping hours. UC San Diego has not established a criteria for nighttime construction noise. The City Noise Ordinance restricts construction to daytime hours (7:00 a.m. and 7:00 p.m.), Monday through Saturday, unless a permit for nighttime construction has been obtained from the City. The approval of such a permit requires consideration of impacts to nearby receptors. Table 3.11-12 compares 2019 LRDP implementation to the criteria for permit consideration in the City Noise Ordinance. UC San Diego is not subject to permitting from the City; however, the permit criteria are used to consider whether or not nighttime construction would be a nuisance to receptors.

Table 3.11-12. Nighttime Noise Considerations

Consideration	Project Compliance
Would construction noise be less objectionable at night than during the daytime because of different population densities or different neighboring activities? What is the character and nature of the neighborhood of the proposed work site?	The Hillcrest Campus and surrounding neighborhood includes residences and other facilities where people normally sleep. Construction noise would likely be more objectionable at night.
Would obstruction and interference with traffic particularly on streets of major importance, be less objectionable at night than during the daytime?	The roadways surrounding the Hillcrest Campus affected by construction, specifically Bachman Place, Arbor Drive, and Washington Street, provide major connections in the neighborhood surrounding the campus. It is likely that interference with traffic would be less objectionable at night.
Would the type of work to be performed emit noises at such a low level as to not cause significant disturbances in the vicinity of the work site?	The circumstances that would require nighttime construction are unknown at this time. However, as all phases of construction would have the potential to result in significant impacts during daytime construction, it is likely that nighttime construction noise would result in a significant disturbance.
Would great economic hardship would occur if the work were spread over a longer time?	It is unknown at this time whether nighttime construction would have any overall impact on construction schedule.
Is proposed night work in the general public interest?	Replacement of the existing acute care hospital within the timeframe allowed by the state seismic regulations in order to avoid a lapse in hospital acute care services is in the general public interest. As such, nighttime construction necessary to facilitate this goal would generally be in the public interest.

Source: Harris 2019.

As described in Table 3.11-12, nighttime construction under the 2019 LRDP would generally meet the City approval criteria related to the necessity of nighttime work, although UC San Diego is not subject to permitting from the City. However, nighttime construction, if it is ultimately required, would likely disturb surrounding NSLU and is a potentially significant impact.

Operational Impacts

Impacts related to operation of the 2019 LRDP include new transportation and stationary noise sources and the introduction of new NSLU to the Hillcrest Campus.

Transportation Noise

This section addresses the potential for implementation of the 2019 LRDP to permanently increase ambient noise levels as a result of increased traffic noise based on the traffic volumes provided in the TIA (LLG 2019). Implementation of the 2019 LRDP would result in a significant impact if it would result in an ambient noise level that exceeds the exterior land use compatibility criteria identified in Table 3.11-7, specifically 65 dBA CNEL for on- and off-site sensitive receptors, or an increase in 3 dBA or greater if the roadway would exceed the standard without project implementation.

Opening Day (Year 2022)

Near-term increases in traffic, with and without the 2019 LRDP, are provided in Table 3.11-13. Traffic volumes in Opening Day, Year 2022 include development of Phases 1A and 1B.

Table 3.11-13. Opening Day (Year 2022) Traffic Noise Levels

Roadway	Segment	Year 2022 (dBA CNEL)	Year 2022 + Project (dBA CNEL)	Increase in Noise Level	Significant Impact?
Hotel Circle South	I-8 Eastbound Ramps to Bachman Place	67	67	0	No
	East of Bachman Place	67	67	0	No
Bachman Place	Hotel Circle to North Access Driveway (future)	66	66	0	No
	North Access Driveway (future) to Arbor Drive	66	67	1	No
Washington Street	India Street to University Avenue	74	74	0	No
	University Avenue to First Avenue	70	70	0	No
	First Avenue to Fourth Avenue	70	70	0	No
	Fourth Avenue to Fifth Avenue	71	71	0	No
	Fifth Avenue to Sixth Avenue	71	71	0	No
	Sixth Avenue to Richmond Street	72	72	0	No
	Richmond Street to Normal Street	72	72	0	No
Front Street	Arbor Drive to Washington Street	61	63	2	No
First Avenue	Arbor Drive to Washington Street	60	63	3	No
	Washington Street to University Avenue	60	61	1	No
	University Avenue to Robinson Avenue	61	61	0	No
Fourth Avenue	Washington Street to Robinson Avenue	63	63	0	No
Fifth Avenue	Washington Street to Robinson Avenue	64	64	0	No

Source: Harris 2019.

Notes: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibel

Noise levels are calculated at 50 feet from roadway centerline. Noise levels are based upon traffic data provided by LLG (2019). Decibel levels are rounded to the nearest whole number.

As shown in Table 3.11-13, Hotel Circle South, Bachman Place, and Washington Street currently generate noise levels that exceed 65 dBA CNEL, without implementation of the 2019 LRDP. Under the Opening Day (Year 2022) scenario, project-related traffic would not result in an increase in noise levels of more than 1 dBA CNEL along Hotel Circle South, Bachman Plan and Washington Street which currently exceed 65 dBA CNEL. The 2019 LRDP would result in an increase in noise levels of 1 to 3 dBA CNEL along Front Street and First Avenue, but would not cause any segment to exceed 65 dBA CNEL. Impacts would be less than significant impact.

Interim Year 2025

Year 2025 includes development of project Phases 1A, 1B, 2A, and 2B. Year 2025 traffic noise levels, with and without the 2019 LRDP, are provided in Table 3.11-14.

Table 3.11-14 Year 2025 Traffic Noise Levels

Roadway	Segment	Year 2025 (dBA CNEL)	Year 2025 + Project (dBA CNEL)	Increase in Noise Level	Significant Impact?
Hotel Circle South	I-8 Eastbound Ramps to Bachman Place	67	68	1	No
	East of Bachman Place	67	67	0	No
Bachman Place	Hotel Circle to North Access Driveway (future)	66	67	1	No
	North Access Driveway (future) to Arbor Drive	66	67	1	No
Washington Street	India Street to University Avenue	74	74	0	No
	University Avenue to First Avenue	70	70	0	No
	First Avenue to Fourth Avenue	70	70	0	No
	Fourth Avenue to Fifth Avenue	71	71	0	No
	Fifth Avenue to Sixth Avenue	71	72	1	No
	Sixth Avenue to Richmond Street	72	72	0	No
	Richmond Street to Normal Street	72	72	0	No
Front Street	Arbor Drive to Washington Street	61	64	3	No
First Avenue	Arbor Drive to Washington Street	60	64	4	No
	Washington Street to University Avenue	60	61	1	No
	University Avenue to Robinson Avenue	61	61	0	No

Table 3.11-14 Year 2025 Traffic Noise Levels

Roadway	Segment	Year 2025 (dBA CNEL)	Year 2025 + Project (dBA CNEL)	Increase in Noise Level	Significant Impact?
Fourth Avenue	Washington Street to Robinson Avenue	63	64	1	No
Fifth Avenue	Washington Street to Robinson Avenue	64	64	0	No

Source: Harris 2019.

Notes: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibel

Noise levels are calculated at 50 feet from roadway centerline. Noise levels are based upon traffic data provided by LLG (2019). Decibel levels are rounded to the nearest whole number.

As shown in Table 3.11-14, Hotel Circle South, Bachman Place, and Washington Street would generate noise levels that exceed 65 dBA CNEL in Year 2025 without implementation of the 2019 LRDP. In Year 2025, traffic generated by the 2019 LRDP would not result in an increase in noise level of more than 1 dBA CNEL along the roadway that currently exceed 65 dBA CNEL. In addition, Year 2025 traffic volumes would not cause noise levels on the remaining segments to exceed 65 dBA CNEL. Impacts would be less than significant.

Buildout Year 2035

Buildout Year 2035 compares buildout traffic volumes with and without the implementation of the 2019 LRDP. This scenario assumes full buildout of the proposed project development and circulation network. Buildout Year 2035 traffic noise levels, with and without the 2019 LRDP, are provided in Table 3.11-15.

Table 3.11-15. Buildout Year 2035 Traffic Noise Levels

Roadway	Segment	Year 2035 (dBA CNEL)	Year 2035 + Project (dBA CNEL)	Increase in Noise Level	Significant Impact?
Hotel Circle South	I-8 Eastbound Ramps to Bachman Place	68	68	0	No
	East of Bachman Place	69	69	0	No
Bachman Place	Hotel Circle to North Access Driveway (future)	69	69	0	No
	North Access Driveway (future) to Arbor Drive	68	69	1	No
Washington Street	India Street to University Avenue	76	76	0	No
	University Avenue to First Avenue	70	70	0	No
	First Avenue to Fourth Avenue	70	70	0	No

Table 3.11-15. Buildout Year 2035 Traffic Noise Levels

Roadway	Segment	Year 2035 (dBA CNEL)	Year 2035 + Project (dBA CNEL)	Increase in Noise Level	Significant Impact?
	Fourth Avenue to Fifth Avenue	71	71	0	No
	Fifth Avenue to Sixth Avenue	72	72	0	No
	Sixth Avenue to Richmond Street	72	72	0	No
	Richmond Street to Normal Street	74	74	0	No
Front Street	Arbor Drive to Washington Street	62	63	1	No
First Avenue	Arbor Drive to Washington Street	62	63	1	No
	Washington Street to University Avenue	63	63	0	No
	University Avenue to Robinson Avenue	65	65	0	No
Fourth Avenue	Washington Street to Robinson Avenue	64	64	0	No
Fifth Avenue	Washington Street to Robinson Avenue	65	65	0	No

Source: Harris 2019.

Notes: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibel

Noise levels are calculated at 50 feet from roadway centerline. Noise levels are based upon traffic data provided by LLG (2019). Decibel levels are rounded to the nearest whole number.

As shown in Table 3.11-15, Hotel Circle South, Bachman Place, and Washington Street would exceed 65 dBA CNEL without project traffic. In Buildout Year 2035, project-related traffic would not result in an increase in noise levels of more than 1 dBA CNEL along any roadway that currently exceeds 65 dBA CNEL. Project-related traffic would result in an increase in noise level of 1 dBA CNEL along Front Street and First Avenue, but would not cause either roadway segment to exceed 65 dBA CNEL. Impacts would be less than significant.

Operational Noise Associated with Proposed Development

The 2019 LRDP includes a range of uses that have the potential to generate noise that may affect adjacent noise-sensitive receptors. These uses include HVAC equipment, truck deliveries, parking lots, CUP operations, residences, recreational amenities, emergency vehicles, and emergency generator testing.

Heating, Ventilation, and Air Conditioning Equipment

HVAC equipment would be required on new buildings across the Hillcrest Campus. Additionally, parking structures may require ventilation and exhaust equipment. The specifications of the HVAC systems that would be required for any individual building are unknown at this time. The anticipated range of newly operating HVAC equipment noise levels depends on a number of factors that include the size of the new or renovated structure, and its expected purpose or use. HVAC system requirements may vary even between buildings of the same size because buildings designed for health care (including those with patient beds) would likely require substantially greater air-conditioning and ventilation loads due to their 24-hour per day operation than ones intended for office use primarily during business hours. In addition, some buildings would contain mixed uses. However, typical commercial mechanical HVAC equipment located on the ground or on rooftops of new buildings would have the potential to generate noise levels which average 60 dBA at a distance of 100 feet, and may run continuously during the day and night (PDH Center 2012). Depending on where it is located, HVAC equipment could have the potential to generate noise that may exceed the exterior noise level threshold of 65 dBA CNEL at uses within 55 feet of the building requiring an HVAC system. Existing NSLU in the neighborhood surrounding the Hillcrest Campus would continue to be separated from the proposed new campus buildings by more than 55 feet by existing roadways. Buildings constructed under the 2019 LRDP would generally be separated from each other by more than 55 feet due to walkways, roadways, and open spaces, with the exception of the Outpatient Pavilion and Annex, the Hospital Annex and New Hospital. The existing Bannister Family House would be located more than 100 feet from the nearest proposed building, Residential Building 1. However, proposed uses would likely require HVAC systems that are larger than typical commercial operations. While HVAC systems currently operate on campus facilities, and future operation would be similar to existing conditions, individual systems would have the potential to exceed 65 dBA CNEL and 60 dBA L_{eq} thresholds. Shielding and building design would reduce indoor and exterior noise exposure to equipment operation, but the level of shielding required cannot be determined at this time due to lack of project design. Therefore, impacts related to building or parking structure HVAC systems would be potentially significant.

Truck Deliveries

Operation of the proposed medical, residential and retail uses would have the potential to generate noise from truck deliveries, such as engines idling and beeping from backing warning signals. Truck deliveries to the Hillcrest Campus would involve deliveries of medical supplies and retail products. The Replacement Hospital would include a loading dock for intermittent deliveries at the back (northern side) of the hospital. There are no existing or sensitive receptors proposed adjacent to the back of the Replacement Hospital. The Replacement Hospital itself would provide noise attenuation for surrounding buildings. Additionally, truck deliveries would be similar to existing conditions. State law currently prohibits heavy-duty diesel delivery trucks from idling

more than five minutes. Therefore, noise from idling would be limited to five minutes during truck deliveries. Given the intermittent and short duration of noise from truck deliveries in a given location, truck deliveries would not be a source of excessive ambient noise. Therefore, impacts related to truck deliveries and loading would be less than significant**.**

Parking Lots

Noise sources from parking lots include car alarms, door slams, radios, and tire squeals. These sources typically range from about 51 to 66 dBA at a distance of 10 feet (Gordon Bricken & Associates 2012), and are generally short-term and intermittent. Parking lots have the potential to generate noise levels that exceed 65 dBA depending on the location of the source; however, noise sources from a parking lot would be different from each other in kind, duration, and location, so that the overall effects would be separate and in most cases would not affect noise-sensitive receptors at the same time. Additionally, three of the four proposed parking areas would be located underground (parking under the Multi-Use Building, Mixed-Use Residential/Wellbeing Center, Residential Sites A and B, and the Canyon Parking Structure) and would not result in noise impacts to the surrounding area. Parking noise would be limited to the Main Parking Structure, located at the southeastern edge of the campus, approximately 150 feet from the nearest off-campus receptors, and approximately 50 feet from the nearest on-campus receptor. Therefore, noise generated from parking areas would be less than significant.

Central Utilities Plant

Noise levels at the La Jolla Campus CUP range from 64 to 71 dBA, measured approximately 20 to 50 feet from the plant. The CUP's chillers were not in operation at the time of measurement; however, cooling towers are typically the dominant noise producer (AECOM 2018). Three of the seven cooling were in operation; which is the same number of cooling towers (three) that are anticipated for the proposed Hillcrest Campus CUP. Additionally, equipment at the La Jolla CUP is older and noisier, while equipment at the Hillcrest Campus CUP is anticipated to use newer, quieter technology. As such, noise levels measured at the La Jolla Campus are considered representative for the purpose of screening potential impacts to NSLU resulting from operation of the proposed Hillcrest Campus CUP. The worst-case noise level was 71.1 dBA L_{eq}, measured approximately 25 feet from the La Jolla CUP, adjacent to the cooling towers at a location not fully shielded by the sound barrier. To establish a more conservative screening distance to account for equipment that was not operational, noise levels from the Hillcrest CUP are assumed to be twice as loud as the La Jolla CUP, or 74 dBA L_{eq} at 25 feet. Assuming this noise level would be constant for 24 hours, the CUP would have the potential to generate noise levels of approximately 81 dBA CNEL at 25 feet without a sound barrier, and exceed 65 dBA CNEL up to 160 feet from the plant. The CUP would be located approximately 230 feet from the nearest off-site receptor, and therefore, CUP noise levels would not be expected to exceed 65 dBA CNEL at the off-site receptors. Only one on-campus NSLU, the proposed Multi-Use Building, would be located within the 160-foot

screening distance of the CUP. The CUP would be located approximately 75 feet from the proposed Multi-Use Building, and would potentially exceed the allowable 65 dBA noise level at this building. Similar to the CUP on the La Jolla Campus, the proposed Hillcrest Campus CUP would include a sound barrier that would reduce noise exposure. Based on the measurements at the La Jolla CUP, a reduction of at least 7 dBA can be expected from barrier installation. However, because the design of the proposed CUP, including barrier location design, are unknown at this time, the proposed CUP is assumed to have the potential to exceed 65 dBA at the Multi-Use Building. An impact is also conservatively assumed at the closest off-site receptors east of the campus (approximately 230 feet away) that would not be shielded from the CUP by other campus development, even though these receptors are anticipated to be well outside of the potential impact area. A potentially significant impact would occur related to CUP operation.

Residential Development

New residential units would be developed on the Hillcrest Campus at the Mixed-Use Residential/Wellbeing Center (approximately 50 units) to the south of the campus and in western area of campus in Residential Buildings 1, 2, 3, and 4 totaling approximately 950 units. Noise generated from residential uses is generally described as nuisance noise. Nuisance noise is defined as intermittent or temporary neighborhood noise from sources such as amplified music or barking dogs. Nuisance noises would be different from each other in kind, duration, and location, so that the overall effects would be separate and in most cases would not affect the receptors at the same time. The Residential Buildings 1 through 4 would also be separated from surrounding uses by open space areas. Therefore, nuisance noise in residential areas would not result in a significant impact.

Recreational Amenities

Under the 2019 LRDP, the Hillcrest Campus would be redesigned to include publicly accessible and semi-public open space throughout campus, with a large Central Green. Noise associated with most uses provided in the open space areas, such as informal gathering spaces, walkways, fitness stations, and eating areas, would be limited to normal conversation that would be similar to existing Hillcrest Campus conditions and generally not be audible to surrounding receptors. However, the central open space area would accommodate an amphitheater or paved plaza area that may occasionally be used for larger gatherings or special events. Gatherings and special events would also typically consist of normal conversation, but may include use of amplified noise systems. Noise systems would be sized to be audible to event attendees and would be shielded from most off-campus receptors by proposed buildings. Off-site uses are also separated from the site by Arbor Drive or Bachman Place, which currently generate traffic noise of 61 dBA CNEL and 66 dBA CNEL, respectively, that would likely be above the levels generated by special events on campus. By comparison, normal conversation levels are typically estimated at 65 dBA at 3 feet, or 41 dBA at 50 feet. Additionally, Section 59.5.0502 of the City Noise Ordinance restricts the use of sound amplifying equipment between the hours of 10:00 p.m. and 8:00 a.m. to a noise level that is not

plainly audible at a distance of 50 feet from the area where it is located. Compliance with this ordinance would limit use of amplifying equipment to below a noise level that would disturb sleep and cause a significant nuisance resulting in a significant impact. However, UC San Diego has not adopted a similar policy to regulate special event noise, and without such a policy, it is possible for special events to result in significant nighttime noise impacts. Therefore, this impact would be potentially significant.

Emergency Vehicles

The Hillcrest Campus would continue to be subject to noise from emergency vehicles (ambulances) under the 2019 LRDP. Use of sirens would occur when an emergency requires ambulance service and is not under the control of the campus. Sirens are typically only used when required, such as during high traffic times. Similar to existing conditions, exposure to siren noise would be more likely to occur during daytime hours when traffic volumes are higher and siren noise is less disturbing. The Replacement Hospital would have fewer beds and provide similar emergency services as the existing hospital; thus, the emergency services provided on the Hillcrest Campus following implementation of the 2019 LRDP would be similar to existing conditions. Therefore, ambulance service to the campus under the 2019 LRDP would be similar to existing conditions. This impact would be less than significant.

Emergency Generator Testing

Emergency generator testing, particularly at the Replacement Hospital, would typically need to occur once per month to ensure the equipment is working properly and can be relied upon to operate during actual emergency situations. Consistent with existing generator maintenance on campus, these generator tests would be performed during daytime hours and last for up to 0.5 hour. Due to the short duration of the tests, the expected daytime occurrence, and the once-per-month frequency of the required testing, the operating generator noise would be temporarily audible to nearby listeners but would not be considered a durable adverse noise effect. Additionally, generator testing noise would not be significantly different from generator testing noise for the existing campus facilities. This impact would be less than significant.

New On-Site Noise Sensitive Land Uses

A potential noise-related land use impact could occur as a result of siting new sensitive noise receptors on the Hillcrest Campus. A potential impact would occur if on-site receptors would be exposed to permanent noise levels in excess of the noise compatibility standards identified in Table 3.11-7.

Under the 2019 LRDP, new NSLU would be developed on the Hillcrest Campus, including residences, hospital beds, and classrooms. As shown in Table 3.11-2, existing daytime noise levels range between 50 dBA and 59 dBA L_{eq}, which are normally acceptable for the proposed uses. As shown in Table 3.11-3, existing noise levels at 50 feet from the centerline of the roadways in the

immediate vicinity of the Hillcrest Campus are below 65 dBA CNEL on Front Street and First Avenue, and as shown in Table 3.11-15, are not projected to exceed 65 dBA CNEL at project Buildout Year 2035. In addition, noise levels on Bachman Place are currently 66 dBA CNEL, and are projected to be 69 dBA CNEL at 50 feet from the roadway centerline at project Buildout Year 2035. Noise levels up to 65 dBA CNEL are considered compatible with the proposed uses. The Multi-Use Building would be located approximately 190 feet from the centerline of Bachman Place. Roadway noise levels would attenuate to approximately 63 dBA CNEL at this distance. Noise levels would generally be considered acceptable for proposed 2019 LRDP development. This impact would be less than significant.

In addition, proposed NSLU would potentially be exposed to new on-campus noise sources, including HVAC systems, the CUP, and special events in the central open space area. Similar to impacts to off-campus uses, because the design of HVAC systems in not currently known, and systems have the potential to violate noise compatibility standards, this impact is considered potentially significant. Exterior or interior noise impacts would potentially occur unless new NSLU are designed to adequately reduce exterior-to-interior noise intrusion levels from stationary sources, including HVAC systems and the CUP. Therefore, noise impacts related to the development of new NSLU would be potentially significant.

Mitigation Measures

The 2019 LRDP would result in potentially significant impacts from construction and operation. Mitigation measures to reduce impacts are described below, however, impacts would not be reduced to a less than significant level.

Construction Impacts

Construction Roadway Noise

Implementation of the 2019 LRDP would result in a significant temporary impact from traffic noise levels along the following roadway segments in the near-term condition during construction:

- Front Street from Arbor Drive to Washington Street
- First Avenue from Arbor Drive to Washington Street

These significant increases in roadway noise level would occur when new 2019 LRDP buildings are operating simultaneously with existing Hillcrest Campus buildings and structures, with the addition of project-related construction traffic. In the short-term, typical sound mitigation for roadway noise level impacts would consist of walls or other barriers that would attenuate noise to the sensitive receptors behind the barrier. Installation of a noise wall to mitigate short-term impacts would be required within private property or a designated right-of-way, which may not be allowed by a property owner or the City. The feasibility of noise walls is restricted by access requirements for driveways, presence of local cross streets, underground utilities, and safety considerations (Caltrans

2013a). For example, a noise wall would be ineffective on the impacted segments of Front Street and First Avenue because of existing driveways and cross streets that would cause gaps in the noise wall and render it ineffective. Construction of a continuous noise barrier would physically separate business and residences from the surrounding community and roadway frontage which would result in adverse impacts to aesthetics and potentially public safety. As such, a wall would not be a feasible mitigation option for these receptors.

Other options to reduce construction traffic noise could include incorporating additional haul routes that distribute traffic over more streets or limiting haul trips per day. However, these options would likely result in increased air quality and GHG impacts by requiring trucks to take longer trips to dispose of material. Additionally, alternative haul routes would require the use of additional residential streets, which would increase noise exposure to additional sensitive receptors. Limiting haul trips would have the potential to extend the construction periods for grading and demolition activities, which would potentially increase air quality and GHG emissions impacts, including the length of exposure of sensitive receptors to health risks from diesel particulate matter. Additionally, as previously described, the construction traffic noise analysis is intended to represent the worst-case scenario for haul trips. It is likely that truck traffic would be less than what this analysis assumes on most construction days, particularly when grading and demolition are not occurring, and noise levels on those days would be reduced accordingly. Table 3.11-16 provides the noise levels on the impacted roadway on days when no haul trips would be required. As shown in Table 3.11-16, no significant impact would occur on these days. However, temporary roadway noise level impacts from project construction would be intermittently significant and unavoidable until operation of all existing facilities has ceased and construction is complete.

Table 3.11-16. Construction Traffic Noise Levels – No Haul Trips

Roadway Segment	Scenario	Without Construction (dBA CNEL)	With Project Construction (dBA CNEL)	Increase in Noise Level	Significant Impact?
Front Street – Arbor Drive to Washington Street	Existing + Phase 1A/1B Construction	61	62	1	No
	Opening day + Phase 2A/2B Construction	63	64	1	No
	Year 2025 + Phase 3 or 4 Construction	64	65	1	No
	Year 2030 + Phase 5 Construction	62	63	1	No

Table 3.11-16. Construction Traffic Noise Levels – No Haul Trips

Roadway Segment	Scenario	Without Construction (dBA CNEL)	With Project Construction (dBA CNEL)	Increase in Noise Level	Significant Impact?
First Avenue – Arbor Drive to Washington Street	Existing + Phase 1A/1B Construction	60	61	1	No
	Opening day + Phase 2A/2B Construction	63	63	0	No
	Year 2025 + Phase 3 or 4 Construction	64	64	0	No
	Year 2030 + Phase 5 Construction	62	63	1	No

Source: Harris 2019.

Note: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibel

Noise levels are calculated at 50 feet from roadway centerline. Decibel levels are rounded to the nearest whole number.

Construction Equipment Noise

Implementation of the 2019 LRDP would have the potential to result in a significant temporary impact from construction equipment noise during all phases of project construction. Mitigation Measure NOI-1A as follows would reduce the temporary significant impact from construction equipment noise during the day and nighttime hours:

> **NOI-1A: Construction Noise.** For all construction activities, the construction contractor shall implement the following measures during construction:
>
> 1. The construction contractor shall work with proper administrative controls on equipment in order to not exceed a 12-hour average sound level of 75 dBA L_{eq} at any NSLU between 7:00 a.m. and 7:00 p.m. Monday through Saturday.
> 2. The construction contractor shall provide written notification to the noise-sensitive uses within 210 feet of normal construction activities and 500 feet of pile driving at least 3 weeks prior to the start of construction activities, informing them of the estimated start date and duration of construction activities.
> 3. Construction activities that could generate high noise levels, such as pile driving, shall be scheduled during times that would have the least impact on sensitive receptor locations. This could include restricting the noisiest construction activities in the areas of potential impact to hours when staff and students would most likely be taking lunch and medical procedures and operation of equipment would be least likely to be scheduled or required. Days of activity shall be adjusted to avoid holidays or scheduled exam days.
> 4. Stationary construction noise sources, such as temporary generators, shall be located as far from nearby noise-sensitive receptors as possible.
> 5. Trucks shall be prohibited from idling along streets serving the construction site where noise-sensitive receptors are located.

6. Outfit construction equipment with properly maintained, manufacturer-approved or recommended sound abatement means on air intakes, combustion exhausts, heat dissipation vents, and the interior surfaces of engine hoods and power train enclosures.
7. Position (to the extent practical) construction laydown and vehicle staging areas as far from noise-sensitive land uses as feasible.
8. If the hourly average noise level is anticipated to exceed 75 dBA for a particular activity, limit simultaneous operation of construction equipment or limit construction time within another hour to reduce the 12-hour average noise level.
9. If feasible and determined to be an effective option, install temporary noise barriers around the perimeter of the construction area to minimize construction noise.

Due to uncertainties related to future construction activities, such as actual required construction fleet and duration of construction in any location or when and where nighttime construction would be required, it cannot be demonstrated that future construction activities would be reduced to noise levels that do not exceed 75 dBA CNEL at on- or off-campus NSLU during normal daytime construction, or cause a significant disturbance to NSLU in the event of necessary nighttime construction. Additionally, the existing and proposed hospitals and on- and/or off-site residences would be multiple stories in height. New residential buildings may be up to 165 feet in the Residential District. The existing hospital is approximately 200 feet tall, and the Replacement Hospital would be no taller than the existing hospital. Therefore, temporary barriers that would reduce ground-level impacts to less than 75 dBA L_{eq} would not feasibly reduce noise levels at higher levels. Therefore, this impact would remain significant and unavoidable.

Operation

Implementation of the 2019 LRDP would have the potential to result in excessive noise levels from operation of the CUP and HVAC equipment, special events at the proposed open space area, and exposure of sensitive interior uses to stationary noise sources, which would result in a significant impact. Mitigation Measures NOI-1B through NOI-1D as follows would reduce these impacts:

> **NOI-1B: Mechanical Equipment Shielding.** Concurrent with design development and prior to construction of the CUP and any new building requiring HVAC equipment, a report prepared by a qualified acoustical specialist shall demonstrate that equipment is designed to ensure that noise levels from the equipment shall not exceed an exterior noise level of 65 dBA CNEL at the nearest on- and off-site NSLU. Noise from the CUP or HVAC equipment may be reduced through implementation of any individual measure or a combination of the following measures:
>
> - Locate noisiest equipment, such as cooling towers, as far from sensitive receptors as possible.
> - Utilize elevation and/or placement of equipment within the CUP strategically to attenuate noise from larger and noise producing equipment.

- Install a permanent noise barrier or shielding surrounding all equipment, or apply acoustical treatment to building surfaces.
- Install a permanent noise enclosure that completely encompasses equipment when access doors are shut. Install sound attenuation louvers and silencers on exhaust stacks where necessary, or make use of natural ventilation.
- Install noise enclosures, barriers, or acoustical treatment surrounding individual pieces of equipment or exhaust.
- Place equipment below grade in basement space.
- Use technologies to reduce noise, such as Whisper Quiet technology, when equipment is available. Other technology may include low-speed fans, baffles, or mufflers.
- Apply acoustical treatment to cooling tower intake and discharge.

NOI-1C: Special Event Noise. Use of sound amplifying equipment at events at Hillcrest Campus outdoor areas between the hours of 10:00 p.m. and 8:00 a.m. shall be limited to a noise level that is not plainly audible at a distance of 50 feet from the area where it is located. Options for limiting noise include but are not limited to committing to not use amplified noise or, when amplified noise is required, using directional speakers or limiting low-frequency bass music noise levels. Prior to hosting an event, event organizers shall be required to fill out an event application that includes this condition as an event requirement. Campus security shall have the authority to shut down events that do not comply with this requirement.

NOI-1D: Interior Noise Levels. Prior to issuance of a certificate of occupancy for any new campus noise-sensitive land uses (residences, inpatient facilities, or classrooms and related learning spaces), a site-specific acoustical analysis shall be prepared by a qualified acoustical specialist to demonstrate that the sound level in all habitable rooms would be 45 dBA CNEL or less or 50 dBA or less for learning spaces/classrooms. The analysis shall specifically take into consideration stationary noise sources, such as building HVAC systems. Noise reduction measures for structures may include insulation between rooms or floors, or specific window treatments, such as multiple-pane and/or laminated glazing, which shall be integrated into the project design.

Impacts related to stationary noise sources, special event noise, and interior noise exposure would be reduced to a less than significant level with the implementation of Mitigation Measures NOI-1B, NOI-1C, and NOI-1D.

3.11.3.2 Issue 2: Excessive Groundborne Vibration or Noise

Noise Issue 2 Summary

Would implementation of the 2019 LRDP result in the generation of excessive groundborne vibration or groundborne noise levels?

Impact: Construction of the 2019 LRDP may require heavy equipment or pile driving activities that, if occurring close to sensitive structures or facilities, housing, vibration-sensitive instruments and/or activities, may cause damage, disruption, or interruption.

Mitigation: Construction Noise (NOI-1A); Construction Notification (NOI-2A); Vibration Best Management Practices (NOI-2B)

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Temporary significant and unavoidable impact during construction

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it generates groundborne vibration in excess of Caltrans or FTA criteria as shown in Table 3.11-4. The Caltrans Transportation and Construction Vibration Guidance Manual (Caltrans 2013b) provides guidance for the analysis of vibratory impacts generated by transportation and construction projects by providing thresholds for structural damage risk, provided in Table 3.11-17. Table 3.11-18 presents similar guidance from the FTA, which offers vibration criteria comparable to that of Caltrans for continuous or steady sources of vibration, but suggests a more stringent threshold for historic buildings. Table 3.11-19 provides the vibration thresholds for high-sensitivity land uses, including operating rooms and buildings containing vibration-sensitive laboratory equipment and processes. Table 3.11-20 provides the vibration thresholds for different land uses and the calculated distance between the source and receptor where impacts would potentially occur, referred to as the screening distance.

Table 3.11-17. Caltrans Guidance on Maximum Vibration Levels for Construction Equipment

Structure Type	Potential Damage Thresholds (PPV in/s)	
	Transient[1] Sources	Continuous/Frequent[2] Intermittent Sources
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial and commercial buildings	2.0	0.5

Source: Caltrans 2013b.

Notes: in/s = inches per second; PPV = peak particle velocity

[1] Transient sources generate a single vibratory event, such as blasting.

[2] Continuous/frequent sources include pile driving equipment and other construction activities generating multiple vibration-intensive events across a given period.

Table 3.11-18. Federal Transit Administration Construction Vibration Criteria

Building Category	Thresholds	
	PPV (in/s)	Approximate VdB
I. Reinforced concrete, steel or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: FTA 2018.

Notes: in/s = inches per second; PPV = peak particle velocity; VdB = vibration decibels

Table 3.11-19. Vibration Impact Significance Criteria with Respect to Vibration-Sensitive Activities

Space Usage of Vibration Criterion (VC)	Maximum Level (VdB)	Description of Use or Receptor
Computer equipment	78	Adequate for computer equipment and low- power optical microscopes (up to 20X).
Operating rooms	72	Suitable for medium-power optical microscopes (100X) and similar equipment.
VC-A	66	Adequate for medium- to high-power optical microscopes (400X), microbalances, optical balances, and similar specialized equipment.
VC-B	60	Adequate for high-power optical microscopes (1000X), inspection and lithography equipment to 3 micron line widths.
VC-C	54	Appropriate for most lithography and inspection equipment to 1 micron detail size.
VC-D	48	Suitable in most instances for the most demanding equipment, including electron microscopes operating to the limits of their capability.
VC-E	42	The most demanding criterion for extremely vibration-sensitive equipment.

Source: FTA 2018.

Notes: VC = vibration criterion; VdB = vibration decibels

Table 3.11-20. Vibration Impact Screening Distances

Type of Receptor	Type of Impact	Threshold (VdB)	Screening Distance – Normal Construction (feet)	Screening Distance – Pile Driving (feet)
Older Residential Buildings	Structural Damage	102	N/A	30
Land Use Category 2 – Residences, or other land use where people normally sleep	Human annoyance	80	75	160
Land Use Category 3 – Institutional or daytime use	Human annoyance	83	60	125
VC-A type vibration-sensitive equipment	Interference with use	66	210	450

Source: Harris 2019.
Note: VdB = vibration decibels

Impact Analysis

Construction Impacts

Construction activities, would have the potential to generate levels of groundborne vibration that could adversely affect nearby sensitive land uses, buildings that are structurally sensitive to groundborne vibration, and facilities where equipment and/or activities may be sensitive to vibratory influences. Typical vibration levels for construction equipment required for the 2019 LRDP are provided in Table 3.11-21. The applicable thresholds and screening distances used in this analysis are provided in Table 3.11-20.

Table 3.11-21. Vibration Source Levels for Construction Equipment

Equipment	Approx. VdB at 25 feet	Approx. VdB at 30 feet[1]	Approx. VdB at 60 feet[1]	Approx. VdB at 75 feet[1]	Approx. VdB at 125 feet[1]	Approx. VdB at 160 feet[1]	Approx. VdB at 210 feet[1]	Approx. VdB at 450 feet[1]
Pile Driver	104	102	93	90	83	80	76	66
Large Bulldozer	87	85	76	73	66	63	59	49
Caisson drilling	87	85	76	73	66	63	59	49
Loaded Trucks	86	84	75	72	65	62	58	48
Jackhammer	79	77	68	65	58	55	51	41
Small Bulldozer	58	56	47	44	37	34	30	20
Vibratory Roller	94	92	83	80	73	70	66	56

Source: FTA 2018.

Notes: VdB = vibration decibels

[1] Based on the formula VdB = VdB(25 feet) – 30log(d/25) provided by the FTA (2018).

As shown in Table 3.11-20, groundborne vibration can be categorized into three categories, structural damage, human annoyance, and interference with use.

Structural Damage

The potential the 2019 LRDP during construction activities to result in structural damage is evaluated based on Caltrans and FTA guidance. As shown in Table 3.11-18, the applicable threshold for the buildings in the neighborhood that surrounds the Hillcrest Campus is 0.5 PPV, which is equivalent to approximately 102 VdB. According to Caltrans criteria, 102 VdB is also the appropriate threshold for historical resources. The nearest off-site historical resource is the Hillcrest Receiving Home School Building, which is located approximately 450 feet east of the Hillcrest Campus and well outside of the potential impact area identified in Table 3.11-21. As discussed in Section 3.4, Cultural and Tribal Cultural Resources, one residence at 101 Dickinson Street was constructed in 1920 and may be more sensitive to vibration that other surrounding development. However, this residence is proposed for demolition in Phase 1. Therefore, structural damage is not a concern. As shown in Table 3.11-21, construction equipment required for the 2019 LRDP would not exceed 102 VdB, with the exception of pile driving. At 25 and 30 feet, pile driving would result in vibration levels that meet or are in excess of 102 Vdb. The construction area for some roadway improvements would be within 30 feet of off-site structures; however, pile driving would not be required for these improvements. As such, construction under the 2019 LRDP would not result in vibration levels that would have the potential for structural damage.

Human Annoyance

Groundborne vibration impact criteria for human annoyance are specified for three land use categories. Land Use Category 1 is for buildings where vibration would interfere with interior operations. Land Use Category 2 is for residences and buildings where people normally sleep and Land Use Category 3 is for institutional land uses with primarily daytime uses. Land Use Category 2 can be applied to on-campus residences, inpatient medical care facilities and off-site residences. Land Use Category 3 can be applied to classrooms, libraries (and related learning spaces), and child development centers. Construction vibration is subject to the infrequent event criterion because operation of vibration-generating equipment is anticipated to be intermittent throughout the day in the vicinity of an individual receptor. As shown in Table 3.11-20, the threshold for Land Use Category 2 is 80 VdB and 83 VdB for Land Use Category 3.

As shown in Table 3.11-21, certain construction equipment associated with the 2019 LRDP would exceed 80 VdB up to 75 feet from the construction area, or 83 VdB up to 60 feet from the construction area. The use of a pile driver would have the potential to exceed 80 VdB up to 160 feet from the construction area, and 83 VdB up to 125 feet from the construction area.

The potential for each phase of construction to result in human annoyance is addressed below.

Phase 1A

No existing on-campus residences or inpatient facilities would be located within 75 feet of Phase 1A construction, and no institutional uses would be located within 60 feet of construction activities. The existing Inpatient Tower and the Clinical Teaching Facility would be located within 160 feet and 125 feet, respectively, from construction activities and would not be exposed to construction vibration from normal construction activities. Use of a pile driver, if required, could result in a potential impact to either existing building. The existing residences on Dickinson Street and First Street would be demolished in the first year of construction and would therefore not be exposed to any construction vibration. In addition, off-site residences to the south of the Hillcrest Campus are located within 75 feet of construction. Additional residences are located within 160 feet of the construction area. Therefore, a significant impact would occur to off-campus receptors from normal construction and on- and off-campus receptors during pile driving activities.

Phase 1B

The existing Inpatient Tower is located more than 75 feet from, but within 160 feet of, the construction area of Phase 1B and would potentially be exposed to construction pile driving vibration, if required. Off-campus residences to the south of the Hillcrest Campus are located within 60 feet of construction, and additional residences to the southwest, south, southeast, and east are within 160 feet of the Phase 1B construction area and would be exposed to normal construction and pile driving vibration, if required. Therefore, a significant impact would occur to

off-campus receptors during normal construction, and to on- and off-campus receptors during pile driving activities, if required.

Phase 2A/2B

The existing Bannister Family House is located within 60 feet of the construction area of Phase 2A would be exposed to normal construction vibration activities. The existing Inpatient Tower is within 125 feet of the Phase 2A construction area and would also be exposed to normal construction vibration activities. However, the use of the pile driver would only occur in the area of the existing Bachman Parking Structure, which is located more than 125 feet away. Existing residences are located immediately surrounding the proposed Mixed-Use Residential/Wellbeing Center to be constructed on Arbor Drive during Phase 2A. Construction of the north access driveway in the northern area of the Hillcrest Campus would be within 160 feet of existing hotels on Hotel Circle South; however, the use of a pile driver is not anticipated for the north access driveway construction. Off-site residences are located within 160 feet west of the Bachman Parking Structure demolition area and would be exposed to construction pile driving vibrations. Therefore, a significant impact would occur to on- and off-campus sensitive receptors during normal construction, and to off-campus receptors during pile driving activities.

Phase 3

The existing Inpatient Tower would be located adjacent to the construction area of Phase 3 and would be impacted by normal construction and pile driving activities. The new Residential Buildings 1 and 2 would also be located within 160 feet of construction and would be exposed to potential pile driving construction vibration at the Replacement Hospital site. Due to its location in the northcentral area of campus, no off-campus residences would be located within 160 feet of Phase 3 construction activities. Therefore, a significant impact would occur to on-campus receptors during normal construction and pile driving activities.

Phase 4

The use of a pile driver would not occur during Phase 4. No existing buildings where people normally sleep or institutional facilities would be located within 75 feet of Phase 4 demolition activities. In addition, no off-campus residences are located within 75 feet of the Phase 4 construction area. Therefore, a significant impact would not occur during Phase 4.

Phase 5

The use of a pile driver would not occur during Phase 5. The new hospital, Residential Buildings 1 and 2, and the Mixed-Use Residential/Wellbeing Center would be adjacent to proposed circulation improvements and may be with 75 feet of construction. Residential Building 2 would also be within the potential impact area of construction of Residential Building 3. Therefore, the new hospital, Residential Buildings 1 and 2 would be exposed to normal construction vibration

activities. However, no off-campus residences are located within 75 feet for the Phase 4 construction area. A significant impact would occur to on-campus receptors during normal construction activities.

Interference with Use

Table 3.11-14 shows the typically acceptable vibration levels for vibration-sensitive equipment. Existing and future operation of the Hillcrest Campus would include operating rooms and use of equipment such as microscopes for medical, classroom, and research purposes. It is assumed that vibration-sensitive equipment on campus generally has a vibration criterion of type VC-A. As shown in Table 3.11-19, a maximum vibration level of 66 VdB is considered acceptable for VC-A type equipment. In addition, a screening level of 66 VdB is also conservatively assumed for operating room equipment for this analysis. As shown in Table 3.11-20, the distance from source to vibration-sensitive equipment within which impacts are calculated to occur is 210 feet for normal construction activities and 450 feet for pile driving activities.

Potential impacts are described by phase below.

Phase 1A

The existing hospital, South Wing, Medical Offices South, Medical Offices North, Bachman Building, Theodore Gildred Facility, and Clinical Teaching Facility are located within 210 feet of the construction area of Phase 1A and would potentially be impacted by normal construction and pile driving activities. The West Wing and Magnetic Resonance Institute and research buildings would be located within 450 feet. The off-site uses within 450 feet of the construction area are existing residences and commercial uses that would not be considered vibration sensitive. A significant impact would occur to on-campus receptors during normal construction and pile driving activities.

Phase 1B

The existing Clinical Teaching Facility, South Wing, and Theodore Gildred Facility would be located more than 210 feet, but within 450 feet, of the construction area of Phase 1B. Therefore, these buildings could be exposed to significant vibration during pile driving, if required. The existing hospital and new Outpatient Pavilion, Medical Offices North, and Medical Offices South would be located within 210 feet of the construction area of Phase 1B and, therefore, would potentially be exposed to normal construction and pile driving activities. The off-site uses within 450 feet of the construction area are existing residences and commercial uses that would not be considered vibration sensitive. A significant impact would occur to on-campus receptors during normal construction and pile driving activities.

Phase 2A/2B

The existing hospital, Medical Office South, and South Wing, and the new Outpatient Pavilion would be located within 210 feet of the construction area of Phase 2A/2B and would be exposed

to normal construction and pile driving vibrations. Medical Offices North would be located within 450 feet and would be exposed to pile driving vibrations. The Theodore Gildred Facility would be within 210 feet of the construction area of Phase 2A and would be exposed to normal constructions vibrations. Additionally, the Clinical Teaching Facility would be within 450 feet of the construction area of Phase 2A and would be exposed to pile driving vibrations. These buildings would be subsequently demolished in Phase 2B. The off-site uses within 450 feet of the construction area are existing residences and commercial uses that would not be considered vibration sensitive. A significant impact would occur to on-campus receptors during normal construction and pile driving activities during the construction of Phase 2A.

Phase 3

The existing Inpatient Tower would be located adjacent to the construction area of Phase 3 and would be impacted by normal and pile driving construction activities. The new Outpatient Pavilion and Multi-Use Building would be located within 210 feet of the construction area and would be exposed to normal construction vibrations. Additionally, the existing Medical Offices South would be located within 450 feet and would be exposed to normal construction and pile driving vibrations. The off-site uses within 450 feet of the construction area are existing residences and commercial uses that would not be considered vibration sensitive. A significant impact would occur to on-campus receptors during normal construction and pile driving activities.

Phase 4

The use of a pile driver would not be required during Phase 4 of construction. The existing Medical Offices South and new Outpatient Pavilion would be located within 210 feet of Phase 4 demolition activities and would be exposed to normal construction vibrations. No off-site vibration-sensitive uses are located within 210 feet of the Phase 4 construction area. A significant impact would occur to vibration-sensitive on-campus receptors within the 210-foot screening distance for vibration-sensitive equipment during normal construction activities.

Phase 5

The use of a pile driver would not occur during Phase 5 of construction. The new hospital would be located adjacent to construction of the Hospital Annex in this phase. Additionally, the existing Medical Offices South and new Outpatient Pavilion would be located within 210 feet of Phase 5 construction. The new hospital and existing Medical Offices South and the new Outpatient Pavilion would be exposed to normal construction vibrations. No off-site vibration-sensitive uses are located within 210 feet of the Phase 5 construction area. A significant impact would occur to on-campus receptors during normal construction activities.

Operational Impacts

Similar to existing conditions, following construction, the uses proposed under the 2019 LRDP would not generate groundborne vibration. Vibration levels from vehicular traffic would not be expected to generate substantial levels of vibration or groundborne noise. Operating vehicles have inflated tires and vibration-dampening suspension systems to help minimize roadway roughness and engine operation vibration transmission to the roadway surface. Stationary noise sources, typified by HVAC and other electromechanical systems, would also not be expected to generate substantial levels of vibration or groundborne noise. Use of amplified music at special events may result in some minor vibration noticeable to event guests. However, because event size would be limited by space, speakers would typically be lifted off the ground, and an event agreement would be required to limit amplified noise, minimal groundborne vibration would be anticipated to be generated from the special event area. In addition, vibration-sensitive instruments and operations, such as those required for medical procedures and research on campus, could be disrupted at much lower levels than would typically affect other uses, and building would be designed to protect operation of these uses. Therefore, operational impacts associated with the 2019 LRPD would not result in the generation of excessive groundborne vibration or groundborne noise levels, and impacts would be less than significant.

Mitigation Measures

Implementation of the 2019 LRDP would result temporary groundborne vibration impacts from construction activities to both on-campus and off-campus receptors. Implementation of Mitigation Measures NOI-2A and NOI-2B, coupled with Mitigation Measure NOI-1A, would minimize impacts by allowing uses that would be potentially affected by vibration the time to anticipate and prepare for impacts:

> **NOI-2A: Construction Notification.** The construction contractor shall provide written notification to the vibration-sensitive uses within the following screening distances at least three weeks prior to the start of construction activities informing them of the estimated start date and duration of daytime vibration-generating construction activities:
>
> - Existing or new residences within 75 feet of normal construction or 160 feet of pile driving
> - Institutional buildings with primarily daytime uses that do not require vibration-sensitive equipment within 60 feet of normal construction or 125 feet of pile driving
> - Uses requiring vibration-sensitive equipment, such as the hospital, within 210 feet of normal construction or 450 feet of pile driving
>
> This notification shall include information warning about the potential for impacts related to vibration-sensitive equipment. UC San Diego shall provide a phone number for the affected businesses and residents to call if they have vibration-sensitive equipment on

their sites. Notification requirements shall also apply to any new businesses within 450 feet of the Hillcrest Campus potentially containing vibration-sensitive uses for which licenses are issued prior to completion of construction.

NOI-2B:Vibration Best Management Practices. Prior to the commencement of construction projects that would involve heavy earth-moving equipment within the following applicable screening distances, UC San Diego shall retain a qualified acoustician to prepare a construction vibration mitigation program to be implemented by the construction contractor(s):

- Existing or new residences within 75 feet of normal construction or 160 feet of pile driving.
- Institutional buildings with primarily daytime uses that do not require vibration-sensitive equipment within 60 feet of normal construction or 125 feet of pile driving.
- Structures potentially requiring vibration-sensitive equipment within 210 feet of normal construction or 450 feet of pile driving. If, during the notification process outlined in Mitigation Measure NOI-2A, existing receptors are identified that involve activities that are vibration-sensitive at a level more stringent than VC-A (as defined by the Federal Transit Administration as medium- to high-power optical microscopes (400X), microbalances, optical balances, and similar specialized equipment), vibration shall be estimated at this structure, regardless of distance, and this measure shall apply if a potential impact is identified.
- The construction vibration mitigation program shall identify and require measures to reduce vibration, such as maintaining equipment and operating equipment as far from sensitive receptors as possible, resulting from construction activities to the maximum extent practicable, as well as detail construction activity notification and monitoring processes that include, but are not limited to, vibration monitoring.
- Vibration monitoring shall be performed during construction to establish the level of vibration produced by high impact activities. Baseline vibration levels at specified locations shall be established prior to the construction activity. Monitoring shall be conducted when any construction activity would occur within the above-described screening distances. Monitoring shall be conducted using portable vibration-monitoring instrumentation that provides a calibrated record of local ground movement/accelerations. If construction vibration exceeds the appropriate threshold, work should be stopped and resumed when all feasible alternative work methods and equipment intended to reduce vibration levels have be implemented.

Implementation of Mitigation Measures NOI-1A, NOI-2A, and NOI-2B would reduce groundborne vibration impacts. However, similar to construction noise, due to uncertainties related

to future construction activities related to the 2019 LRDP, it cannot be demonstrated that future ground construction activities would be reduced to vibration levels would that do not exceed the applicable thresholds at on- or off-campus receptors. Additionally, feasible alternative construction methods may not be available to reduce vibration levels to below the applicable threshold, particularly for vibration-sensitive equipment in buildings adjacent to construction zones. Vibration impacts would be temporary and would cease following construction. However, this temporary impact would be significant and unavoidable.

3.11.3.3 Issue 3: Aircraft Noise

Noise Issue 3 Summary

Would implementation of the 2019 LRDP expose people residing or working in the project area to excessive noise levels?

Impact: The SDIA would not generate excessive noise levels at the Hillcrest Campus. In addition, implementation of the 2019 LRDP would not increase the exposure to helicopter noise because similar emergency services would be provided on-campus.

Mitigation: No measures are required.

Significance Before Mitigation: Less than significant

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP would have a significant impact if it would expose people residing or working in the project area to excessive noise within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public use airport or private airstrip. The potential for the 2019 LRDP to expose sensitive receptors to excessive noise levels from SDIA was assessed by reviewing the airport's land use compatibility planning documents (San Diego County Regional Airport Authority 2014). Evaluation of impacts from operation of the existing and proposed helipad is based on data provided by the medical helicopter service providers for use of the Hillcrest Campus helipad in 2017.

Impact Analysis

The 2019 LRDP site is located approximately 1.3 miles to the northeast of SDIA. The Hillcrest Campus is located within the SDIA Airport Influence Area and overflight area, but is not located within the 60 dBA CNEL noise contour (San Diego County Regional Airport Authority 2014). Therefore, the SDIA does not generate excessive noise levels at the Hillcrest Campus. Impacts would be less than significant.

The 2019 LRDP would relocate the existing helipad from the Medical Offices North building, which would be demolished, to the top of the Replacement Hospital building. As previously described, there were 531 helicopter landings at the existing helipad in 2017. Landings occurred in every month, on every day of the week, and both day and night and no pattern emerged to predict when future landings would be more or less likely to occur. The existing helipad is located at the intersection of West Arbor Drive and Front Street, across Front Street from existing residences. Residences throughout the surrounding area are subject to helicopter overflights. Relocating the helipad to the middle of campus, and several stories higher, would increase the distance from the helipad to the nearest sensitive receptor and may improve helicopter noise exposure for existing off-site residences because the helicopters may be at a higher altitude during residential flyovers. New noise-sensitive residences, educational facilities, and a hospital bed tower would be constructed on campus, but would be similar to existing uses. Individual helicopter landings and takeoffs would continue to be a short-term, intermittent nuisance. However, implementation of the 2019 LRDP would not be expected to increase exposure to helicopter noise because similar emergency services would be provided at the hospital, although the total number of inpatient beds would decrease. The new helipad would be designed to accommodate similarly sized helicopters to those accommodated by the existing helipad. The type of helicopter utilizing the helipad is determined by the emergency services provider and outside of the control of UC San Diego. Frequency of helicopter landings would continue to be determined by occurrence of emergencies and pursuant to the FAA and Caltrans required approvals. This impact would be less than significant.

The Scripps Mercy Hospital, located approximately 0.25 mile southeast of the Hillcrest Campus, also includes a helicopter landing facility. Similar to the Hillcrest Campus, helicopter landings at the Scripps Mercy Hospital helipad occur when emergency service is required and cannot be predicted. Exposure of on-campus sensitive receptors to noise from the Scripps Mercy Hospital helipad would be similar to existing conditions. This impact would be less than significant.

Mitigation Measures

Impacts related to aircraft noise would be less than significant; therefore, no mitigation measures are required.

3.11.4 Cumulative Impacts and Mitigation

Noise Cumulative Issue Summary

Would implementation of the 2019 LRDP have a cumulatively considerable contribution to a cumulative noise impact considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Issue 1: Exceed noise standards	Potentially Significant	Not cumulatively considerable
Issue 2: Excessive groundborne vibration or noise	Potentially Significant	Not cumulatively considerable
Issue 3: Aircraft noise	Less than Significant	Not cumulatively considerable

This section describes the potential cumulative noise, vibration, and aircraft impacts resulting from implementation of the 2019 LRDP in conjunction with past, present, and reasonably foreseeable future projects as provided in Table 3-1. The geographic context for the analysis of cumulative noise impacts varies based on the type of noise impact being analyzed.

3.11.4.1 Cumulative Issue 1: Exceed Noise Standards Construction Impacts

Construction noise impacts are localized in nature because they are limited to the construction site where construction equipment is operating. A cumulative impact would only occur if construction of multiple cumulative projects would occur simultaneously. Due to the length of the 2019 LRDP construction period, it is likely that construction would occur simultaneously with other cumulative projects listed in Table 3-1. For example, the mixed-use building at 875 Hotel Circle South and library at 215 West Washington Street are currently under construction. The residential building proposed on Fifth Avenue has been approved, and construction may be ongoing as construction of the 2019 LRDP uses begins. As discussed above, normal construction activities as a result of the 2019 LRDP would have the potential to exceed 75 dBA L_{eq} up to 210 feet from active construction activities. Construction involving pile driving could exceed 75 dBA L_{eq} up to 500 feet from the construction area. The nearest cumulative project to the 2019 LRDP site is the redevelopment of an existing hotel with a mix of commercial and recreational uses (Legacy International Center project), approximately 1,000 feet from the Hillcrest Campus. Due to distance, construction under the 2019 LRDP would not result in noise levels that would combine with construction noise levels from cumulative development to exceed noise standards at the same receptors at the same time. A significant cumulative impact would not occur. Therefore, implementation of the 2019 LRDP would not result in a cumulatively considerable contribution to a significant cumulative roadway noise impact.

Operational Impacts

Transportation

A cumulative ambient noise impact would occur if development associated with cumulative regional land use projects would result in an increase in ambient noise that would exceed the noise level standards in Table 3.11-8. Buildout of the 2019 LRDP, along with future regional growth, would result in increases in traffic that would cumulatively increase traffic noise. The potential noise impacts that would result from cumulative projects and regional growth are included in the Buildout Year 2035 condition. Table 3.11-22 compares Buildout Year 2035 traffic noise levels to existing conditions. Cumulative growth would not result in an increase in traffic noise of more than 3 dBA CNEL on any roadway segments that exceed 65 dBA CNEL under existing conditions. Additionally, cumulative growth would not cause any roadway segments to exceed 65 dBA CNEL. As such, a cumulative impact would not occur on any roadway segments. Therefore, implementation of the 2019 LRDP would not result in a cumulatively considerable contribution to a significant cumulative roadway noise impact.

Operational Noise Associated with Proposed Development

The geographic context for the 2019 LRDP cumulative analysis is the projects listed in Table 3-1. These approved or planned projects primarily include new residences in the neighborhood south of the campus and one redevelopment project on Hotel Circle South that would accommodate a mix of commercial uses. Similar to the 2019 LRDP, residential land uses would generate nuisance noise that would not be considered a significant impact. Additionally, the nearest cumulative project (Legacy International Center project) would be located more than 1,000 feet away from the Hillcrest Campus. The proposed commercial development would potentially include HVAC systems; however, the cumulative commercial project would be located approximately 1,200 feet north of the Hillcrest Campus. As previously stated, typical mechanical HVAC would have the potential to generate noise levels which average 60 dBA at a distance of 100 feet. Due to distance, noise from the Hillcrest Campus would not combine with new noise sources from cumulative development. A significant cumulative impact would not occur. Therefore, implementation of the 2019 LRDP would not result in a cumulatively considerable contribution to a significant cumulative operational noise impact.

Table 3.11-22 Cumulative Traffic Noise Impacts

Roadway	Segment	Existing (dBA CNEL)	Buildout Year 2035 (with project) (dBA CNEL)	Increase in Noise Level	Significant Cumulative Impact?	Increase Attributable to Proposed Project[1]	Cumulatively Considerable Contribution?
Hotel Circle South	I-8 Eastbound Ramps to Bachman Place	67	68	1	No	0	No
	East of Bachman Place	67	69	2	No	0	No
Bachman Place	Hotel Circle to North Access Driveway (future)	66	69	3	No	0	No
	North Access Driveway (future) to Arbor Drive	66	69	3	No	1	No
Washington Street	India Street to University Avenue	74	76	2	No	0	No
	University Avenue to First Avenue	70	70	0	No	0	No
	First Avenue to Fourth Avenue	70	70	0	No	0	No
	Fourth Avenue to Fifth Avenue	70	71	1	No	0	No
	Fifth Avenue to Sixth Avenue	71	72	1	No	0	No
	Sixth Avenue to Richmond Street	72	72	0	No	0	No
	Richmond Street to Normal Street	74	74	0	No	0	No
Front Street	Arbor Drive to Washington Street	61	63	2	No	1	No
First Avenue	Arbor Drive to Washington Street	60	63	3	No	1	No
	Washington Street to University Avenue	60	63	3	No	0	No
	University Avenue to Robinson Avenue	61	65	4	No	0	No
Fourth Avenue	Washington Street to Robinson Avenue	63	64	1	No	0	No
Fifth Avenue	Washington Street to Robinson Avenue	64	65	1	No	0	No

Source: Harris 2019.

Notes: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibel; I- = Interstate

Noise levels are calculated at 50 feet from roadway centerline. Noise levels are based upon traffic data provided by LLG (2019). Decibel levels are rounded to the nearest whole number. The bold text indicates a significant impact.

[1] Based on the results in Table 16 in Appendix I. The 2019 LRDP's contribution to the cumulative noise impact is based on the increase in traffic noise attributable to the 2019 LRDP under the Buildout Year 2035 scenario. If the 2019 LRDP's contribution is less than three decibels, the 2019 LRDP's contribution is not cumulatively considerable.

3.11.4.2 Cumulative Issue 2: Excessive Groundborne Vibration or Noise

Similar to noise effects, vibration is a localized phenomenon and is progressively reduced as the distance from the source increases. Therefore, the area of projects that would be considered for the vibration cumulative analysis would only be those projects in close proximity to the Hillcrest Campus. There are no approved, planned or foreseeable projects adjacent to the Hillcrest Campus that would generate similar vibration during construction. The closest cumulative project to the site is located approximately 1,000 feet from of the Hillcrest Campus (Legacy International Center project). Therefore, vibration generated by construction on the Hillcrest Campus and other sites would not combine to generate cumulative vibration impacts. Once constructed, the proposed land uses would not generate a significant source of vibration during normal operation. A significant cumulative vibration impact would not occur.

3.11.4.3 Cumulative Issue 3: Aircraft Noise

No cumulative projects resulting in additional aviation uses are planned to be introduced in the immediate vicinity of the Hillcrest Campus. In addition, impacts related to nuisance noise from overflights are site specific and are not cumulative in nature. The Replacement Hospital would include a new helipad to replace the existing helipad that would be demolished. However, the 2019 LRDP does not propose any new or increased air traffic. The need for helicopter flights would continue to be determined by need for service rather than campus operation. No NSLU would be exposed to excessive noise levels from aviation as a result of the 2019 LRDP. Therefore, a cumulative impact related to aviation noise would not occur.

3.11.5 CEQA Issues Where There Is No Potential for a Significant Effect

All checklist items in Appendix G of the CEQA Guidelines under noise are evaluated in this 2019 LRDP EIR.

3.11.6 References

AECOM. 2018. Noise Technical Report, University of California San Diego, 2018 Long Range Development Plan Environmental Impact Report. Prepared for Baranek Consulting Group, Inc. July 9, 2018.

Caltrans (California Department of Transportation). 2013a. Technical Noise Supplement to the Traffic Noise Analysis Protocol. September.

Caltrans. 2013b. Transportation and Construction Vibration Guidance Manual. September 2013.

City of San Diego. 2015. City of San Diego General Plan. Adopted in 2008. Noise Element amended June 29, 2015.

FHWA (Federal Highway Administration). 2008. Roadway Construction Noise Model (RCNM), Version 1.1. December 8, 2008.

FTA (Federal Transit Administration). 2006. Transit Noise & Vibration Impact Assessment. Final report. FTA-VA-90-1003-06. FTA, Office of Planning and Environment. May 2006. Accessed December 12, 2108. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf.

FTA. 2018. Transit Noise & Vibration Impact Assessment. September 2018.

Gordon Bricken and Associates. 2012. Acoustical Analysis Bundy Canyon Site, City of Wildomar. January 17, 2012.

Harris (Harris & Associates). 2019. Noise Technical Report for the 2019 Long Range Development Plan for the UC San Diego Hillcrest Campus.

Hinton, William C. 2018. Email to Melody Dotson, RN, MSN, BHNC (UC San Diego). June 11, 2018.

LLG (Linscott, Law & Greenspan, Engineers). 2019. UC San Diego Hillcrest Campus 2019 Long Range Development Plan – Transportation Impact Analysis. June 2019.

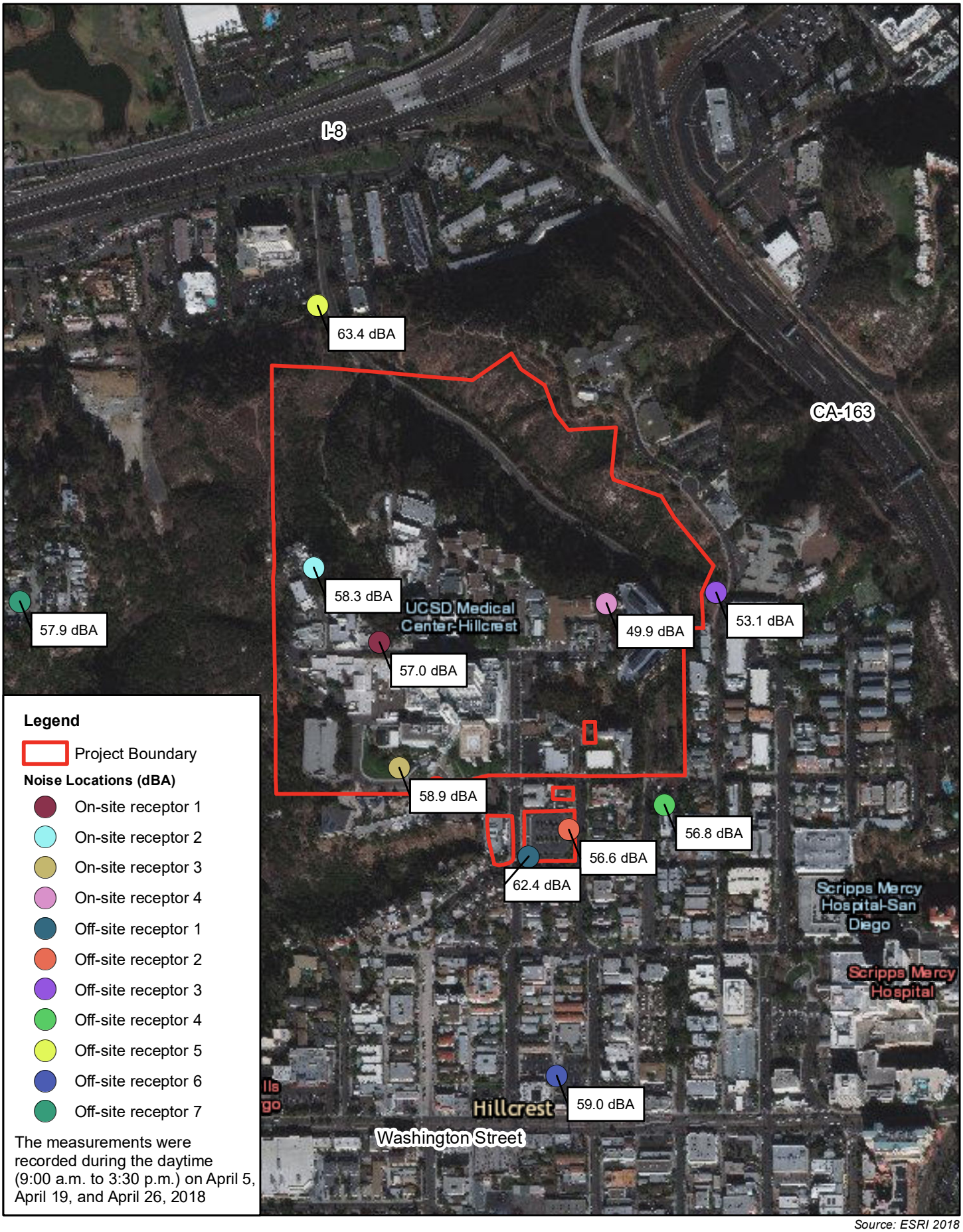
OPR (Governor's Office of Planning and Research). 2017. General Plan Guidelines. Accessed January 2019.http://www.opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf.

PDH Center. 2012. Overview of Noise Control and HVAC Acoustics in Buildings.

San Diego County Regional Airport Authority. 2014. San Diego International Airport Land Use Compatibility Plan. April 2014.

San Diego County Regional Airport Authority. 2017. Air Traffic Report. December 2017.

Sanchez, Elyse. 2018. Email to Morgan Weintraub (Harris & Associates). June 12, 2018.



Source: ESRI 2018

Figure 3.11-1
Ambient Sound Level Survey Locations
at UC San Diego Hillcrest

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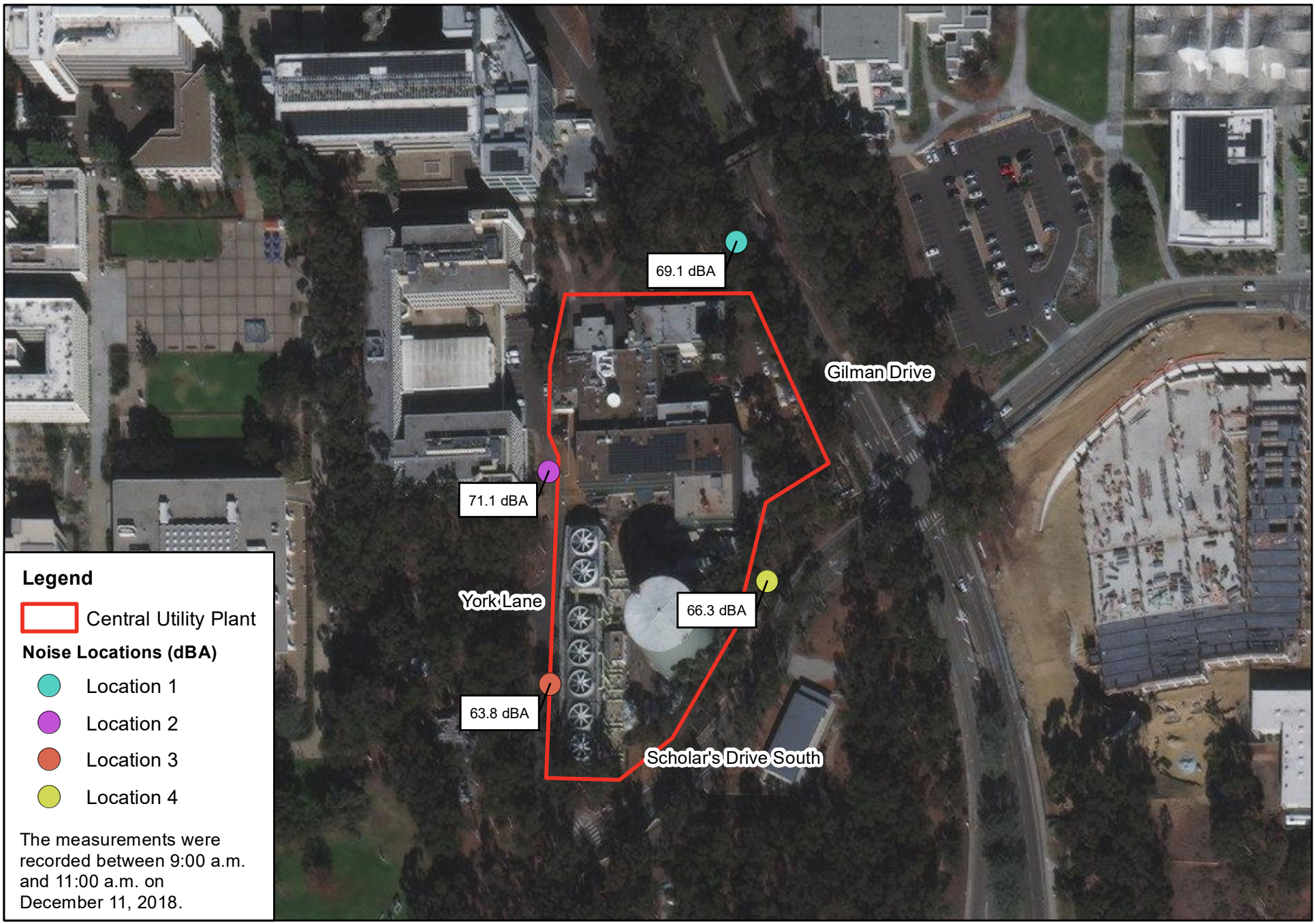

Source: ESRI 2018

Figure 3.11-2
Campus CUP Noise Measurement Locations at UC San Diego La Jolla

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3.12 Population and Housing

This section describes the existing population and housing conditions on the Hillcrest Campus and surrounding areas, including the City, the County, and the State of California. This section also describes the growth in population (students, faculty, staff, and their families) directly and indirectly related to the implementation of the 2019 LRDP for the Hillcrest Campus and the potential population and housing impacts that could result from implementation of the 2019 LRDP.

Changes in population, employment, and housing demand are social and economic effects, not environmental effects. According to CEQA, these effects should be considered in an EIR only to the extent that they create adverse impacts on the physical environment. According to Section 15382 of the CEQA Guidelines, "an economic or social change by itself shall not be considered a significant effect on the environment."

This section is based on the Population and Housing Study prepared for the 2019 LRDP by Harris (2019) and included as Appendix K of this 2019 LRDP EIR.

3.12.1 Environmental Setting

3.12.1.1 Statewide Setting

The following discussion on statewide population and housing is based on California's Housing Future: Challenges and Opportunities, Final Statewide Housing Assessment 2025 (HCD 2018) and the California Department of Finance demographic statistics (DOF 2018).

Population

The current population of 39 million is expected to grow to 45 million by 2035, as shown in Table 3.12-1. The 5-year state growth rate is expected to modestly increase between 2020 and 2025 and decline from 2025 onward. This represents a general continuation of slowing growth that began in the latter decades of the previous century. Despite a slower growth rate, the state stands to add approximately 6.3 million persons from 2015 to 2035, with a growth rate of 3.4 to 4.1 percent every 5 years.

Table 3.12-1. California Population Estimates, 2015–2035

Year	Population	Population Increase[1]	Percent Change[2]
2015	39,059,415	—	—
2020	40,639,392	1,579,977	4
2025	42,326,397	1,687,005	4.1
2030	43,939,250	1,612,853	3.8
2035	45,440,735	1,501,485	3.4

Source: DOF 2018.

Notes:

[1] Population increase is the incremental population change from the previous 5-year period.

[2] Percent change is the percent change from the previous 5-year period.

Housing

According to the California Department of Housing and Community Development Final Statewide Housing Assessment 2025 (HCD 2018), for the past 10 years (i.e., 2008–2018), California has built an average of less than 80,000 new homes annually. As identified in the Final Statewide Housing Assessment 2025, California averaged more than 200,000 new homes annually from 1954–1989, with multi-family housing accounting for the largest share of the housing production. The production of homes increased somewhat during the housing boom of the mid-2000s, and then dropped dramatically starting in 2006, coinciding with the economic downturn sometimes referred to as the "Great Recession." As of 2016, the most current year for which data is available, approximately 100,000 new housing units were produced annually.

The production of housing has not returned to the level required to meet the projected housing need. The Federal Housing Administration identified housing supply as a significant issue and worked with the State Legislature to find solutions. This work resulted in the 2017 Housing Package, a collection of bills intended to streamline development, increase accountability for complying with housing laws, and provide ongoing funding to create and preserve affordable homes. From 2015 to 2025, approximately 1.8 million new housing units, or 180,000 new homes annually, are needed to meet projected population and household growth. Since California is currently building an average of less than 80,000 new homes annually, the state would need to construct approximately 100,000 more homes annually to meet projected population and household growth (HCD 2018).

3.12.1.2 Regional Setting

The following discussion on regional population and housing is based on the California Department of Finance census data and SANDAG population and housing estimates.

Population

The population growth rate for the San Diego region (i.e., the County) is projected to slow in the coming decades, as shown in Table 3.12-2. Despite this slower growth, the region's population is expected to increase by more than 450,000 persons from 2015 to 2035 and reach approximately 3.7 million by 2035. The regional growth trends follow a similar pattern as the state as a whole in terms of declining growth rates but the County's 5-year growth rate is consistently lower than the state's growth rate. For example, from 2015 to 2020, the state's growth rate is projected to increase by 4.0 percent (see Table 3.12-1), while the County's growth rate is expected to increase by 3.8 percent (see Table 3.12-2), a difference of 0.2 percent. The County's growth would continue to decline in relation to the state's growth rate such that, by 2030 and 2035, the County's growth rate is projected to be 0.7 percent less than the state's growth rate.

Table 3.12-2. Regional Population Estimates

Year	Population	Population Increase[1]	Percent Change[2]
2015	3,274,141	—	—
2020	3,398,672	124,501	3.8
2025	3,521,600	122,928	3.6
2030	3,631,155	109,555	3.1
2035	3,730,053	98,898	2.7

Source: DOF 2018.

Notes:

[1] Population increase is the incremental population change from the previous 5-year period.

[2] Percent change is the percent change from the previous 5-year period.

In 2015, the population of the region was approximately 8.3 percent of the overall California population. According to state and regional projections, the region's share of the state population would remain essentially unchanged at 8.2 percent in 2035. Due to land use constraints, state policies and goals, the County's General Plan, and general plans of incorporated cities in the County, the majority of future regional population and employment growth is expected to occur largely through increased density rather than continued sprawl.

As shown in Table 3.12-3, the City had a total population of approximately 1.3 million in 2012, approximately 42 percent of the regional total. Based on the SANDAG Series 13 Regional Growth Forecast (SANDAG 2013), the City's population is expected to reach nearly 1.7 million by 2035, which is approximately 43 percent of the regional total and would account for nearly 48.5 percent of regional growth.

Table 3.12-3. County of San Diego Subregional Population Growth, 2012–2035

Jurisdiction	2012	2020	2035	Population Change	Percent of Population Change (Jurisdiction versus County)
Carlsbad	107,674	118,450	124,351	16,677	2.3
Chula Vista	249,382	287,173	326,625	77,243	10.9
Coronado	23,187	23,634	24,165	978	0.1
Del Mar	4,194	4,399	4,672	478	0.1
El Cajon	100,562	102,761	109,383	8,821	1.2
Encinitas	60,346	62,908	65,264	4,918	0.7
Escondido	146,089	165,214	172,892	26,803	3.8
Imperial Beach	26,609	27,506	30,369	3,760	0.5
La Mesa	58,296	61,102	70,252	11,956	1.7
Lemon Grove	25,603	26,884	28,673	3,070	0.4
National City	58,967	62,342	73,329	14,262	2.0
Oceanside	169,319	177,840	188,597	19,278	2.7
Poway	48,382	50,026	53,062	4,680	0.7
San Diego	**1,321,315**	**1,453,267**	**1,665,609**	**344,294**	**48.5**
San Marcos	85,560	98,915	109,095	23,535	3.3
Santee	54,643	59,497	63,812	9,169	1.3
Solana Beach	13,000	13,376	14,207	1,207	0.2
Unincorporated	495,267	495,267	543,426	617,570	17.2
Vista	95,034	96,993	111,771	16,737	2.4
County Total	**3,143,429**	**3,435,713**	**3,853,698**	**710,269**	**—**

Source: SANDAG 2013.
Notes: SANDAG Series 13 data do not have a baseline year; therefore, 2012 has been used.
Population change is the incremental population change for each jurisdiction from 2012 through 2035. The percent of population change indicated what percent each jurisdiction's incremental population change is of the County's total incremental population change from 2012 through 2035. For example, from 2012 through 2035, the City is estimated to have a total population change of 344,294 persons, which is 48.5 percent of the County's total incremental population change of 710,269 persons.
Bold text refers to the City of San Diego.

Housing

Housing production at the regional level is not projected to keep pace with population growth in the coming years. The most recent SANDAG Regional Housing Needs Assessment (RHNA) identified the need for 161,980 housing units from 2010 to 2020, while the SANDAG Series 13 Regional Growth Forecast estimates an incremental supply of approximately 125,000 new housing units. These estimates project a deficit of nearly 37,000 housing units by 2020. Based on these numbers, there is an annual projected demand for 14,725 units, while only 11,363 are projected to be delivered (SANDAG 2011). The gap between housing demand and supply is consistent with recent historical trends. From 2003 to 2010, enough homes were produced to meet 75 percent of regional needs (SANDAG 2017).

At the subregional level, SANDAG projects that 53.5 percent of the regional housing production from 2012 to 2035 will occur in the City. As shown in Table 3.12-4, by 2035, the City is expected to have a total of 640,668 households or approximately 46 percent of the regional total, an increase from 44 percent of the regional total in 2012. This trend is consistent with state and regional planning goals to concentrate regional growth in the urban core.

Table 3.12-4. County of San Diego Subregional Housing Growth, 2012–2035

Jurisdiction	2012	2020	2035	Housing Unit Change	Percent of Housing Unit Change (Jurisdiction versus County)
Carlsbad	45,171	48,448	50,261	5,090	2.2
Chula Vista	79,255	89,176	101,188	21,933	9.6
Coronado	9,596	9,668	9,697	101	0.0
Del Mar	2,637	2,646	2,653	16	0.0
El Cajon	35,934	36,180	38,163	2,229	1.0
Encinitas	25,586	26,146	26,765	1,179	0.5
Escondido	48,345	53,605	55,633	7,288	3.2
Imperial Beach	9,863	10,001	10,926	1,063	0.5
La Mesa	25,840	26,460	30,001	4,161	1.8
Lemon Grove	8,813	9,118	9,654	841	0.4
National City	16,720	17, 458	20,877	4,157	1.8
Oceanside	65,469	67,817	70,395	4,926	2.2
Poway	16,545	16,855	17,685	1,140	0.5
San Diego	**518,137**	**559,142**	**640,668**	**122,531**	**53.5**
San Marcos	28,539	32,625	35,795	7,256	3.2
Santee	20,124	21,490	22,776	2,652	1.2
Solana Beach	6,521	6,583	6,833	312	0.1
Unincorporated	171,863	185,253	209,506	37,643	16.4
Vista	30,860	31,012	35,307	4,447	1.9
County Total	**1,165,818**	**1,249,684**	**1,394,783**	**228,965**	**—**

Source: SANDAG 2013.

Notes: SANDAG Series 13 data do not have a 2015 baseline year; therefore, 2012 has been used.

Housing unit change is the incremental housing unit change from 2012 through 2035 for each jurisdiction. The percent of housing unit change indicated what percent each jurisdiction's total housing unit change is of the County's total incremental housing unit change from 2012 through 2035. For example, from 2012 through 2035, the City is estimated to have an incremental housing unit change of 122,531 units, which is 53.5 percent of the County's total incremental housing unit change of 228,965 units.
Bold text refers to City of San Diego.

A comparison of Tables 3.12-3 and 3.12-4 suggests that the region will approach 4 million residents and 1.4 million housing units by 2035. As indicated on Figure 3.12-1, Regional Population, Jobs, and Housing Forecast, home construction in the San Diego region has not kept pace with population growth, and the gap is expected to grow.

3.12.1.3 Local Setting

The following discussion on local population and housing was compiled by SANDAG (2013) based on the City's Mission Valley Community Plan (2013a) and Uptown Community Plan (2016).

Population and Housing in Adjacent Community Plan Areas

Existing and projected numbers for population and housing units in the adjacent Uptown and Mission Valley Community Plan Areas are presented in Table 3.12-5. The Hillcrest Campus is identified as Institutional land use in the Uptown Community Plan, and no density is assigned to this land use. The 1995 Hillcrest Campus LRDP did not plan for any residential units on the campus; however, 21 units have since been acquired by UC San Diego as part of land purchases. The Uptown Community Plan and the Mission Valley Community Plan are expected to grow in population while simultaneously growing in households. The Uptown Community is expected to experience a population growth of 11,952 persons, or 31.5 percent, from 2012 to 2035, while households within the community are expected to increase by 6,123 units, or 26.5 percent. The Mission Valley Community is expected to experience a population growth of 15,244 persons, or 80 percent, from 2012 to 2035, while households within the community are expected to increase by 8,066 units, or 71.8 percent.

Table 3.12-5. Adjacent Communities' Population and Housing Growth

Community Plan	Population					Households				
	2012	2020	2035	Population Change	Percent Change	2012	2020	2035	Household Change	Percent Change
Uptown	37,855	39,810	49,807	11,952	31.5	23,100	23,593	29,223	6,123	26.5
Mission Valley	19,038	24,984	34,282	15,244	80	11,233	14,324	19,299	8,066	71.8

Source: SANDAG 2013.

Notes: SANDAG Series 13 data do not have a 2015 baseline year; therefore, 2012 has been used.

3.12.1.4 Campus Population Growth

Buildout of the 2019 LRDP is expected to increase non-residential campus population, which includes staff and faculty, from an existing employee headcount of 4,450 persons in 2017 to approximately 5,200 persons in 2035. The total increase of approximately 750 persons is shown in Table 3.12-6.

Table 3.12-6. Existing and Projected Non-Residential Campus Population

Category	2017 Existing Population	2035 Projected Population	Change (+)
Medical Faculty/Staff[1]	3,200	3,550	350
Research Faculty/Staff[2]	250	300	50
Administrative/Operations Staff[3]	1,000	1,350	350
Total	**4,450**	**5,200**	**750**

Source: UC San Diego Health Human Resources 2018.

Notes:

[1] Includes physicians, nurses, technicians, medical residents, and other staff related to direct patient care.

[2] Includes research faculty, staff, and related administration.

[3] Includes other health care administration, service staff, support staff, and future residential/mixed-use operations staff.

3.12.2 Campus Residential Population Growth

Currently, the Hillcrest Campus provides a total of 21 residential units, including 19 residential units in the Dickinson housing cluster and 2 residential units located at 4194 First Avenue (see Table 3.12-7, Projected Housing Growth [Multi-Family Units]). The 21 residential units equate to a total residential population of 35 residents, using a persons per household rate of 1.67 person per dwelling unit (American Community Survey 2016). The 2019 LRDP proposes to construct up to 1,000 new residential units and demolish the 21 existing residential units for a net increase of 979 new units that would house a total residential population of up to 1,646 residents, using a persons per household rate of 1.67 that has been reported for the Hillcrest zip code (American Community Survey 2016). The proposed 979 new on-campus housing units would be offered to UC San Diego affiliates (faculty, staff, and students).

There are also 12 long-term stay units for out-of-town hospital patients and their families (Bannister Family House), which are considered a medical-related use, not a residential use. The Bannister Family House is not proposed for demolition and would continue to be operated as a long-term stay facility under the 2019 LRDP.

Table 3.12-7. Projected Housing Growth (Multi-Family Units)

Program Use Category	2019 Existing Units	2035 Proposed Units	Projected Net New Units
Residential Units	21 units (14,300 gsf)	1,000 units (~1,159,000 gsf)	+979 units (1,144,700 gsf)

Source: UC San Diego 2019.

Notes: gsf = gross square feet

Housing Growth by Phase

The addition of approximately 979 new net housing units would occur over several phases. Phase 1A would involve the demolition of 19 existing housing units (Dickinson housing cluster) and 2 residential housing units located at 4194 First Avenue. Phase 1B would involve the demolition of existing buildings and parking lots in preparation for the construction of Residential Site A in Phase 2A. Phase 2A would involve the development of Residential Site A consisting of

approximately 520 new units within proposed Buildings R-1 and R-2 in the western portion of the campus. Phase 2A would also involve construction of the Mixed-Use Residential/Wellbeing Center consisting of approximately 50 new residential units located between Front Street and First Avenue and north of Montecito Way. Phase 5 would involve construction of the remaining approximately 430 multi-family residential units in proposed Residential Buildings 3 and 4 (R-3 and R-4) as part of Residential Site B development within the Residential District. Table 3.12-8 depicts the timing of demolition and construction of residential units by phase.

Table 3.12-8. 2019 LRDP Housing (Multi-Family Units) by Phase

Phase	Demolition	Construction
Phase 1A	Dickinson housing cluster (19 units) Residential units at 4194 First Avenue (2 units)	None.
Phase 1B	None.	None.
Phase 2A	None.	• Residential Site A consisting of two buildings (R-1 and R-2): o Residential R-1 (150 units) o Residential R-2 (370 units) • Mixed-Use Residential/Wellbeing Center (50 residential units)
Phase 2B	None.	None.
Phase 3	None.	None.
Phase 4	None.	None.
Phase 5	None.	• Residential Site B consisting of two buildings (R-3 and R-4): o Residential R-3 (280 units) o Residential R-4 (150 units)

Source: UC San Diego 2019.

Hillcrest Campus Residential Interest Survey

The Hillcrest Campus Residential Interest Survey was conducted between May 23 and June 1, 2018. The purpose of the survey was to assess the level of interest in a proposed development of rental units on the Hillcrest Campus. A total of 24,648 UC San Diego affiliates were invited to participate. These included faculty, staff, and graduate students from the La Jolla Campus, Hillcrest Campus, and off-site UC San Diego locations. Of this total, 2,637 respondents completed the survey for a margin of error of 2 percent. The highest percentage of respondent types were regular/career staff (33.8 percent), graduate students (28.4 percent), and academic staff (14.8 percent). Of the 2,637 respondents, 1,787 had interest levels of very interested, somewhat interested, or not sure (remaining respondents had interest levels of not very interested or not at all interested). The results of the survey demonstrate that the demand is present for the 979 net new residential units to be occupied by UC San Diego affiliates. Many of the survey respondents currently live in neighborhoods near the

Hillcrest Campus, as demonstrated in Table 3.12-9. According to the survey, the total survey respondents of graduate students, faculty, and staff who provided their current zip code information currently who live in neighborhoods near the Hillcrest Campus is 1,102. By moving UC San Diego affiliates from nearby neighborhoods to the Hillcrest Campus, local housing units currently occupied by the UC San Diego affiliates would be available for other San Diego residents (UC San Diego Real Estate 2018).

Table 3.12-9. Hillcrest Campus Residential Interest Survey Respondents by Zip Code

Neighborhood	Zip Code	UC San Diego Graduate Student, Faculty, and Staff Population
Mission Hills	92103	257
North Park	92104	158
Normal Heights	92116	127
Golden Hill	92102	55
Hillcrest	92163	16
Mission Valley	92108	101
Mission Valley	92168	3
Linda Vista	92111	91
Linda Vista	92171	3
College	92115	81
College	92195	1
Morena	92110	65
Downtown	92138	6
Downtown	92112	2
Downtown	92101	136
	Total	**1,102**

Source: UC San Diego Real Estate 2018.

Note: This represents only the number of respondents who included their zip code. Those who responded to the survey but did not include their zip code information are not included in the table values.

3.12.3 Regulatory Framework

As discussed in other sections of this 2019 LRDP EIR, UC San Diego is part of the UC, a constitutionally created entity of the State of California, with "full powers of organization and government" (Cal. Const. Art. IX, Section 9). As a constitutionally created state entity, the UC is not subject to municipal regulations of surrounding local governments, such as the City's General Plan or land use ordinances, for uses on property owned or controlled by the UC that are in furtherance of the UC's education purposes. However, UC San Diego may consider, for coordination purposes, aspects of local plans and policies for the communities surrounding the campus when it is appropriate and feasible, but it is not bound by those plans and policies in its planning efforts. Thus, UC San Diego has voluntarily reviewed municipal plans for general

consistency with the proposed 2019 LRDP; however, none of the following plans have jurisdiction over UC San Diego.

3.12.3.1 Local (Non-Regulatory)

As discussed in other sections of this 2019 LRDP EIR, UC San Diego is part of the UC, a constitutionally created entity of the State of California with "full powers of organization and government" (Cal. Const. Art. IX, Section 9). As a constitutionally created state entity, the UC is not subject to municipal regulations of surrounding local governments, such as the City's General Plan or land use ordinances, for uses on property owned or controlled by the UC that are in furtherance of the UC's education purposes. However, UC San Diego may consider, for coordination or other purposes, aspects of local plans and policies for the communities surrounding the campus when it is appropriate and feasible, but the UC is not bound by those plans and policies in its planning efforts. Thus, UC San Diego has voluntarily reviewed municipal plans for general consistency with the proposed 2019 LRDP; however, none of the following plans have jurisdiction over UC San Diego.

San Diego Forward: The Regional Plan

SANDAG's Regional Plan is a regional transportation and sustainability plan that aims to provide a blueprint for a more livable, equitable, and innovative future (SANDAG 2015). It combines and updates two previous plans, the Regional Comprehensive Plan and the Regional Transportation Plan/Sustainable Communities Strategy, into one document that looks toward 2050. The Regional Plan covers a broad range of topics including air quality, borders and tribal nations, climate change, economic prosperity, emerging technologies, energy and fuels, habitat preservation, healthy communities, public facilities, shoreline preservation, transportation, and water quality. The Sustainable Communities Strategy in the Regional Plan identifies the following six main strategies to complement the goal of sustainability: to focus on job growth and housing in urbanized areas with existing public transportation options, preserve open space, invest in a transit network that caters to everyone and includes many options, reduce GHG emissions, address housing needs for all economic segments of the population, and implement the Regional Plan through incentives and collaboration. The Hillcrest Campus was identified by SANDAG on the Smart Growth Concept Map as being located in a smart growth opportunity area urban center in Central San Diego (SANDAG 2016). In addition, SANDAG is currently evaluating an alternative direction, the Five Big Moves, for the Regional Transportation Plan and expects to make a final decision by the end of 2019. The Five Big Moves would include Complete Corridors, Transit Leap, Mobility Hubs, Flexible Fleets, and Next Operating System. These proposed changes would provide an opportunity to align with a more comprehensive approach to moving people around the region, including to and from the Hillcrest Campus.

Regional Housing Needs Assessment

SANDAG is required by state law to complete an RHNA, in consultation with the California Department of Housing and Community Development, in order to determine the region's housing needs in four income categories—very low, low, moderate, and above moderate. The adopted RHNA for the San Diego region covers the 8-year period from January 1, 2013, through December 31, 2020. The RHNA allocates housing needs in the four income categories for each of the cities and the County to use in their housing element. The cities and County are required to update their housing elements to include RHNA allocations every 8 years; updates can be required every 4 years if updated housing elements are not adopted by certain timelines. As noted previously, the RHNA factors in the housing needs generated by universities in the region, including UC San Diego. Because building is not keeping pace with the housing demand in the region, SANDAG is currently working on an algorithm to allocate additional housing units to each jurisdiction in the County. The allocation will be determined in 2019, allowing jurisdictions 2 years to update general plans and housing elements.

City of San Diego General Plan

The 2013–2020 Housing Element of the City's General Plan serves as a policy guide to address the comprehensive housing needs of the City (City of San Diego 2013b). State law mandates that local governments outline the housing needs of their community, the barriers or constraints to providing that housing, and actions proposed to address these concerns over an 8-year period.

Uptown Community Plan

The City's Uptown Community Plan identifies principles and policies for development within the community. Those that pertain to population and housing are identified below. The City prepares its community plans with an expected 20- to 30-year period of relevance. The Uptown Community Plan provides policies to inform land use, development form, and public resource decisions. The Uptown Community Plan is a component of the General Plan. Both the General Plan and the Uptown Community Plan should be reviewed for land use planning direction of the City. While the Uptown Community Plan addresses specific community needs, its principles, goals, and policies remain in harmony with the General Plan. Specific General Plan policies are referenced within the Uptown Community Plan to emphasize their significance within the community, but all applicable General Plan policies may be cited in conjunction with the Uptown Community Plan.

Mission Valley Community Plan (2013)

The Mission Valley Community Plan was adopted by the City Council in 1984 and last amended in 2013. The purpose of the plan is to provide recommendations to guide development in Mission Valley through the horizon year. The horizon year is defined as attaining the plan's maximum occupancy capacity, which is based on land use, development intensity, circulation, and public

facilities. While it sets forth proposals for implementation, the plan neither establishes new regulations or legislation nor rezones property. The plan includes a series of goals and objectives and development guidelines established by the community and consistent with Citywide policies (City of San Diego 2013a).

Final Draft Mission Valley Community Plan Update (2019)

In 2015, the City, in coordination with local community members, began updating the Mission Valley Community Plan, which serves as a blueprint for the future development of the neighborhood. After completing extensive research on existing conditions; gathering input from the Mission Valley Community Plan Update Subcommittee, community members, and stakeholders on topics such as land use, mobility, and parks; and analyzing future conditions, the Working Draft of the Mission Valley Community Plan was released for public review in August 2018. In June 2019, the Final Draft of the Mission Valley Community Plan Update was released for public review, with the public hearing process set to begin in summer 2019. The Mission Valley Community Plan contains an organized list of policies for which all future development should adhere (City of San Diego 2019).

3.12.4 Project Impacts and Mitigation

The following sections address various potential impacts relating to population and housing that could result due to the implementation of the proposed 2019 LRDP.

3.12.4.1 Issue 1: Induce Substantial Population Growth

Population and Housing Issue 1 Summary

Would implementation of the 2019 LRDP 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)?

Impact: Implementation of the 2019 LRDP would not result in direct or indirect inducement of substantial population growth in the area.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

Impact Analysis

Buildout of the 2019 LRDP is expected to increase the non-residential campus population, which includes students, staff, and faculty, from an existing population of 4,450 persons in 2017 to approximately 5,200 persons in 2035, or a 16.8 percent increase. The total non-residential campus population increase of approximately 750 persons would equate to less than 0.01 percent of the projected 2035 regional population. The 2019 LRDP is also projected to add approximately 979 net new on-campus housing units to the Hillcrest Campus by 2035 (up to 1,000 new units would be constructed, and 21 existing units would be demolished). This increase in housing equates to 1,646 additional on-campus residents, based on 1.67 person/dwelling unit reported for the Hillcrest zip code (American Community Survey 2016). The proposed housing units would be provided for UC San Diego affiliates associated with the La Jolla and Hillcrest Campuses and are anticipated to accommodate a portion of the planned non-residential population growth identified in the 2019 LRDP. As such, the projected non-residential and residential populations are not necessarily additive because the additional students, staff, and faculty may also reside in the proposed new on-campus housing.

In comparison, the overall projected San Diego regional population growth from 2012 to 2035 would be 710,269, and the projected Hillcrest Campus population growth from the 2019 LRDP would be up to 2,396 (750 non-residential campus population + 1,646 residential campus population = 2,396 population increase). This presents a worst-case scenario because, as discussed previously, some of the additional students, staff, and faculty included in the projected non-residential growth may also reside in the proposed new on-campus housing. Therefore, an up to 2,396-person population increase used for analysis purposes likely reflects some double counting among the non-residential and residential populations. Even a worst-case population increase of an up to 2,396 persons reflects only 0.33 percent of the overall regional population increase expected by 2035 (see Table 3.12-3).

The Hillcrest Campus is identified as Institutional land use in the Uptown Community Plan, and no density is assigned to this land use. The 1995 Hillcrest Campus LRDP did not plan for any residential units on the campus; however, 21 existing units have since been acquired by UC San Diego as part of land purchases. The provision of approximately 979 net new residential units would not induce substantial population growth because it would be provided to accommodate existing and proposed UC San Diego affiliates. Based on the Hillcrest Campus Residential Interest Survey (UC San Diego Real Estate 2018) conducted by UC San Diego in 2018, at least 1,787 out of 2,637 respondents are or may be interested in rental units on the Hillcrest Campus. This demonstrates that adequate demand is present to restrict the proposed housing to solely UC San Diego affiliates (i.e., the primary lessee on each unit would be current or future faculty, staff, and graduate students of UC San Diego). UC San Diego affiliates already reside in the San Diego region, as they work or study at the La Jolla or Hillcrest Campuses or other off-site locations, or live on campus and work offsite. As demonstrated by Table 3.12-9, many UC San Diego affiliates

also already live in the neighborhoods surrounding the Hillcrest Campus. Therefore, the proposed increase in residential units on campus would not directly induce population growth as the majority of future residents would not be relocating from areas outside of the County; rather, they would be relocating from within the region and in many cases from within the immediate vicinity of the Hillcrest Campus. Additionally, by moving UC San Diego affiliates into the proposed on-campus housing, residential units in the surrounding communities that would otherwise be occupied by the UC San Diego affiliates would be available to the public at large. In the context of the housing shortage being experienced by the state and San Diego region, the provision of new housing on the Hillcrest Campus would be considered growth accommodating, and would represent a regional benefit. The 2019 LRDP's direct impacts would be less than significant.

The 2019 LRDP would not extend roads or other infrastructure to areas not currently served with these facilities. The proposed north access driveway and First Avenue extension would serve the existing Hillcrest Campus and improve on-campus circulation. Other road improvements to Arbor Drive and Bachman Place would improve existing roadway conditions and local circulation in developed areas of the Uptown and Mission Valley Communities by enhancing connectivity and paths of travel and, therefore, the level of service on surrounding roadways. Section 3.15, Transportation, describes how the circulation system around the hospital would change a result of the 2019 LRDP. Therefore, the 2019 LRDP would not indirectly induce substantial population growth. The 2019 LRDP's indirect impacts would be less than significant.

Mitigation Measures

Impacts related to inducement of substantial population growth are considered less than significant; therefore, no mitigation is required.

3.12.4.2 Issue 2: Displacement of People or Housing

Population and Housing Issue 2 Summary

Would implementation of the 2019 LRDP displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Impact: Implementation of the 2019 LRDP would not result in the displacement of a substantial number of existing people or housing.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP would have a significant impact if it would displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere.

Impact Analysis

As previously stated, the Hillcrest Campus currently contains a total of 21 residential units. The 2019 LRDP proposes to construct up to 1,000 new residential units and demolish the 21 existing residential units for a net increase of approximately 979 net new units. In addition, 12 long-term stay units (Bannister Family House) are provided on campus, which are not considered residential and would not be demolished under the 2019 LRDP. Therefore, the provision of up to 1,000 new residential units would more than make up for the demolition of 21 existing on-campus housing units. Implementation of the 2019 LRDP would not displace substantial numbers of existing people or housing that would necessitate the construction of replacement housing elsewhere. Impacts would be less than significant.

Mitigation Measures

Impacts related to substantial displacement of people or housing are considered less than significant; therefore, no mitigation is required.

3.12.5 Cumulative Impacts and Mitigation

Population and Housing Cumulative Issue Summary

Would implementation of the 2019 LRDP have a cumulatively considerable contribution to a cumulative population and housing impact considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Issue 1: Direct or indirect inducement of substantial population growth in an area	Less than significant	Not cumulatively considerable
Issue 2: Regional displacement of people or housing	Less than significant	Not cumulatively considerable

The geographic context for cumulative impacts on population and housing is the San Diego region.

3.12.5.1 Cumulative Issue 1: Induce Substantial Population Growth

Direct Inducement of Substantial Population Growth in an Area

The region's population growth is accounted for in SANDAG's population projections for the County and within the County, including the individual municipalities' general plans and community plans.

Buildout of the 2019 LRDP is expected to increase the non-residential campus population, which includes staff and faculty, from an existing population of 4,450 persons to approximately 5,200 persons in 2035, or a 16.8 percent increase. The total non-residential campus population increase of approximately 750 persons would equate to less than 0.01 percent of the projected 2035 regional population. The 2019 LRDP is also projected to add approximately 979 net new on-campus housing units to the Hillcrest Campus by the planning horizon year 2035 equating to approximately 1,646 additional on-campus residents. Thus, the total population increase due to the 2019 LRDP is anticipated to be up to 2,396 persons (750 non-residential campus population + 1,646 residential campus population). As previously discussed, this presents a worst-case scenario because some of the additional students, staff, and faculty included in the projected non-residential growth may also reside in the proposed new on-campus housing. Therefore, an up to 2,396-person population increase used for analysis purposes likely reflects some double counting among the non-residential and residential populations.

In comparison, the overall projected San Diego regional population growth from 2012 to 2035 would be 710,269. The 2019 LRDP population increase of up to 2,396 persons reflects only 0.33 percent of the overall regional population increase expected by 2035 (see Table 3.12-3). The increase in the Hillcrest Campus population non-residential growth is accounted for in SANDAG's population projections for the County and would result in less than 1 percent of the overall regional population increase expected by 2035. The residential growth would include the UC San Diego affiliates who are currently or would be affiliated with UC San Diego, the majority of which would already be residing in the San Diego region; therefore, those residents would not result in a significant increase in regional population. Therefore, the 2019 LRDP would not result in cumulative direct inducement of substantial population growth in the area. The impact would not be cumulatively considerable.

Indirect Inducement of Substantial Population Growth in an Area

With regard to cumulative indirect inducement of substantial population growth in an area, the San Diego region would contribute to the indirect inducement of population growth through the extension of roads or other infrastructure. Cumulative projects would be required to comply with City or County requirement to provide new roads or utility improvements, as needed, to serve new populations. The construction of new roads or infrastructure projects would be subject to environmental review documentation pursuant to CEQA, as well as analysis of those projects for

consistency with the goals, policies, and recommendations of applicable planning documents. In general, compliance with federal, state, and local regulations would preclude incremental impacts associated with new construction of, or improvements to, roads or infrastructure projects.

Development under the proposed 2019 LRDP would consist of redevelopment of the Hillcrest Campus. The 2019 LRDP would not extend roads or other infrastructure to areas not currently served with these facilities. The proposed north access driveway and First Avenue extension would serve the existing Hillcrest Campus and improve on-campus circulation. Other road improvements to Arbor Drive and Bachman Place would improve existing roadway conditions and local circulation in developed areas of the Uptown and Mission Valley Communities by improving the level of service and would not provide infrastructure to areas not currently served. Therefore, the 2019 LRDP would not result in cumulative indirect inducement of substantial population growth in the area. The impact would not be cumulatively considerable.

3.12.5.2 Cumulative Issue 2: Displacement of People or Housing

With regard to displacement of housing and people, development in the region is likely to result in the displacement of housing and people. However, the proposed 2019 LRDP would not contribute to these potential impacts. Impacts would not be cumulatively considerable.

3.12.6 CEQA Issues Where There Is No Potential for a Significant Effect

All checklist items under Population and Housing in Appendix G of the CEQA Guidelines are evaluated in this 2019 LRDP EIR.

3.12.7 References

American Community Survey. 2016. "5-Year Estimates 2012–2016." American Fact Finder. Accessed August 6, 2018.

City of San Diego. 2013a. Mission Valley Community Plan. Adopted June 1985. Amended May 2013. Accessed November 7, 2018. https://www.sandiego.gov/sites/default/files/mission_valley_cp_060613_0.pdf.

City of San Diego. 2013b. City of San Diego General Plan Housing Element 2013–2020.

City of San Diego. 2016. Uptown Community Plan. November 2016. Accessed November 7, 2018. https://www.sandiego.gov/sites/default/files/uptown_community_plan_full_version.pdf.

City of San Diego. 2019. Mission Valley Community Plan Update. Final Draft. June 2019. Accessed June 2019. https://www.sandiego.gov/sites/default/files/missionvalley_cpu_draft_053119_8.5x11_printversion_1.pdf.

DOF (California Department of Finance). 2018. Demographic and Population Forecasts. Accessed November 5, 2018. http://www.dof.ca.gov/Forecasting/Demographics/projections/.

Harris (Harris & Associates). 2019. Population and Housing Study for the 2019 UC San Diego Long Range Development Plan.

HCD (California Department of Housing and Community Development). 2018. California's Housing Future: Challenges and Opportunities, Final Statewide Housing Assessment 2025. February 2018. Accessed January 2019. http://www.hcd.ca.gov/policy-research/plans-reports/docs/SHA_Final_Combined.pdf.

SANDAG (San Diego Association of Governments). 2011. Regional Housing Needs Assessment Plan, Fifth Housing Element Cycle, Planning for Housing in the San Diego Region, 2010–2020. Final. October 28, 2011. Accessed November 5, 2018. https://www.sandag.org/uploads/publicationid/publicationid_1661_14392.pdf.

SANDAG. 2013. "Series 13 Regional Growth Forecast." Data Surfer. Accessed November 5, 2018. http://datasurfer.sandag.org/.

SANDAG. 2015. San Diego Forward: The Regional Plan. October 2015. Accessed January 15, 2019. http://sdforward.com/pdfs/Final_PDFs/The_Plan_combined.pdf.

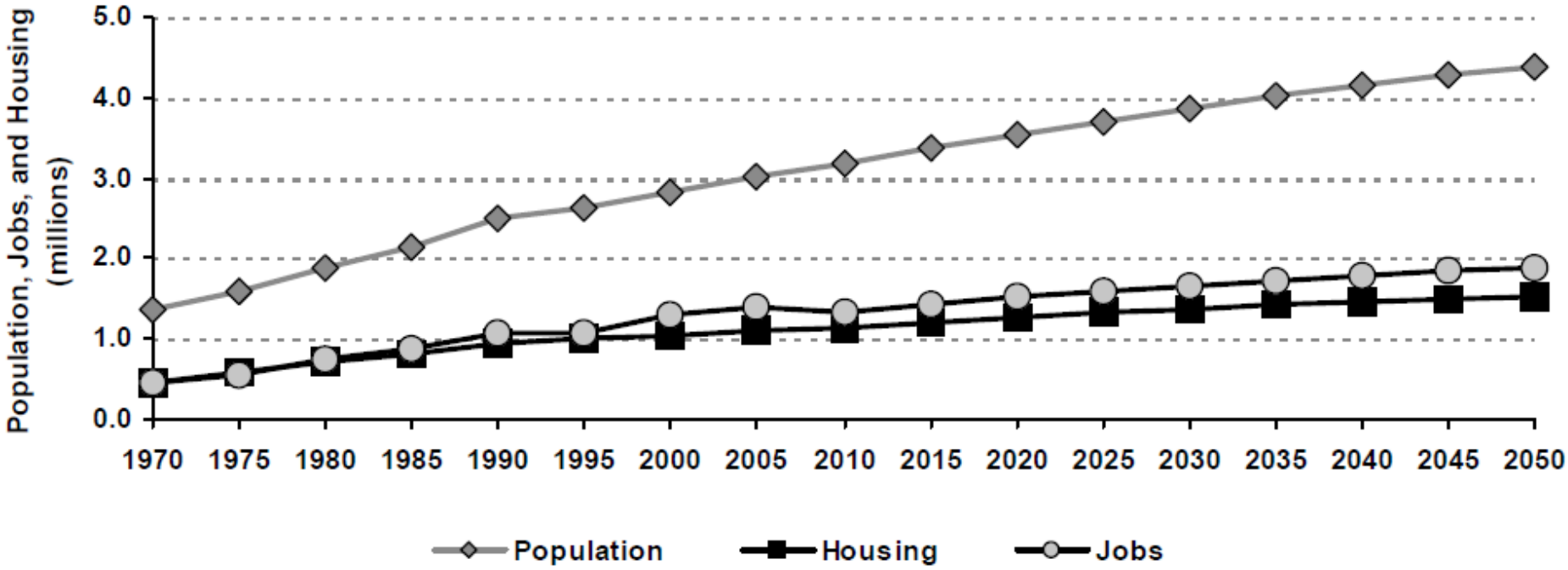
SANDAG. 2016. "Smart Growth Concept Map: Downtown–Central San Diego Subregion." May 2016. Accessed May 2019. https://www.sandag.org/uploads/projectid/projectid_296_20553.pdf.

SANDAG. 2017. Regional Housing Progress Report 2017. Accessed November 5, 2018. https://www.sandag.org/uploads/publicationid/publicationid_2132_22605.pdf.

University of California, San Diego (UC San Diego) Real Estate (University of California, San Diego, Real Estate). 2018. Hillcrest Campus Residential Interest Survey.

UC San Diego Health Human Resources. 2018. Existing and Projected Non-Residential Campus Population. July 2018.

UC San Diego. 2019. 2019 Long Range Development Plan for the University of California, San Diego, Hillcrest Campus. Draft.



Source: SANDAG, Series 13 Regional Growth Forecast (2013)

Figure 3.12-1
Regional Population, Jobs, and Housing Forecast

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3.13 Public Services

This section characterizes existing and proposed public services and evaluates changes to the physical environment that may result from the expansion of such services due to the proposed 2019 LRDP for the Hillcrest Campus. The analysis that follows evaluates the on-campus population increases under the proposed 2019 LRDP and the associated demand for public services, including fire protection, police protection, and schools. Effects associated with recreation services, such as parks, are evaluated in Section 3.14, Recreation, of this 2019 LRDP EIR.

3.13.1 Environmental Setting

3.13.1.1 Fire Protection

UC San Diego Hillcrest Fire Prevention

The Hillcrest Campus does not have its own fire department and therefore relies on the City of San Diego Fire-Rescue Department (SDFR) to respond to all applicable emergencies. However, the Hillcrest Campus does employ a fire marshal and staff totaling four employees who are responsible for campus-wide fire prevention. The Hillcrest Campus Fire Marshal and staff provide services such as plan review and construction inspections of new construction as well as alterations or renovations to existing buildings and facilities. Plan review and construction inspections are performed in accordance with current California building and fire codes (Fiero 2018).

The Hillcrest Campus employs various fire protection measures to ensure adequate safety on campus. When new development, redevelopment, or site improvements occur at the Hillcrest Campus, the campus emergency access route map must be amended to ensure that adequate fire protection equipment access is maintained on campus at all times. The City Deputy Fire Marshal meets with the Hillcrest Campus Fire Marshal as needed to review and revise site access plans to adequately serve the campus. Maintenance activities for water mains and fire hydrants are managed by the UC San Diego Facilities Management Department, which is responsible for ensuring that the water supply for fire hydrants meets fire flow standards. All of the on campus buildings have been equipped with fire alarm, sprinkler, and fire suppression systems. Fire hydrants, sprinkler systems, standpipes, fire pumps, and the fire alarm systems undergo annual testing and maintenance. The Hillcrest Campus Fire Marshal represents the State Fire Marshal for inspection and licensing of all buildings (Fiero 2018). The Hillcrest Campus also has an Emergency Operations Plan that addresses various emergency situations including fires and other human-caused and natural disasters. There are policies for all employees that cover fire prevention, fire response, and interim life safety measures (Imroth 2018).

The Hillcrest Campus performs approximately 26 fire drills per year as well as fire safety training for all employees. The Hillcrest Campus Fire Marshal keeps records of fire alarm activations that

have occurred at campus buildings. Approximately 113 fire alarm activations occurred in 2017 and SDFR responded to each of these alarms. The primary causes for these activations included burnt food from cooking, smoking in restrooms, construction dust, and system malfunction (Fiero 2018).

Additionally, annual fuel management is conducted to protect the Hillcrest Campus from wildfires. Fuel management on campus follows the City's Brush Management Regulations in the San Diego Municipal Code (SDMC Section 142.0412) (2019), which identify a 100-foot-wide zone between structures and native wildlands divided into two sections: Zone 1 – a minimum 35-foot-wide zone extending out from the structure, and Zone 2 – the remaining 65 feet that extend beyond Zone 1. Zone 1 is typically hardscape or irrigated landscaping (or a combination thereof) with the inclusion of low-fuel species and is considered part of the development footprint for a project. Zone 2 is the thinning zone where selective thinning and pruning of plants is required to reduce fuel load. No grading, grubbing, or irrigation is allowed in Zone 2, and non-native plants are identified as a priority for removal ahead of native plants. The UC San Diego Hillcrest Campus Fire Marshal has the authority to adjust zone widths and requirements based on site conditions. Additionally, approximately 20 fire hydrants are located throughout the Hillcrest Campus, and the campus complies with the California Fire Code regarding fire hydrant provision.

City of San Diego Fire-Rescue Department

The SDFR is responsible for responding to emergencies that occur in the communities that surround the Hillcrest Campus and on the campus itself. The SDFR provides emergency/rescue services, hazard prevention, and safety education to ensure the protection of life, property and the environment, including education about vegetation management to protect properties from wildfires in canyon areas. The SDFR has 52 fire stations responsible for protecting 343 square miles and a population of 1,419,845 persons (City of San Diego 2018a). If additional support is needed, SDFR relies on automatic aid agreements with jurisdictions adjacent to the City. These agreements ensure that the closest engine company or medic unit would respond to an incident on the Hillcrest Campus, regardless of their jurisdiction. The SDFR averaged a response time of 6 minutes and 9 seconds during the Citygate Report Year 2015–2016, which does not meet the City's goal of 5 minutes (Citygate 2017). These response times are achieved 90 percent of the time. Citygate identifies 10 potential locations for additional fire stations to fill the current gaps in service throughout the City and achieve faster response times. The nearest of these stations to the Hillcrest Campus would be a location near Waterfront Park in the downtown area.

A particular fire threat within the Uptown Community is the steep open space canyons that primarily extend along the edges of the neighborhoods and I-8 in the Mission Valley Community on the northern boundary of the Uptown Community. These heavily vegetated areas have been prone to fires in the past. The SDFR has an active program that promotes the clearing of canyon vegetation from structures. The City has recognized the value of fire prevention measures, including adopting strenuous safety codes and an aggressive fuel management program, to reduce

pressure on the overall response system in the long term. The City will continue to evaluate fire and police capacity as growth and development continues to occur in the area to ensure that station locations and staffing levels are adequate to maintain acceptable levels of service (City of San Diego 2016a).

The Uptown Community, including the Hillcrest Campus, is served primarily by three fire stations (see Figure 3.13-1, Public Services near the Hillcrest Campus, for locations of fire stations). Fire Station 3 is located approximately 2.2 miles south of the Hillcrest Campus at 725 West Kalmia Street. The total district service area for this station is 2.2 square miles serving Midtown, Balboa Park, and surrounding areas. This fire station operates one fire engine. Fire Station 5 is located at 3902 Ninth Avenue and is located approximately 0.9 mile southeast of the Hillcrest Campus. This station's district service area is 4.1 square miles serving the Hillcrest Community and its surrounding areas. Fire Station 5 operates one fire engine and one Battalion Chief's vehicle. Fire Station 5 completed a remodel in August 2018. The new building includes over 10,000 square feet and two stories (SDGLN 2018). Fire Station 8 is located approximately 0.7 mile from the Hillcrest Campus at 3974 Goldfinch Street. This fire station serves Mission Hills and its surrounding areas with a total district service area of 2.7 miles. This station operates one fire engine (City of San Diego 2018a). According to the Uptown Community Plan Update EIR (City of San Diego 2016b), there are plans for Fire Station 8 to be expanded to include new quarters and parking for fire staff that would occupy the Mission Hills Library site at 925 West Washington Street once the library is relocated (City of San Diego 2016b).

Based on data collected by Citygate for the reporting year 2015–2016, Fire Stations 3, 5, and 8 closest to the Hillcrest Campus averaged SDFR response times of 8:55, 7:43, and 7:10 (minutes: seconds) respectively, 90 percent of the time (Citygate 2017).

The SDFR responded to 113 incidents on the Hillcrest Campus in 2017. With each alarm, the SDFR dispatches one engine and one truck company. A truck company is a group of firefighters who have additional training and experience to perform individual tasks upon arrival in an emergency situation (FDNY 2018). If additional information is given about the type of incident (i.e., visible thick smoke), SDFR dispatches five engines, two trucks, three battalion chiefs, and one shift commander. However, this extensive response only occurs a few times per year (Fiero 2018).

3.13.1.2 Police Services

UC San Diego Hillcrest Security Services

The Hillcrest Campus Security Services is a part of the overall UC San Diego Health security system. This team is responsible for all security-related incidents on the Hillcrest Campus with the San Diego Police Department (SDPD) serving as the responding law enforcement agency. Although other UC campuses, including the La Jolla Campus, have the UC Police Department operating on campus and handling all patrol, investigation, crime prevention, and related law

enforcement duties, the UC Police Department does not have any responsibility on the Hillcrest Campus. Therefore, campus security deals with all minor incidents on campus and all other emergencies are relayed to the SDPD (Billberry 2019).

City of San Diego Police Department

The Central and Western Neighborhood Divisions of the SDPD serve the Uptown Community including the Hillcrest Campus (see Figure 3.13-1 for police division locations). The Central Division police station is located at 2501 Imperial Avenue approximately 5.4 miles south of the campus. The Central Division serves a population of 103,524 persons and encompasses 9.7 square miles. This division serves the neighborhoods of Balboa Park, Barrio Logan, Core-Columbia, Cortez, East Village, Gaslamp, Golden Hill, Grant Hill, Harborview, Horton Plaza, Little Italy, Logan Heights, Marina, Park West, Petco, Sherman Heights, South Park, and Stockton (City of San Diego 2018b) The Western Division police station is located at 5215 Gaines Street approximately 3.4 miles northwest of the Hillcrest Campus. The Western Division serves a population of 129,709 persons and encompasses 22.7 square miles. This division serves the neighborhoods of Hillcrest, La Playa, Linda Vista, Loma Portal, Midtown, Midway District, Mission Hills, Mission Valley West, Morena, Ocean Beach, Old Town, Point Loma Heights, Roseville-Fleetridge, Sunset Cliffs, University Heights, and Wooded Area located within the community of Point Loma (City of San Diego 2018b).

The SDPD works toward accomplishing its policies and public safety goals by embracing the Neighborhood Policing philosophy and practice. Neighborhood Policing requires shared responsibility between the City and residents in order to address underlying problems contributing to crime and the fear of crime. The City engages in a problem-solving partnership with community groups, government agencies, private groups, and individuals to fight crime and improve the quality of life for residents of San Diego (City of San Diego 2018c).

The SDPD sets response time goals for different levels of emergencies. Average response time guidelines are as follows: Priority E Calls (imminent threat to life) within 7 minutes; Priority 1 Calls (serious crimes in progress) within 14 minutes; Priority 2 Calls (less serious crimes with no threat to life) within 27 minutes; Priority 3 Calls (minor crimes/requests that are not urgent) within 80 minutes; Priority 4 calls (minor requests for police service) within 90 minutes (City of San Diego 2018d). The SDPD's general goal for responding to emergency calls is 7 minutes and the staffing goal is to maintain 1.48 officers per 1,000 population ratio). The SDPD is meeting or exceeding these response times (City of San Diego 2013). In fiscal year 2018, there were approximately 231 calls made from the Hillcrest Campus to SDPD (Billberry 2019).

3.13.1.3 Schools

The San Diego Unified School District (SDUSD) provides kindergarten through 12th grade school services to most of the City. It is the second largest school district in California and employs

approximately 13,559 persons in more than 226 educational facilities. As of the 2017–2018 school year, there were 117 active elementary schools (kindergarten–8th grade), 24 active middle schools, 22 high schools, and 13 atypical/alternative schools in the SDUSD system. There are also 49 charter schools and 5 additional program sites. Total SDUSD student enrollment for all district and charter schools was 127,112 students in the 2017–2018 school year (Hudson 2018) (Appendix L). Of that total, 74,860 students were enrolled in district elementary schools and 29,941 students were enrolled in district secondary schools. The remaining 21,599 students were enrolled in charter schools (DOE 2018). Students attending private schools are not counted in these enrollment numbers.

The majority of school-age children residing within and around the Hillcrest Campus attend assigned SDUSD schools. The nearest SDUSD elementary school is Florence Elementary School (kindergarten–5th grade) located approximately 0.5 mile south of the Hillcrest Campus at 3914 First Avenue. As of April 2018, Florence Elementary School has an operating capacity of 80 percent. The nearest middle school within the SDUSD attendance boundary surrounding the Hillcrest Campus is Roosevelt Middle School located approximately 2.2 miles south of the Hillcrest Campus at 3366 Park Boulevard. Roosevelt Middle School has an operating capacity of approximately 70 percent as of April 2018. The nearest SDUSD high school to the Hillcrest Campus is San Diego High School located approximately 3.2 miles south of the Hillcrest Campus at 1405 Park Boulevard. Refer to Figure 3.13-1 for a visual map of these school locations. As of April 2018, San Diego High School has an operating capacity of 80 percent. Students who reside in or around the Hillcrest Campus may attend schools in the SDUSD system other than their assigned schools on a space-available-basis by applying through the SDUSD's Choice enrollment program (SDUSD 2018). There are various private schools and neighboring community schools that also serve the community.

Based on the SDUSD Instructional Facilities Planning Department (IFPD), the student generation rates for existing multi-family development within the City ranges from 0.016 to 0.189 per unit (Hudson 2018). Kindergarten through 12th grade students living in off-campus households would typically attend the schools assigned for their neighborhood by the school district.

3.13.1.4 Medical Services

The Hillcrest Campus provides critical medical services for the Uptown Community and City. Inpatient services are located across several buildings clustered within the center of the Hillcrest Campus. Comprehensive emergency medicine makes up the bulk of all inpatient services provided on campus and includes a Level 1 Trauma Center, a comprehensive stroke center, a regional burn center, disaster medicine, hyperbaric medicine, and toxicology. Outpatient activities are scattered across the Hillcrest Campus and beyond its boundaries in other areas of the Medical Complex neighborhood. These services include, but are not limited to, arthritis and rheumatology, cardiology, dermatology, endocrinology, nephrology, nutritional counseling, obstetrics, pulmonology, infectious disease/skin testing, vascular surgery, and a pharmacy. The Hillcrest

Campus also houses a Clinical Teaching Facility where research activities and classroom/teaching experiences take place.

3.13.1.5 Parks

Refer to Section 3.14 for a discussion of on- and off-campus park and recreation facilities and services.

3.13.2 Regulatory Framework

There are no federal public services regulations that apply to the proposed 2019 LRDP. Applicable state regulations and non-regulatory local regulations are discussed below.

3.13.2.1 State

State Fire Regulations

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which include regulations concerning building standards (as also set forth in the California Building Code [CBC]), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training. The State Fire Marshal enforces these regulations and building standards in all state-owned buildings, state-occupied buildings, and state institutions throughout California, including the UC. The Hillcrest Campus Fire Marshal is delegated the authority by the State Fire Marshal for inspection and licensing of the buildings on campus.

3.13.2.2 Local (Non-Regulatory)

As discussed in other sections of this 2019 LRDP EIR, UC San Diego is part of the UC, a constitutionally created entity of the State of California, with "full powers of organization and government" (Cal. Const. Art. IX, Section 9). As a constitutionally created state entity, the UC is not subject to municipal regulations of surrounding local governments, such as the City's General Plan or land use ordinances, for uses on property owned or controlled by the UC that are in furtherance of the UC's education purposes. However, UC San Diego may consider, for coordination purposes, aspects of local plans and policies for the communities surrounding the campus when it is appropriate and feasible, but it is not bound by those plans and policies in its planning efforts. Because the Hillcrest Campus relies on fire and police protection from the City, local plans and policies may be relevant to the analysis of impacts resulting from implementation of the proposed 2019 LRDP. The plans and policies relevant to this analysis are presented in the following sections.

City of San Diego General Plan

The City's General Plan Public Facilities, Services and Safety Element (2018c) was recently amended in June 2018 to be compliant with SB 1241, which requires jurisdictions with Very High Hazard Severity Zones to address the risk of fire in the General Plan.

The following Public Facilities, Services, and Safety Element goals contained in the City's General Plan are relevant to the analysis found in this section:

- Public facilities and services that are equitably and effectively provided through application of prioritization guidelines.
- Adequate public facilities available at the time of need.
- Protection of life, property, and environment by delivering the highest level of emergency and fire-rescue services, hazard prevention, and safety education.
- Safe, peaceful, and orderly communities.
- Police services that respond to community needs, respect individuals, develop partnerships, manage emergencies, and apprehend criminals with the highest quality of service.
- A public school system that provides opportunities for students to attend schools within their residential neighborhoods as well as choices in educational settings outside their neighborhoods.

The following are the Public Facilities, Services, and Safety Element policies put forward that would implement the above goals and are relevant to this section:

- **PF-C.1** Require development proposals to fully address impacts to public facilities and services.
- **PF-D.1** Locate, staff, and equip fire stations to meet established response times.
- **PF-D.2** Determine fire station needs, location, crew size and timing of implementation as the community grows.
- **PF-D.6** Provide public safety related facilities and services to assure that adequate levels of service are provided to existing and future development.
- **PF-E.2** Maintain average response time goals as development and population growth occurs.
- **PF-K.1** Assist the school districts and other education authorities in resolving problems arising over the availability of schools and educational facilities in all areas of the City.

Uptown Community Plan

The Uptown Community Plan (2016a) provides policies to inform land use, development form, and public resource decisions and provides a long-range guide for the future physical development of the community. While the Uptown Community Plan addresses specific community needs, its policies and recommendations are consistent with the City's General Plan. A description of land uses within this community is included within Section 3.10, Land Use and Planning, of this 2019 LRDP EIR.

The following Public Facilities, Services, and Safety Element goals contained in the Uptown Community Plan are relevant to the analysis found in this section:

- A high level of community facilities and services that meet the needs of Uptown.
- Police and fire safety services that meet the needs of the community.

The following are the Public Facilities, Services, and Safety Element policies put forward that would implement the above goals and are relevant to this section:

- PF-1.3 Provide public facilities that accommodate a full range of programs to serve residents and cultivate civic involvement.
- PF-1.6-f Reduce incident of criminal activity within the Uptown neighborhoods. Development projects should provide adequate lighting, visibility for surveillance, and gradations between public and private spatial territories.
- PF-1.7 Maintain the high level of fire protection throughout Uptown.
    a. Support efforts by the City to educate and inform the community regarding fire prevention techniques.
    b. Support regular upgrading of Uptown fires stations as necessary to adequately respond to fires and emergencies.
- PF-1.10 Transform school facilities in Uptown into neighborhood focal points with a strong image and identity.
    d. Encourage the San Diego Unified School District to engage the community in planning for new and expanded facilities.
- PF-2.1 Maintain a high level of fire protection throughout the community, particularly in the neighborhoods adjacent to natural open space

3.13.3 Project Impacts and Mitigation

The following sections address various potential impacts relating to public services that could result from implementation of the proposed 2019 LRDP. Refer to Section 3.14 for a discussion of on- and off-campus park and recreation facilities and services.

3.13.3.1 Issue 1: Fire Protection Facilities

Public Services Issue 1 Summary

Would implementation of the 2019 LRDP result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection?

Impact: Implementation of the 2019 LRDP would not result in increased demand for fire services that would require new facilities that could result in a significant physical impact to the environment.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if the 2019 LRDP would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection.

Impact Analysis

Currently, the City as a whole is not meeting its desired fire response times; however, the City is working to address the cumulative demand for SDFR facilities citywide. The 2017 Citygate Report (Citygate 2017) identifies the need for 10 new fire stations throughout the City to close current service gaps and improve response times. The 2017 Citygate Report does not specifically identify the Uptown Community as a priority area for new fire stations. However, a new replacement facility at Fire Station 5 located approximately 0.9 mile from the Hillcrest Campus was recently completed to meet the needs of the local neighborhood, including the Hillcrest Campus. In addition, Fire Station 8, approximately 0.7 mile from the Hillcrest Campus, is also planned for relocation/expansion to better meet the needs of the community; as of this writing, the City has issued the project building permit. Beyond these two fire station expansions, there is no evidence that other fire protection facilities would be needed in the Uptown neighborhood. Moreover, the Uptown Community Plan Update EIR (2016b) does not identify a need for additional fire stations in the Uptown Community.

Implementation of the 2019 LRDP would result in the demolition of approximately 1.1 million gsf and the construction of 2.7 million gsf, resulting in 1.6 gsf of net new development on campus, including up to 1,000 residential units. This new development would result in a non-residential population increase of approximately 750 persons and a residential population increase of approximately 1,646 additional on-campus residents. For analysis purposes, a total proposed campus population increase of approximately 2,396 persons is assumed from implementation of the 2019 LRDP. This presents a worst-case scenario because some of the additional students, staff, and faculty included in the projected non-residential population may also reside in the proposed new on-campus housing. Therefore, an up to 2,396-person population increase is a conservative estimate, as it likely reflects some double counting among the non-residential and residential populations. The proposed residential units would be provided for current or future UC San Diego affiliates (faculty, staff, and students) that generally would otherwise live elsewhere in the San Diego region. The addition of approximately 2,396 persons into the Uptown Community would increase the potential for fire-related incidents on campus and may incrementally increase demand for fire services.

The SDFR Fire Stations 3, 5, and 8 currently serve the Uptown Community and would serve the Hillcrest Campus under the proposed 2019 LRDP. These three fire stations are projected to be able to serve approximately 58,870 persons living in the Uptown Community at full buildout (City of San Diego 2016a). The introduction of approximately 1,646 new, on-campus residents from the implementation of the 2019 LRDP would represent approximately 3 percent of the total community residential population at full buildout. This percentage spread between three fire stations would not result in a substantial increase in demand per fire station. Therefore, implementation of the 2019 LRDP would incrementally add to fire demand but would not directly trigger the need for new fire facilities that would result in substantial adverse physical impacts beyond those already contemplated.

In addition, a majority of the new campus development would be replacing and upgrading existing facilities on the Hillcrest Campus, including the existing hospital. New buildings and facilities associated with campus infrastructure would be constructed of ignition-resistant materials and built to current building codes with state-of-the-art fire suppression infrastructure to lessen fire risk. The redevelopment of the campus would substantially upgrade the existing aging campus utility systems, including undergrounding electrical facilities, which would further reduce fire risk. Moreover, the circulation system within the campus would be improved, allowing for the more efficient access of emergency vehicles.

UC San Diego would continue to implement its campus-wide Emergency Operations Plan, which addresses the planned response to emergency access on the Hillcrest Campus (see Section 3.13.1.1). The campus would also continue to employ fuel management techniques to protect the campus from wildfires (see Section 3.17, Wildfire). Consistent with the California Health and Safety Code, UC San Diego would equip all new redevelopment on the Hillcrest Campus (academic, residential, medical, research, and support facilities) with state of the art emergency fire alarm and fire sprinkler systems and place new fire hydrants as necessary. The Hillcrest Campus Fire Marshal and his staff would also continue to implement campus-wide fire prevention programs. These actions, mandated by state law, would limit the number of incidents requiring the SDFR to respond to on-campus calls, further minimizing additional demand for fire protection services.

Therefore, implementation of the 2019 LRDP would not require the construction of new or expanded fire protection facilities in order to maintain the acceptable service response times. Impacts would be less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact on fire protection services; therefore, no mitigation is required.

3.13.3.2 Issue 2: Police Protection Facilities

Public Services Issue 2 Summary

Would implementation of the 2019 LRDP result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection?

Impact: Implementation of the 2019 LRDP would not result in increased demand for police services that would require new facilities that could result in a significant physical impact to the environment.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the proposed 2019 LRDP may have a significant impact if the 2019 LRDP would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection.

Impact Analysis

Implementation of the 2019 LRDP would result in the demolition of approximately 1.1 million gsf and the construction of 2.7 million gsf resulting in 1.6 gsf of net new development on campus. A majority of the new campus development would be replacing and upgrading existing facilities to be built to current building codes on campus, including the existing hospital. The 2019 LRDP would result in a non-residential population increase of approximately 750 persons and a residential population increase of approximately 1,646 additional on-campus residents. For analysis purposes, the total proposed campus population would increase up to 2,396 persons, though this number likely includes some double counting among the non-residential and residential populations. The proposed residential units would be provided for current or future UC San Diego affiliates (faculty, staff, and students) who would live elsewhere in the San Diego region. The addition of approximately 2,396 persons into the Uptown Community would increase the potential for incidents on campus and may incrementally increase demand for police services.

The SDPD's Central and Western Neighborhood Divisions serve the Uptown Community and would continue to serve the Hillcrest Campus under the proposed 2019 LRDP. In total, these two divisions currently serve a population of approximately 233,233 persons in the City. The addition of approximately 2,396 persons with implementation of the 2019 LRDP would represent a 1 percent

increase in overall service population. This small percentage would equate to a small increase in demand for SDPD service. The City has an officer-resident ratio of 1.3 officers per 1,000 residents (Himchak 2019). The addition of approximately 2,396 persons into the area would require an additional 3.1 officers. This can be accommodated by hiring new officers for the existing police divisions that serve the City and would not require new facilities. Additionally, the SDPD is already meeting its target response times of 7 minutes for Priority 1 response calls and would be expected to continue to meet target response times with the addition of the new officers described previously.

Buildout of the proposed 2019 LRDP would result in a non-residential population increase of approximately 750 persons on the Hillcrest Campus, including graduate students, faculty, and staff that would reside in other established communities throughout the City. Some of these people would choose to live on campus and would be accounted for in the residential campus population increase for police services described previously. The remainder would live in other local communities that would spread out and share the additional demand for police services. Assuming the same officer-resident ratio presented previously, approximately one more officer would be required to serve the residential population increase from implementation of the 2019 LRDP. Therefore, implementation of the 2019 LRDP is not anticipated to require additional police facilities to serve the Hillcrest Campus. Impacts would be less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact on police services; therefore, no mitigation is required.

3.13.3.3 Issue 3: Public School Facilities

Public Services Issue 3 Summary

Would implementation of the 2019 LRDP result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios for public schools?

Impact: Implementation of the 2019 LRDP would not result in the need for new or altered school facilities that could result in a significant physical impact to the environment.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the proposed 2019 LRDP may have a significant impact if the 2019 LRDP would result in substantial adverse physical impacts

associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools.

Impact Analysis

Buildout of the proposed 2019 LRDP would result in an increased on-campus residential population of approximately 1,646 due to the increase of 979 multi-family residential units. The SDUSD IFPD evaluated the potential impacts of the on-campus population increase associated with the 2019 LRDP on the schools serving the Hillcrest Campus (Hudson 2018) (Appendix L). Because the size of the new residential units is unknown at this time (e.g., studio, one- or two-bedroom), the SDUSD IFPD reviewed existing multi-family residential developments with varying unit size in the City to determine a range of student generation rates (Hudson 2018). Based on up to 1,000 new residential units, SDUSD IFPD estimated that the Hillcrest Campus could generate up to 123 total students ranging from kindergarten through 12th grade, assuming a rate of up to 0.123 children under the age of 18 per household (Hudson 2018). The increase in school-age children would potentially create additional demand for local public school seating capacity.
The SDUSD IFPD determined that Florence Elementary, Roosevelt Middle, and San Diego High Schools would likely be able to accommodate the growth in school-age children under the proposed 2019 LRDP under existing attendance boundaries. Currently, Florence Elementary and San Diego High Schools are both operating at 80 percent capacity, and Roosevelt Middle School is operating at 70 percent capacity. Though the urban areas surrounding the Hillcrest Campus typically see lower student generation rates than more suburban parts of the region, given the long timeline of the Hillcrest Campus redevelopment, it is difficult to say with certainty what district enrollment would be at buildout. If full capacity is reached at these schools, the SDUSD would employ two primary strategies to address a potential overcrowding situation. The first strategy would be to reduce nonresident student enrollment, and the second strategy would be to change school attendance areas. However, since overall SDUSD enrollment has been in a downward trend averaging 1,000–2,000 less students per year for the past 3 years, the capacities of these schools are not expected to be reached and would likely be able to accommodate the increased enrollment under the 2019 LRDP.

In addition, Proposition S, a bond measure passed in 2008, and Proposition Z, a bond measure passed in 2012 authorized $2.1 billion and $2.8 billion in funding to repair, renovate, and revitalized schools within the SDUSD. The upgraded school facilities funded through these bond measures would contribute to the provision of adequate facilities to serve regional growth in the City. The increase in children living on campus is not expected to result in the need for new school facilities beyond those already planned for by the SDUSD. Therefore, implementation of the 2019 LRDP would not result in a significant physical adverse effect with respect to the provision of adequate school facilities.

Buildout of the proposed 2019 LRDP would result in a non-residential population increase of approximately 750 persons at the Hillcrest Campus, including graduate students, faculty, and staff that reside in other established communities throughout the City. Assuming the same ratio described previously for on-campus school-age children, approximately 56 more school-age children would result with the new faculty and staff under the implementation of the 2019 LRDP. Some of these people would choose to live on campus and would be accounted for in the residential campus population increase for school-age children described previously. The remainder would live in other local communities, which would spread out and share the additional demand for local public school seating capacity. Furthermore, school facilities in other local communities would be provided through school fees collected with property taxes and developer agreements.

When compared to the total number of students enrolled in the SDUSD educational system as of 2017–2018 school year (127,112), the number of school-aged children that could result from implementation of the 2019 LRDP (179 children by the planning horizon year 2035) is a relatively small number. UC San Diego would continue to coordinate with the SDUSD on the campus's residential development and anticipated increase in school-aged children as project detail such as unit size becomes available. Therefore, increased on- and off-campus housing demand resulting from implementation of the proposed 2019 LRDP would not result in the need for new school facilities or substantial alterations that would result in adverse physical impacts. Impacts would be less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact on schools; therefore, no mitigation is required.

3.13.4 Cumulative Impacts and Mitigation

Public Services Cumulative Issue Summary

Would implementation of the 2019 LRDP have a cumulatively considerable contribution to a cumulative public services impact considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Issue 1: Fire protection performance standards and potential adverse physical impacts from new facilities	Less than significant	Not cumulatively considerable
Issue 2: Police protection performance standards and potential adverse physical impacts from new facilities	Less than significant	Not cumulatively considerable
Issue 3: School service ratios and potential adverse physical impacts from new facilities	Less than significant	Not cumulatively considerable

3.13.4.1 Cumulative Issue 1: Fire Protection Services

The geographic context for the analysis of cumulative impacts in regard to fire protection services is the City near the Hillcrest Campus, where the facilities that may serve the campus are located. A significant cumulative impact would occur if growth associated with cumulative projects would outpace the fire department's ability to expand and serve new development resulting in adverse effects to the fire department from either increased response times, physical deterioration of existing facilities, or lack of funding for the development of future facilities. As stated in Section 3.13.1.1, the City is not currently meeting its desired fire protection service response times in many areas due to insufficient crews and stations, which results in the potential for a significant cumulative impact due to the need to expand fire protection services to adequately serve the projected population. To improve the current condition, the construction of new or improved fire facilities is planned throughout the City, including in the Uptown Community, and this construction could result in physical impacts to the environment. In general, compliance with federal, state, and local regulations would preclude incremental impacts associated with new construction of or improvements to facilities infrastructure. However, for some projects, it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts, and such projects may require additional project-specific mitigation measures. Because of the geographic extent of the City and the fact that new fire protection facilities would be geographically separated from one another in order to serve the communities that are underserved, the physical impacts of expanding the fire protection facilities would be isolated to the specific sites identified in the Citygate Report (2017) and would not result in cumulatively significant physical impacts.

Therefore, a significant cumulative impact associated with provision or expansion of fire protection facilities would not occur, and the proposed 2019 LRDP's contribution would not be cumulatively considerable.

3.13.4.2 Cumulative Issue 2: Police Protection Services

The geographic context for the analysis of cumulative demand for police services and facilities is the City where the facilities that may serve the Hillcrest Campus are located and where populations associated with the proposed 2019 LRDP may live. A significant cumulative impact related to adverse effects on existing police services would occur if the development of future cumulative projects were to result in adverse effects on the SDPD from either increased response times, physical deterioration of existing facilities, or lack of funding for the development of future facilities. As additional development occurs in the region, including the nearby Legacy International Center project, the proposed 111-dwelling-unit mixed-use development project located at 635 Robinson Avenue, and a 141-multi-family residential unit project at 3500 to 3534 Fifth Avenue, increases in the demand for police protection would most likely require improvements to police protection facilities. However, these and other cumulative projects would

undergo discretionary review by local agencies and would be required to conform with applicable adopted land use plans, which are used as the basis to plan for adequate police protection services. Furthermore, police protection facilities would be provided for new development through property taxes, developer agreements, and other general fund revenue sources. Also, because the SDPD is meeting its target of 7 minutes for Priority 1 response calls, a significant cumulative impact associated with the provision of new or expanded police protection facilities would not occur, and the proposed 2019 LRDP's contribution would not be cumulatively considerable.

3.13.4.3 Cumulative Issue 3: School Services

The geographic context for on-campus demand for schools is the SDUSD, which would provide school services for school-age children residing at the Hillcrest Campus and in the surrounding communities. A significant cumulative impact related to adverse effects on existing school services would occur if future cumulative projects would generate an increase in population that would exceed the SDUSD educational standards and result in degraded school facilities and services. The cumulative projects that could result in an increase in the number of public school-age children attending SDUSD schools in the vicinity of the Hillcrest Campus are primarily residential projects. These projects include a 111-residential dwelling unit project at 635 Robinson Avenue, a 141 multi-family residential unit project at 3500 to 3534 Fifth Avenue, and 6 attached multi-family residential units at 3745 Third Avenue. These projects would undergo discretionary review by local agencies and be required to conform to applicable adopted land use plans, which are used as the basis to plan for adequate school facilities. Additionally, based on the SDUSD IFPD letter (Appendix L), the schools in the Hillcrest area currently have available capacity to serve new students. The overall SDUSD enrollment has been in a downward trend averaging 1,000–2,000 less students per year for the past 3 years; therefore, the capacities of these schools are not expected to be reached and would likely be able to accommodate the increased enrollment from cumulative project development. As described previously, if for any reason in the future capacity at these schools becomes limited, the SDUSD employs strategies to address a potential overcrowding situation. Therefore, a significant cumulative impact associated with the construction of new or expanded school facilities would not occur, and the proposed 2019 LRDP's contribution would not be cumulatively considerable.

3.13.5 CEQA Issues Where There Is No Potential for a Significant Effect

All checklist items in Appendix G of the CEQA Guidelines under Public Services are evaluated in this 2019 LRDP EIR.

3.13.6 References

Billberry, Elizabeth. 2019. "Security Services on the Hillcrest Campus." Email from Elizabeth Billberry (UC San Diego Health) to Morgan Weintraub (Harris & Associates). January 11, 2019.

City of San Diego. 2013. Performance Audit of Police Patrol Operations. September 2013.

City of San Diego. 2016a. Uptown Community Plan. November 2016.

City of San Diego. 2016b. Final Program Environmental Impact Report for the Uptown Community Plan Update. City of San Diego, Planning Department. September 2016.

City of San Diego. 2018a. "About SDFD." Accessed August 30, 2018. https://www.sandiego.gov/fire/about.

City of San Diego. 2018b. "Police." Accessed September 10, 2018. https://www.sandiego.gov/police.

City of San Diego. 2018c. "Public Facilities, Services, and Safety Element," as amended. In City of San Diego General Plan. Updated June 29, 2015. Amended June 15, 2018.

City of San Diego. 2018d. Fiscal Year 2019 Adopted Budget. Department Detail, Police. Accessed January 9, 2018. https://www.sandiego.gov/sites/default/files/fy19ab_v2police.pdf.

City of San Diego. 2019. "Section 142.0412: Brush Management." in San Diego Municipal Code. February 2019.

Citygate (Citygate Associates, LLC). 2017. San Diego Fire-Rescue Department Standards of Response Cover Review. February 22, 2017.

DOE (California Department of Education). 2018. "2017–18 Enrollment by Age Group and Grade: San Diego Unified District Report." Data Quest. Accessed September 10, 2018. https://dq.cde.ca.gov/dataquest/dqcensus/EnrAgeGrd.aspx?cds=3768338&agglevel=District&year=2017-18&ro=y&ro=y&ro=y&ro=y&ro=y.

FDNY (FDNY Foundation). 2018. "Truck Company." Accessed on January 11, 2018. http://www.fdnysmart.org/truck-company/.

Fiero, Jimmy. 2018. "Fire Safety on the Hillcrest Campus." Personal communication from Jimmy Fiero (UC San Diego) to Morgan Weintraub (Harris & Associates). December 5, 2018.

Himchack, Elizabeth Marie. 2019. "Police Chief: Crime is Down, Officer Retention and Hiring Up." The San Diego Union-Tribune. January 9, 2019.

Hudson, Sarah. 2018. Letter from Sarah Hudson (SDUSD) to Lauren Kahal (UC San Diego Campus Housing). April 18, 2018.

Imroth, Monique. 2018. "Evacuation procedures at Hillcrest." Personal communication from Monique Imroth (UC San Diego) to Morgan Weintraub (Harris & Associates). December 7, 2018.

SDGLN (San Diego Gay and Lesbian News). 2018. "Hillcrest Fire Station No. 5 Opens." August 20, 2018. Accessed December 4, 2018. https://sdgln.com/commentary/2018/08/20/hillcrest-fire-station-no-5-opens.

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Source: ESRI 2018

Figure 3.13-1
Public Services near the Hillcrest Campus

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3.14 Recreation

This section of this 2019 LRDP EIR describes the current recreational uses on the Hillcrest Campus and the surrounding areas as well as the proposed recreational uses and facilities that would be constructed with project implementation. The analysis section discusses if the implementation of the 2019 LRDP for the Hillcrest Campus would lead to a physical deterioration of existing recreation facilities by increasing the use of those facilities. It also discusses whether the development of additional recreation facilities would result in an adverse physical effect on the environment.

3.14.1 Environmental Setting

The Hillcrest Campus does not currently house any recreation-specific facilities and contains few recreational opportunities. Limited open space is provided on the mesa top between buildings with concrete paths offering connections from one building to the next. The campus is surrounded to the north, east, and west by steep-sloped canyon areas that provide views to visitors and staff from various buildings and lookout points. Off-campus recreational opportunities are also available, including the numerous city, county, and state parks and private health clubs located in the vicinity of the campus. On- and off-campus recreational opportunities and facilities are discussed in greater detail in the following sections.

3.14.1.1 Existing On-Campus Recreational Opportunities

The Hillcrest Campus currently contains few recreational opportunities. Open space is sporadically placed throughout the campus, predominantly surrounding the front entrance of the Inpatient Tower and the Clinical Teaching Facility. Limited lawns with mature trees and seating areas offer space for studying, gathering, and quiet reflection. Surrounding the campus to the north, west, and east are steep-sloped canyon areas. The City's General Plan (City of San Diego 2008) designates these canyon hillsides and existing open space within the campus as "Park, Open Space, & Recreation." Rough unkempt dirt trails meander throughout the canyons providing limited opportunities for walking and hiking, which is discouraged to avoid impacts to natural habitat and for safety reasons. Concrete pathways weave through a majority of the campus with some ground-level vista points offering views of Mission Valley and the canyons below particularly from the western side of Dickinson Street facing northwest and west between the West Wing, MRI Research Building, and Multipurpose Facility buildings.

3.14.1.2 Off-Campus Recreational Opportunities

Faculty, staff, and graduate students living on or near campus may use off-campus recreational facilities due to the lack of recreational opportunities currently provided on the Hillcrest Campus. The City's Department of Parks and Recreation manages several public parks and recreational facilities within approximately 1 mile of the Hillcrest Campus including West Lewis Street Pocket

Park, Mercy Plaza Park, Pioneer Park, and Mission Hills Park and Open Space Area. Other parks and recreational facilities nearby that may serve the Hillcrest Campus population include the Riverwalk Golf Club, Tecolote Natural Park and Nature Center, Waldo Dean Waterman Park, Waterfront Park, SeaWorld San Diego, Fiesta Island Park, Balboa Park, San Diego Zoo, Mission Bay Park, Mission Bay Golf Course and Golf Center, Belmont Park, Sunset Cliffs Natural Park, and numerous bicycle and hiking trails and beaches. Also, a number of private health clubs and recreational facilities are in the vicinity of the Hillcrest Campus (City of San Diego 2018a).

Presidio Park, located approximately 1.65 miles west of the Hillcrest Campus, is the nearest City park that also operates a recreation center. The Presidio Recreation Center houses youth basketball, youth flag football, adult softball, kickball, and senior basketball leagues. They offer open yoga sessions and open gym basketball once a week. The recreation center is open Monday through Thursday from 1:00 p.m. to 9:00 p.m., Friday from 12:00 p.m. to 8:00 p.m., and Saturday from 10:00 a.m. to 3:00 p.m. (City of San Diego 2018b).

In regards to future off-campus facilities in the Uptown Community surrounding the Hillcrest Campus, the Uptown Community Plan (City of San Diego 2016) identifies a need for future recreational space and facilities to accommodate the increasing population within the City. The City's primary goal is to obtain land for population-based parks; however, vacant land is limited, unavailable, or cost-prohibitive. The City's General Plan (City of San Diego 2008) allows for the application of park equivalencies including joint-use facilities, trails through open space, portions of resource-based parks, privately owned parks, publicly used parks, non-traditional parks, and facility or building expansion or upgrades. The Uptown Community Plan (City of San Diego 2016) identifies joint-use of the future Grant K-8 School gymnasium approximately 0.6 mile southwest of the Hillcrest Campus and a proposed joint-use facility at Florence Elementary School approximately 0.3 mile south, as well as sites to be determined that would provide all of the recreation center space required to serve the community plan at full projected development. The plan also identifies the need for an Uptown aquatics complex at a future site to be determined. Various sites for new neighborhood parks, pocket parks/plazas, resource-based parks, and open space trails have been proposed to address the future park deficit with full buildout of the community plan area.

3.14.2 Regulatory Framework

The following regulatory framework discussion focuses on state and local regulations because there are no relevant recreation-related federal laws.

3.14.2.1 State

The Quimby Act

The Quimby Act (California Government Code, Section 66477) authorizes local governments to establish ordinances requiring developers of new subdivisions to dedicate land for parks, pay an in-lieu fee, or perform a combination of the two. The Quimby Act also requires a city or county to adopt standards for recreational facilities in its general plan recreation element if it is to adopt a parkland dedication/fee ordinance. The amount of land dedicated or fees paid shall be based upon the residential density, which shall be determined on the basis of the approved or conditionally approved tentative map or parcel map and the average number of persons per household. UC San Diego is not subject to Quimby Act requirements because it is not a local government entity. The Quimby standards are used as a guidepost not a requirement under the subsequent analysis.

State Public Park Preservation Act

The primary instrument for protecting and preserving parkland is the state Public Park Preservation Act. Under the Public Resource Code, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

3.14.2.2 Local (Non-Regulatory)

As discussed in other sections of this 2019 LRDP EIR, UC San Diego is part of the UC, a constitutionally created entity of the State of California, with "full powers of organization and government" (Cal. Const. Art. IX, Section 9). As a constitutionally created state entity, the UC is not subject to municipal regulations of surrounding local governments, such as the City's General Plan or land use ordinances, for uses on property owned or controlled by the UC that are in furtherance of the UC's education purposes. However, UC San Diego may consider, for coordination purposes, aspects of local plans and policies for the communities surrounding the campus when it is appropriate and feasible, but it is not bound by those plans and policies in its planning efforts. Because some of the Hillcrest Campus population may use recreational facilities within the City and surrounding communities, local plans and policies may be relevant to the analysis of impacts resulting from implementation of the proposed 2019 LRDP. The policies relevant to this analysis are presented in the following sections.

City of San Diego General Plan

The City's General Plan (City of San Diego 2008) sets forth goals and objectives for the development of the City. As discussed in the Recreation Element of the General Plan (City of San Diego 2015), the City provides three types of recreational accommodations for residents and visitors. These include population-based parks, resource-based parks, and open-space areas. The City's General Plan (City of San Diego 2008) defines resource-based parks and open space.

Resource-based parks include both regional parks and shoreline parks and beaches, both of which serve regional resident and/or visitor populations. Open space is defined as City-owned land, canyons, mesas, and other natural landforms, with the exception of shorelines, that serve single or multiple community plan area(s) population(s) (City of San Diego 2015). The Recreation Element of the General Plan (City of San Diego 2015) also contains goals, guidelines, and policies to guide the management of the parks and recreation system.

Uptown Community Plan

The Uptown Community Plan (City of San Diego 2016) provides policies to inform land use, development form, and public resource decisions and provides a long-range guide for the future physical development of the community. While the Uptown Community Plan addresses specific community needs, its policies and recommendations are consistent with the City's General Plan. A closer description of land uses within this community is included within Section 3.10, Land Use and Planning, of this 2019 LRDP EIR.

The following Recreation Element goals contained in the Uptown Community Plan are relevant to the analysis found in this section (City of San Diego 2016):

- A sustainable park and recreation system that meets the needs of the Uptown residents and visitors which serves a variety of users, such as children, persons with disabilities, and the underserved teenage and senior populations.
- Parks and recreation facilities that keep pace with the Uptown population growth through the timely acquisition of available land and development of new facilities.
- Increased quantity and quality of recreation facilities in Uptown through the promotion of alternative methods, such as park equivalencies, where development of typical facilities and infrastructure may be limited by land constraints.
- Park and recreation facilities that are accessible to, and within one-half mile radius of, Uptown residents, and form an inter-connected community park system.
- Comprehensive pedestrian and bicycle connections between parks and open space lands within and adjacent to the Uptown Community, as well as to surrounding communities.

3.14.3 Project Impacts and Mitigation

The following sections address various potential impacts relating to parks and recreational facilities that could result due to the implementation of the proposed 2019 LRDP.

3.14.3.1 Issue 1: Deterioration of Parks and Recreational Facilities

Recreation Issue 1 Summary

Would implementation of the 2019 LRDP 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?

Impact: The 2019 LRDP would increase the Hillcrest Campus population, which could increase the use of off-campus recreational facilities. However, substantial deterioration of the facilities is not anticipated.

Mitigation: No mitigation is required.

Significance Before Mitigation: Less than significant

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it 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.

Impact Analysis

Impacts to existing parks and recreation facilities most often occur as a result of a substantial increase in population. As identified in Section 3.12, Population and Housing, of this 2019 LRDP EIR, the existing Hillcrest Campus population (residents, students, medical faculty/staff, research faculty/staff, administrative faculty/ staff) is estimated to be approximately 4,450 individuals as of the year 2017. This population is based on UC San Diego Health Human Resources data (for students, staff, and faculty), U.S. Census data, and the 2016 American Community Survey for the Hillcrest area (for residents). Under the 2019 LRDP, the non-residential campus population (graduate students, faculty, and staff) would increase by approximately 750 persons from 4,450 individuals to a population of approximately 5,200. The residential population would increase by approximately 1,611 individuals from 35 residents to a campus population of approximately 1,646 under the 2019 LRDP. The projected non-residential and residential populations are not necessarily additive because the additional students, staff, and faculty may also reside in the proposed housing.

According to the Uptown Community Plan (City of San Diego 2016), the projected residential population for Uptown at full community development is approximately 58,870 persons. The proposed 2019 LRDP would introduce approximately 1,646 additional residents into the Uptown Community, an approximately 2.8 percent increase in the Uptown Community population at full

build out. However, because residents would be UC San Diego affiliates, a majority of these new individuals would already reside in the San Diego region, resulting in a negligible change in the overall population of the region.

The projected increase in campus population associated with the 2019 LRDP could result in an increased use of off-campus recreational facilities. Increased use of privately operated for-profit facilities is not considered an adverse impact because it is an economic benefit to those facilities. Use of off-campus public recreational facilities may occur from the residential and non-residential Hillcrest Campus populations. UC San Diego affiliates who study or work on campus but live off campus may use the public recreational facilities in the neighborhoods surrounding the campus and/or near where they live. UC San Diego affiliates who live in the on-campus housing may also use recreational facilities off campus in the surrounding neighborhoods. In addition, the non-residential campus population would be expected to live in various local communities throughout Southern California, similar to the existing condition, thus the impacts to recreational facilities would be spread out and unlikely to cause deterioration of facilities.

According to the City's General Plan (City of San Diego 2008) standards, the community should be served by approximately 164.84 usable acres of parkland at full community development. The Uptown Community Plan (City of San Diego 2016) cites a 97.14-acre population-based park deficit and identifies potential future parks and recreation facilities to accommodate increased population growth. Additionally, while future residents and UC San Diego affiliates of the Hillcrest Campus would use existing parks and recreation facilities within the Uptown Community, the proposed 2019 LRDP includes plans to construct new recreation facilities and open space that would accommodate the increase in demand and further minimize the park at full buildout deficit cited by the Uptown Community Plan.

Currently, the Hillcrest Campus has limited recreational facilities on site, and with implementation of the 2019 LRDP, new recreational opportunities would be provided on campus that currently do not exist. These recreation opportunities would serve both the campus population and surrounding neighborhood residents, which would reduce the demand that the Hillcrest Campus population may place on nearby public recreational facilities. An approximate 40,000 gsf Wellbeing Center would be constructed on campus and open to UC San Diego affiliates and nearby neighborhood residents. The center would be intermixed with 50 multi-family residential units in order to promote an active lifestyle within the adjacent residential communities both on- and off-campus. The center would include both indoor and outdoor fitness areas for various activity types such as yoga, aerobics, dance, cycling, swimming, meditation, weight training, and court sports. Flexible spaces in the Wellbeing Center would be provided for health education, community lecture series, mobile health clinics, technology/workforce training, and family counseling. Temporary activation events such as farmer's markets, outdoor fitness classes, and community health and wellness fairs would offer more

intermittent bursts of activity. Future temporary events would be planned collaboratively between all campus stakeholders to ensure long-term and local stewardship.

Under the proposed 2019 LRDP, the Hillcrest Campus would feature a range of open space types, with varying levels of intended programming and public access. New open space types would include publicly accessible open spaces for recreation and community events, more contained spaces for quiet meditation, and preserved habitat areas that offer visual/aesthetic benefits (Figure 2-5, Conceptual Future Campus Open Space Types). Publicly accessible open space would make up the majority of the open space area within the developed mesa portion of the campus. It would consist primarily of a large central open space area that would include the following: an informal stage or paved plaza area for larger gatherings and special events, berms or other unique landscape features for passive gathering or relaxation, food or beverage kiosks with movable furniture, and multi-generational fitness stations that encourage people to spend time outdoors. The Central Green would be a communal gathering place and would host a small, freestanding retail area of approximately 4,000 gsf.

Other examples of publicly accessible open space on the campus would include setbacks along the campus rights-of-way and other smaller parks and plazas. New pedestrian connections would weave throughout publicly accessible open spaces and along the edge of the mesa, allowing for physical and visual links to the surrounding canyon landscape and informal recreation and play. Courtyards, building entryways and setbacks would make up a second tier of open space that is semi-public in nature and more connected with the private uses it abuts, such as shaded benches outside building entrances and café seating outside a ground-floor restaurant. Limited access open spaces would be dedicated for use by specific campus user groups and not open to the general public and offer quiet, reflective areas for Health Care District and/or Residential District users to immerse themselves in nature. The Residential District would include publicly accessible dog-related amenities. The canyons surrounding the Hillcrest Campus would be considered preserved landscape and would serve as a natural habitat area and scenic resource to be enjoyed from a distance.

Implementation of the proposed 2019 LRDP would result in a minimal increase (2.7 percent) in the Uptown Community's total residential population and would provide new recreational amenities for the enjoyment of the campus population and surrounding neighborhood residents. Currently, the publicly accessible open space on the Hillcrest Campus is minimal compared to what is proposed in the 2019 LRDP. The 2019 LRDP would not result in the increased use of existing parks or recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. Therefore, the increased use of existing neighborhood and regional parks or other recreational facilities due to the proposed 2019 LRDP population would be less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact related to the deterioration of parks and recreational facilities; therefore, no mitigation measures are required.

3.14.3.2 Issue 2: Construction or Expansion of Recreational Facilities

Recreation Issue 2 Summary

Would implementation of the 2019 LRDP include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Impact: Implementation of the 2019 LRDP would include the construction and expansion of recreational facilities that may have an adverse physical effect on the environment.	**Mitigation:** Mitigation measures in Section 3.1, Aesthetics; Section 3.2, Air Quality; Section 3.3, Biological Resources; Section 3.4, Cultural and Tribal Cultural Resources; Section 3.5, Energy; Section 3.6, Geology and Soils; Section 3.8, Hazards and Hazardous Materials; Section 3.11, Noise; Section 3.15, Transportation
Significance Before Mitigation: Potentially significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would include recreational facilities or require the construction or expansion of recreational facilities that may have an adverse physical effect on the environment.

Impact Analysis

Increased open space on campus is a main goal for the proposed 2019 LRDP. In 2013, UC San Diego completed an open space study for the Hillcrest Campus to develop a more "cohesive and branded landscape language" (UC San Diego 2013). The open space study aimed to highlight the landscape's important role as a branding device for UC San Diego Health and to strengthen connections between the Hillcrest Campus and surrounding neighborhood. In order to keep with its goals of becoming "a state-of-the-art academic health campus and lifelong wellness destination with locally focused amenities" (UC San Diego 2013), the 2019 LRDP proposes the construction of new publicly accessible wellness facilities and open spaces throughout the Hillcrest Campus.

Development under the proposed 2019 LRDP would be divided into five phases. The approximately 40,000 gsf Wellbeing Center would be constructed in Phase 2A. The proposed Wellbeing Center would be intermixed with up to 50 multi-family residential units and provide both indoor and outdoor fitness areas for activities including but not limited to yoga, dance, cycling, swimming, weight training, and court sports. Flexible spaces and temporary activation events would be provided for health education, community lecture series, mobile health clinics, technology/workforce training, outdoor fitness classes, and community health and wellness fairs. The Wellbeing Center would be available for both residents on the Hillcrest Campus and non-residents in the surrounding community.

The proposed Bachman Place widening in Phase 2B would allow for new bicycle/wheeled device and pedestrian infrastructure separated from vehicular lanes with vegetated and/or painted buffers that would transform the street into a multi-modal connection to the campus and the adjacent Medical Complex and Hillcrest neighborhoods.

Publicly accessible open space would make up the majority of the recreational amenities within the developed mesa portion of the future Hillcrest Campus. The central plaza, open space, and pedestrian circulation improvements throughout the internal Hillcrest Campus would be constructed in Phase 5. The Central Green would consist primarily of a large Central Plaza open space area that would include a gathering area for events and unique landscape features. Publicly accessible dog-related amenities would be provided within the Residential District. New pedestrian connections would weave throughout open spaces and along the edge of the mesa, allowing for physical and visual links to the surrounding canyon landscape. Courtyards, building entryways, setbacks, smaller pocket parks, shaded benches, and outdoor seating would also be included. The canyons surrounding the Hillcrest Campus would be considered preserved landscape and would serve as a natural habitat area and a scenic resource.

As described previously, implementation of the proposed 2019 LRDP would result in the construction of new on-site recreational facilities that could cause a significant environmental effect. However, project-level analysis of potential physical impacts that could be associated with the construction of these facilities as part of the 2019 LRDP is provided in other sections of this 2019 LRDP EIR. These impacts are addressed and mitigated in other 2019 LRDP EIR sections, including Section 3.2, Air Quality; Section 3.3, Biological Resources; Section 3.4, Cultural and Tribal Cultural Resources; Section 3.6, Geology and Soils; and Section 3.11, Noise.

Also, as discussed in Section 3.14.3.1, the approximately 1,646 on-campus residential person increase in the Hillcrest Campus population could result in an increased demand for public recreational facilities in the areas surrounding the Hillcrest Campus. However, this increase in population would not be considered substantial (2.7 percent of the Uptown Community population at full build-out) because the majority of individuals would already originate in the San Diego region. UC San Diego affiliates who study or work on campus but live off campus may use the public recreational facilities in the neighborhoods surrounding the campus and/or near where they live. UC San Diego affiliates who live in the on-campus housing may also use recreational facilities off campus in the surrounding neighborhoods. In addition, the non-residential campus population would be expected to live in various local communities throughout Southern California, similar to the existing condition, thus the impacts to recreational facilities would be spread out and unlikely to cause substantial deterioration of facilities.

Also, the increased demand for recreational facilities in the areas surrounding the Hillcrest Campus is expected to be limited given the new recreational opportunities that would be provided on

campus for both residents and non-residents. With implementation of the 2019 LRDP, recreational opportunities would be provided on campus that currently do not exist, as described previously. In addition, the Hillcrest Campus would provide recreation opportunities for non-UC San Diego residents in the area, as well as reduce the demand that future on-campus Hillcrest Campus populations may place on nearby public recreational facilities. For this reason, implementation of the 2019 LRDP is not anticipated to result in the development or expansion of off-campus recreational facilities that may have an adverse physical effect on the environment. Therefore, the impact would be less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a potentially significant impact associated with the construction of new recreational facilities on the Hillcrest Campus. However, mitigation measures identified in other 2019 LRDP EIR sections, including Mitigation Measures AES-2A and AES-2B (Section 3.1, Aesthetics); AIR-2 and AIR-3 (Section 3.2, Air Quality); BIO-1A–1D, BIO-2A–2D, and BIO-3A–3O (Section 3.3, Biological Resources); CUL-1 and CUL-2A and CUL-2B (Section 3.4, Cultural and Tribal Cultural Resources); ENE-1 (Section 3.5, Energy); GEO-5 (Section 3.6, Geology and Soils); HAZ-2A–HAZ-2D and HAZ-5 (Section 3.8, Hazards and Hazardous Materials); NOI-1A–1D and NOI-2A and NOI-2B (Section 3.11, Noise); and TRA-1A–1C (Section 3.15, Transportation), would reduce impacts to a less than significant level.

3.14.4 Cumulative Impacts and Mitigation

Recreation Cumulative Issue Summary

Would implementation of the 2019 LRDP have a cumulatively considerable contribution to a cumulative physical impact to recreational facilities considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Issue 1: Deterioration of parks and recreational facilities.	Less than significant	Not cumulatively considerable
Issue 2: Construction or expansion of new recreational facilities which result in an adverse environmental effect.	Potentially significant	Not cumulatively considerable.

3.14.4.1 Cumulative Issue 1: Deterioration of Parks and Recreational Facilities

The geographic context for the analysis of cumulative impacts to existing parks and recreational facilities is considered the Uptown Community where future Hillcrest Campus population and housing-related growth would primarily occur due to the proposed increase of up to 979 multi-family residential units (see Section 3.12, Population and Housing, and Section 4.2, Growth

Inducement, of this 2019 LRDP EIR). Cumulative impacts to existing recreational facilities and parks would primarily occur from projects that would cause an influx of population growth into the Uptown Community such that substantial physical deterioration of the recreational facilities would occur or be accelerated. These projects, identified in Table 3-1, Cumulative Projects, include the proposed 120 residential unit development located at 635 Robinson Avenue, the six attached residential unit project located at 3745 Third Avenue and the 141 dwelling unit to be located at 35000-3535 Fifth Avenue. The Uptown Recreation Element in the Uptown Community Plan (City of San Diego 2016) identifies future parks and recreation facilities targeted within the community to accommodate the increasing population. In addition, future residential development projects located off campus would be required to pay in-lieu fees for parks or donation of parkland (pursuant to the Quimby Act), which would provide funding for additional park and recreational facilities in the area to satisfy demand from future population growth and funding for maintenance of those facilities. The Quimby Act allows a city or county to require the dedication of land or to impose a requirement for payment of in-lieu fees, or a combination of both, for park or recreational purposes as a condition for the approval of a tentative map or parcel map for private development projects. Thus, the necessary funding and/or land to develop recreation facilities to serve campus populations living off campus would be provided to the City during the development of residences. Furthermore, funding for maintenance of those facilities is provided through property assessments and taxes that are distributed to the City. With implementation of the 2019 LRDP, the Hillcrest Campus would provide new recreation opportunities for both UC San Diego affiliates and non-Hillcrest Campus residents in the area, which would reduce demand on other nearby public recreational facilities. Thus, a significant cumulative impact associated with the deterioration of parks and recreational facilities would not occur. The 2019 LRDP's contribution would not be cumulatively considerable.

3.14.4.2 Cumulative Issue 2: Construction or Expansion of New Recreational Facilities

The geographic context for the analysis of cumulative impacts from the expansion or construction of new recreational facilities is the Uptown Community where the Hillcrest Campus is located and population and housing-related growth would primarily occur. The Uptown Community Plan (City of San Diego 2016) identifies recommendations for future parks and recreation facilities. A significant cumulative impact related to the construction or expansion of these recreational facilities would occur if cumulative projects were to require or construct new recreational facilities that would have an adverse physical effect on the environment. A cumulative project, the Legacy International Center project proposes a recreational component that would consist of a pedestrian trail culminating in a vista (viewing area) along the southern side of the site within the portion of the hillside that has been previously disturbed and would not be expected to contribute to a cumulative recreation impact. The proposed residential developments noted previously in Section 3.14.4.1 could potentially require new or expanded recreational facilities due to the influx of individuals as a result of these projects.

The development of new park and recreation facilities under the Uptown Community Plan (City of San Diego 2016) could result in significant cumulative physical effects on the environment. However, the environmental impacts of any necessary development of new parks and/or recreation facilities would be mitigated in accordance with federal, state, and local requirements. As discussed in Section 3.14.3.2, the development of new recreational facilities under the proposed 2019 LRDP would not result in adverse environmental effects with the implementation of appropriate mitigation measures, as discussed throughout this 2019 LRDP EIR. Therefore, the proposed project, in combination with other cumulative projects, would not result in a significant cumulative impact associated with the construction or expansion of park and recreational facilities that could result in environmental effects.

3.14.5 CEQA Issues Where There Is No Potential for a Significant Effect

All checklist items in Appendix G of the CEQA Guidelines under Recreation are evaluated in this 2019 LRDP EIR.

3.14.6 References

City of San Diego. 2008. City of San Diego General Plan. March 10, 2008.

City of San Diego. 2015. "Recreation Element." In City of San Diego General Plan. Updated June 29, 2015.

City of San Diego. 2016. Uptown Community Plan. Accessed November 2018. https://www.sandiego.gov/planning/community/profiles/uptown.

City of San Diego. 2018a. "Park Facilities Map." Department of Parks and Recreation. Accessed January 11, 2019. https://www.sandiego.gov/park-and-recreation/centers/map.

City of San Diego. 2018b. "Presidio Recreation Center." Accessed January 11, 2019. https://www.sandiego.gov/park-and-recreation/centers/recctr/presidio.

UC San Diego (University of California San Diego). 2013. UC San Diego Hillcrest Medical Campus Open Space Study. Prepared by Anshen + Allen Architects. November 2013.

3.15 Transportation

This section of this 2019 LRDP EIR describes the existing transportation and circulation conditions and identifies applicable plans, policies, and regulations related to transportation, including mass transit and non-motorized travel. This section then evaluates if implementation of the proposed 2019 LRDP for the Hillcrest Campus would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities; conflict or be inconsistent with CEQA Guidelines, Section 15064.3, subdivision (b); substantially increase hazards due to a design feature or incompatible use; and result in inadequate emergency access. Information in this section is based on the Transportation Impact Analysis (TIA) prepared by Linscott, Law & Greenspan, Engineers (LLG 2019), which is included as Appendix M of this 2019 LRDP EIR.

3.15.1 Environmental Setting

3.15.1.1 Existing Transportation Network

Transportation Study Area

The study area for the 2019 LRDP encompasses areas of potential transportation impacts. The scope of the study area was developed based on the City Traffic Impact Study Manual's "50 directional peak-hour trips" guideline (City of San Diego 1998). A preliminary trip distribution, a review of approved traffic studies in the area, and a working knowledge of the local transportation system were also considered when determining the study area.

The study area was developed in coordination with City staff based on a Select Zone Assignment (SZA) prepared by SANDAG. The SZA estimates the project trip assignment throughout the street network using a computer model assignment of origin/destination. Based on the above guidelines and approach, the study area for the 2019 LRDP includes 21 intersections, 17 street segments, and one ramp meter as shown in Figure 3.15-1, 2019 LRDP Transportation Study Area. The study area for the 2019 LRDP covers all the major regional and local corridors in the vicinity, such as Washington Street, University Avenue, Robinson Avenue, First Avenue, Fourth Avenue, and Fifth Avenue, and thereby encompasses areas of anticipated impact related to the 2019 LRDP.

The following is a list of the study area:

Study Area Intersections

1. Hotel Circle South/I-8 Eastbound Ramps
2. Hotel Circle South/Bachman Place
3. Hotel Circle North/Camino De La Reina
4. Washington Street/Hancock Street
5. Washington Street/San Diego Avenue

6. Washington Street/India Street
7. Washington Street/Goldfinch Street
8. Washington Street/Front Street
9. Washington Street/First Avenue
10. Washington Street/Fourth Avenue
11. Washington Street/Fifth Avenue
12. Washington Street/8th Avenue/State Route (SR-) 163 Southbound Off-Ramp
13. Washington Street/Richmond Street/SR-163 On-Ramp
14. Normal Street/Park Boulevard/El Cajon Boulevard
15. University Avenue/Fourth Avenue
16. University Avenue/Fifth Avenue
17. Robinson Avenue/Fourth Avenue
18. Robinson Avenue/Fifth Avenue
19. Bachman Place/North Access Driveway (future)
20. Arbor Drive/Front Street
21. Arbor Drive/First Avenue

Study Area Street Segments

Hotel Circle South

1. I-8 Eastbound Ramps to Bachman Place
2. Bachman Place to Camino De La Reina

Bachman Place

1. Hotel Circle South to Hillcrest Campus Boundary
2. Hillcrest Campus Boundary to Arbor Drive

Washington Street

1. India Street to University Avenue
2. University Avenue to First Avenue
3. First Avenue to Fourth Avenue
4. Fourth Avenue to Fifth Avenue
5. Fifth Avenue to Sixth Avenue
6. Sixth Avenue to Richmond Street
7. Richmond Street to Normal Street

Front Street

1. Arbor Drive to Washington Street

First Avenue

1. Arbor Drive to Washington Street
2. Washington Street to University Avenue
3. University Avenue to Robinson Avenue

Fourth Avenue

1. Washington Street to Robinson Avenue

Fifth Avenue

1. Washington Street to Robinson Avenue

Study Area Freeway Ramp Meters

1. Washington Street to Southbound SR-163

Existing Roadway Network

A description of the existing major roadways included in the study area is provided below.

Hotel Circle South

Hotel Circle South is classified in the Mission Valley Community Plan Circulation Element as a Three-Lane Collector roadway. Within the study area, Hotel Circle South is currently built as a Three-Lane Collector with a two-way left-turn lane between Taylor Street and Bachman Place. Between Bachman Place and Camino De La Reina, Hotel Circle South is currently built as an undivided Two-Lane Collector. Class II bike lanes and sidewalks are provided, curbside parking is prohibited, and the posted speed limit is 35 mph. Striped crosswalks are provided at the signalized intersection of Hotel Circle South and Bachman Place. Pedestrian crossing is prohibited along the west leg of the intersection.

Washington Street

Washington Street is classified in the Uptown Community Plan Circulation Element as a Four-Lane Major Arterial roadway and a Four-Lane Prime Arterial roadway. Within the study area, Washington Street is currently built as a Four-Lane Major Arterial with a raised median and between Richmond Street and Ibis Street. Class II Bike lanes are provided. Sidewalks are provided between 9th Avenue and Ibis Street, curbside parking is permitted on both sides of the roadway West of Fourth Avenue, and the posted speed limit is 35 mph. Between Ibis Street and India Street, Washington Street is currently built as a Four-Lane Prime Arterial with a raised median, in which lass II Bike lanes are provided, sidewalks are not provided, curbside parking is prohibited, and the posted speed limit is 55 mph. Striped crosswalks are provided at all signalized intersections within the study area. There are currently high-visibility crosswalks in the area where high pedestrian traffic is present.

Front Street

Front Street is classified in the Uptown Community Plan Circulation Element as a Two-Lane Collector roadway. Within the study area, Front Street is currently built as a one-way Two-Lane Collector between Arbor Drive and Washington Street. Non-contiguous 5-foot sidewalks are provided along both sides of Front Street from Dickenson Street to Robinson Street. On the northbound side of Front Street non-contiguous sidewalks are provided between Robinson Avenue and West University Avenue. Striped crosswalks are provided at all signalized intersections within the study area. There are currently some high-visibility crosswalks in the area where high pedestrian traffic is present. Curbside parking is permitted, and the posted speed limit is 25 mph.

First Avenue

First Avenue is classified in the Uptown Community Plan Circulation Element as a Two-Lane Collector roadway. Within the study area, First Avenue is currently built as a one-way Two-Lane Collector between Arbor Drive and Washington Street. Non-contiguous 5-foot sidewalks are provided along both sides of First Avenue from Arbor Street to Lewis Street. Contiguous 5-foot sidewalks are provided on both sides First Avenue from Lewis Street to University Avenue. Striped crosswalks are provided at all intersections along First Avenue. Curbside parking is permitted, and the posted speed limit is 25 mph.

Fourth Avenue

Fourth Avenue is classified in the Uptown Community Plan Circulation Element as a Two-Lane Collector roadway. Within the study area, Fourth Avenue is currently built as a one-way Two-Lane Collector between Washington Street and Walnut Avenue. Contiguous 8-foot sidewalks are provided along both sides of Fourth Avenue between Washington Street and University Avenue. South of University, Fourth Avenue provides contiguous 10-foot sidewalks. A combination of standard and continental crosswalks are provided at all intersections along Fourth Avenue. Curbside parking is permitted, and the posted speed limit is 25 mph.

Fifth Avenue

Fifth Avenue is classified in the Uptown Community Plan Circulation Element as a Three-Lane Collector roadway. Within the study area, Fifth Avenue is currently built as a one-way Three-Lane Collector between Washington Street and Robinson Avenue. Contiguous 8-foot sidewalks are provided along the west side of Fifth Avenue between Washington Street and University Avenue. On the east side of Fifth Avenue 10-foot sidewalks are provided between Washington Street and University Avenue. South of University Avenue, 10-foot sidewalks are provided on both sides. Striped crosswalks are provided at all intersections along Fifth Avenue. Bike Lanes are provided, curbside parking is permitted, and the posted speed limit is 25 mph.

University Avenue

University Avenue is classified in the Uptown Community Plan Circulation Element as a Three-Lane Collector roadway. Within the study area, University Avenue is currently built as a Two-Lane Collector between Washington Street and Fifth Avenue. East of Fifth Avenue, University Avenue is currently built as a Four-Lane Collector. Class II bike lanes are provided between Goldfinch Street and Third Avenue. Contiguous 8-foot sidewalks are provided along both sides of University Avenue from Goldfinch Street to Falcon Street. Between Falcon Street and Eagle Street, 5-foot non-contiguous sidewalks are provided along the eastbound side of University Avenue. Contiguous 8-foot sidewalks are provided along the westbound side of University Avenue from Falcon Street to Eagle Street. Contiguous 5-foot sidewalks are provided on both sides from Falcon Street to First Avenue. From First Avenue to Fourth Avenue, 8-foot contiguous sidewalks are provided along both sides of University Avenue and 10-foot contiguous sidewalks are provided from Fourth Avenue to Fifth Avenue along both sides of the road. Striped crosswalks are provided at all intersections along University Avenue. Curbside parking is permitted, and the posted speed limit is 25 mph.

Arbor Drive

Arbor Drive is classified in the Uptown Community Plan Circulation Element as a Two-Lane undivided Local Street. Within the study area, Arbor Drive is currently built as a Two-Lane Local Street east of First Avenue and west of Front Street. Between Front Street and First Avenue, Arbor Drive is currently built as a Two-Lane One-Way Local Street. Contiguous 5-foot sidewalks are provided along both sides of Arbor Drive west of Front Street. Between Front Street and Bachman Place, non-contiguous five-foot sidewalks are provided along both sides of Arbor Drive. Striped crosswalks are provided at all intersections including one mid-block crossing west of Front Street providing access to the UC San Diego Medical Center – Hillcrest. Curbside parking is permitted, and the posted speed limit is 25 mph.

Bachman Place

Bachman Place is classified in the Mission Valley Community Plan Circulation Element as a Two-Lane Collector Roadway. Within the study area, Bachman Place is currently built as a Two-Lane undivided Collector Roadway. Contiguous sidewalks are provided along the southbound side of Bachman Place between Hotel Circle South and the Bachman Parking Structure. Contiguous sidewalks are provided along both sides of Bachman Place between the Bachman Parking Structure and Lewis Street. Striped crosswalks and high-visibility crosswalks are provided at all intersections along Bachman Place. Curbside parking is prohibited, with the exception of 60 metered parking spaces on the southbound side of the street. The posted speed limit is 40 mph.

Existing Transit Network

Public Transit

The existing public transit network within the study area consists of bus service provided by the San Diego Metropolitan Transit System (MTS). The bus route served in the immediate area is Route 3. Route 10 is approximately 0.25-mile distance from the Hillcrest Campus. A description on each of these routes is given below.

Route 3 runs from Euclid Transit Center to the Hillcrest Campus. The existing Hillcrest Campus bus stop is located along Front Street in front of the Medical Offices South building. The route runs along Ocean View Boulevard, Market Street, Fourth and Fifth Avenue, and Washington Street. There are seven major stops along this route including destinations to Balboa Park, Educational Cultural Complex, Gaslamp Quarter, and Market Creek Plaza. This route runs on weekdays departing at 4:40 a.m. with 15-minute headways. Weekend service begins at 5:55 a.m. with 30-minute headways.

Route 10 runs from Old Town Transit Center to University and College Avenues. The route runs through the City Heights, North Park, and Hillcrest neighborhoods. There are eight major stops along this route including destinations to City Heights Retail Village, City Heights Transit Plaza, Hillcrest Department of Motor Vehicles, Scripps Mercy Hospital, Uptown Shopping Center, and Village Hillcrest. This route runs on weekdays departing at 5:51 a.m. with 15-minute headways. Weekend service begins at 6:32 a.m. on Sundays with 30-minute headways and at 5:51 a.m. on Saturdays with 20-minute headways. The area around and including the Hillcrest Campus is considered a transit priority area (see Section 3.15.3.2).

UC San Diego Shuttle Service

UC San Diego provides shuttle service between the La Jolla and Hillcrest Campuses. The shuttle provides services from UC San Diego Medical Center – Hillcrest to the Thornton Pavilion in La Jolla with eight stops in between. The Hillcrest Campus shuttle stop is located on Arbor Drive west of the existing hospital entrance. The shuttle operates on weekdays departing at 5:30 a.m. from the UC San Diego Medical Center – La Jolla with 30-minute headways. Shuttle service ends at 9:15 p.m. at the Hillcrest Campus stop. A discussion of UC San Diego's transportation programs is provided in Section 3.15.1.2.

Existing Bicycle Network

A robust and well-established bicycle network is provided within the study area. A description of the study area roadways including their bicycle facilities is described above.

Existing Pedestrian Network

The Hillcrest Campus in general has good connectivity to the surrounding community for pedestrians. The description of the study area roadways, including their pedestrian facilities, is provided above.

3.15.1.2 UC San Diego Transportation Programs

Transportation Demand Management Program

To ease demands on the parking system, students, faculty, and staff can choose from several commuting and transportation options. UC San Diego has one of the most comprehensive Transportation Demand Management (TDM) programs in the region. This program is based on a points system tied to employer engagement, Rideshare Challenge participation, and shifts in employee transportation choices (UC San Diego 2019).

The UC San Diego TDM program addresses the following categories:

- Commuting/Alternative Transportation
- Campus Mobility
- Shuttle Service
- Parking Policies
- Resources and Services

UC San Diego's Transportation Services Department maintains these various TDM programs, which are described in further detail below. Note UC San Diego's shuttle service was described previously and is not further discussed below.

Commuting/Alternative Transportation

Public Transit Incentive Programs

Public transit incentives are provided by UC San Diego through the following formal programs:

- U-Pass – The Universal Transit Pass Program that provides students unlimited rides on all regional MTS and North County Transit District (NCTD) mass transit bus and trolley/light rail routes during academic quarters.
- Eco-Pass – Provides faculty and staff unlimited access to all regional MTS and NCTD mass transit bus and trolley/light rail routes at a 25 percent discount.
- Coaster Club – Provides faculty, staff and students who live off-campus and do not hold an annual, quarterly or monthly parking permit a discount on monthly passes to ride the NCTD Coaster.

With some restrictions, these programs provide discounted transit passes for students, faculty and staff, free parking, emergency rides home with SANDAG's Guaranteed Ride Home program, and

discounted access to shared vehicles via Zipcar carsharing. The U-Pass program also offers a cloud application (app) to further facilitate ease of use.

Cycling Programs

UC San Diego's current TDM program includes two cycling-oriented programs to encourage cycling as a viable alternative transportation method:

- **Pedal Club** offers an array of benefits to students, faculty and staff living off-campus who choose to use cycling as their primary means of commuting. The following is a partial list of Pedal Club benefits includes:
  - Discounts on purchases at the UC San Diego Bike and Skate retail store
  - Free shower access and locker rentals
  - Access to occasional use parking products
  - Emergency rides home
  - Waived fees and rental credits for Zipcar shared vehicle program
- **UC San Diego Bikeshare Program** is a pilot program that began in December 2017. This program provides dockless bike sharing on campus for UC San Diego students, faculty, staff, and visitors. UC San Diego users receive discounted rates in the program.

Ridesharing

UC San Diego's ridesharing program is a combination of subsidized commercial ride hailing service via Lyft FLEX (currently a pilot project), along with access to exclusive carpool/vanpool services using UC San Diego's own Zimride program and participation in regional carpool and vanpool matching program through iCommute. UC San Diego provides registered carpool/vanpool with reserved carpool parking.

The ridesharing program also includes discounts for Zipcar carsharing for on-campus and local trips, which is further incentivized by permit-less parking on campus. All of these programs are supported by SANDAG's Guaranteed Ride Home program that ensures unforeseen rides home in the case of illness, unscheduled overtime or family emergencies.

Campus Mobility Program

The UC San Diego's Campus Mobility Program includes the following:

- **Triton Mobility Services (Americans with Disabilities Act [ADA]):** This service is provided to assist travel between ADA-compliant locations via wheelchair-accessible van or cart.
- **Online Resources:** UC San Diego also maintains an online interactive and detailed map of its various locations (UC San Diego 2019). This map provides links to specific UC

San Diego facilities, transit info, transportation and mobility services, and a wide array of other information.

Parking Policies

Under UC policy, anyone who parks at UC San Diego must pay a fee to help support construction, maintenance, and administration of parking facilities, and support other TDM. Paid parking also discourages single-occupancy vehicle auto use. Students, faculty, staff and visitors who intend to park must display a valid parking permit, pay a parking meter or pay upon exit at gate-arm facilities at the Hillcrest Campus 24 hours per day, 7 days per week.

The majority of parking provided is restricted to permit-only parking. Permits are sold online and in parking offices. Visitors who need daily or hourly parking can use meters or purchase pay station permits.

With funding from the Department of Energy's Electric Vehicle (EV) Project, UC San Diego has installed several public EV charging stations. A valid parking permit is required to park at the Hillcrest Campus EV charging station parking spaces in the Arbor Parking Structure and some restrictions apply with respect to length of parking duration.

Resources and Services

UC San Diego provides a comprehensive list of TDM and parking resources on its transportation services website (UC San Diego 2019). Additionally, UC San Diego staffs a "Commute Solutions" office location on the Hillcrest Campus located in the Bachman Parking Structure. This office provides information on Carpools, Coaster Club, Courtesy Ride Home, ECO Pass/U-Pass and Pedal Club. Bicycle registration is conducted at the UC San Diego Police Community Service Office in Price Center Commuter Lounge, as well as at the UC San Diego Bike and Skate shop.

Transportation Services Department and Transportation Policy Committee

The UC San Diego Transportation Services Department continually monitors and develops future TDM strategies for UC San Diego's transportation programs and facilities, including those at the Hillcrest Campus. The Transportation Policy Committee (TPC) also provides advisory services to the Vice Chancellor, Resource Management and Planning.

Generally, the Transportation Services Department's mission is to promote and sustain UC San Diego as a pacesetter in terms of its responsiveness to legitimate concerns about the quality of the environment, equity of treatment, thoughtful use of land, and fiduciary obligations. Specifically, the Transportation Services Department and TPC advise on:

- Development of alternative transportation programs
- Fees and rates

- Location, timing and scope of future facilities
- Disposition of transportation and parking system revenues

To assist the committee in its deliberations, staff representing the functional areas of the Vice Chancellor Chief Financial Officer and Vice Chancellor Resource Management and Planning are invited to attend TPC meetings on an "as needed" basis to provide information and to convey feedback appropriately to these Vice Chancellors and to other committees with intersecting responsibilities (e.g., TPC recommendations on sites for future facilities will be advanced to the Campus/Community Planning Committee).

3.15.1.3 Existing Traffic Operations

This section discusses the existing traffic operations (described in terms of level of service [LOS]) of the intersections, street segments, and freeway ramp meter locations within the traffic study area. It also includes a summary of how existing traffic operations were determined.

Existing Traffic Operations Methodology

LOS is the term used to denote the different operating conditions which occur on a given street segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as street geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. LOS provides an index to the operational qualities of a street segment or an intersection. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. LOS designation is reported differently for signalized versus unsignalized intersections, street segments, freeway mainline segments, and ramp meter locations, as discussed below.

Intersection and Street Segment Operations Methodology

Existing weekday daily traffic counts and AM (7:00–9:00 a.m.) and PM (4:00–6:00 p.m.) peak hour traffic volume counts were collected at the study area intersections and street segments. The majority of the counts were conducted on Wednesday August 30, 2017 while UC San Diego and area schools were in session with supplemental counts conducted on Tuesday October 16, 2018 and Tuesday November 1, 2018.

Signalized intersections were analyzed under weekday AM and PM peak hour conditions. Average vehicle delay was determined utilizing the methodology found in Chapter 18 of the 2016 Highway Capacity Manual (HCM) 6th Edition, with the assistance of the Synchro (version 10) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection LOS. Unsignalized intersections were analyzed under weekday AM and PM peak hour conditions. Average vehicle delay and LOS were determined based upon the procedures found in Chapters 19 and 20 of the HCM, with the assistance of the Synchro (version 10) computer

software. A more detailed explanation of the methodology provided in Appendix A of the TIA (provided as Appendix M in this 2019 LRDP EIR). Table 3.15-1 shows the signalized and unsignalized intersection delay categorized for each LOS.

Table 3.15-1. Intersection LOS and Delay Ranges

LOS	Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10.0	≤ 10.0
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	≥ 80.1	≥ 50.1

Source: Transportation Research Board 2016.

Street segment operations were determined based upon comparison of daily traffic volumes, expressed as ADTs, to the City's Roadway Classification, Level of Service, and ADT Table, shown in Table 3.15-2. Table 3.15-2 provides segment capacities for different street classifications, based on traffic volumes and street characteristics.

Table 3.15-2. Street Classifications, LOS, and ADT

Street Classification	Lanes	LOS				
		A	B	C	D	E
Prime Arterial	8	30,000 ADT	42,000 ADT	60,000 ADT	70,000 ADT	80,000 ADT
Prime Arterial	7	27,500 ADT	38,500 ADT	55,000 ADT	62,500 ADT	70,000 ADT
Prime Arterial	6	25,000 ADT	35,000 ADT	50,000 ADT	55,000 ADT	60,000 ADT
Major Arterial	6	20,000 ADT	28,000 ADT	40,000 ADT	45,000 ADT	50,000 ADT
Major Arterial	5	17,500 ADT	24,500 ADT	35,000 ADT	40,000 ADT	45,000 ADT
Major Arterial	4	15,000 ADT	21,000 ADT	30,000 ADT	35,000 ADT	40,000 ADT
Collector (continuous left-turn lane)	4	10,000 ADT	14,000 ADT	20,000 ADT	25,000 ADT	30,000 ADT
Collector (continuous left-turn lane)	3	7,500 ADT	10,500 ADT	15,000 ADT	18,750 ADT	22,500 ADT
Collector (no center lane)	4	5,000 ADT	7,000 ADT	10,000 ADT	13,000 ADT	15,000 ADT
(continuous left-turn lane)	2					

Source: City of San Diego 2008.

Notes:

Approximate recommended ADT based on the City's Street Design Manual.

The volumes and the average daily LOS listed above are only intended as a general planning guideline.

LOS is not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. LOS normally applies to roads carrying through traffic between major trip generators and attractors.

Freeway Ramp Meter Location Operations Methodology

The ramp meter delays and queues were analyzed using the fixed rate approach. The fixed rate approach is based solely on the specific time intervals at which the ramp meter is programmed to release traffic based on a meter rate identified by Caltrans. The results are theoretical and conservatively based on Caltrans' most restrictive ramp meter rate because ramp meter rates are not constant, even within the peak hours. The meter rates dynamically adjust based on the level of traffic on the freeway mainlines.

Existing Intersection Operations

Existing AM and PM peak hour operations for the 21 intersections within the study area are presented in Table 3.15-3.

Table 3.15-3. Existing Study Area Intersection Operations

Intersection	Control Type	Peak Hour	Existing	
			Delay[1]	LOS[2]
1. Hotel Circle S/I-8 EB Ramp	AWSC[3]	AM	14.6	B
		PM	29.3	D
2. Hotel Circle S/Bachman Place	Signal	AM	22.6	C
		PM	22.5	C
3. Hotel Circle N/Camino De La Reina	Signal	AM	11.2	B
		PM	17.3	B
4. Washington St/Hancock St	Signal	AM	20.3	C
		PM	23.5	C
5. Washington St/San Diego Ave	Signal	AM	12.6	B
		PM	11.6	B
6. Washington St/India St	Signal	AM	12.5	B
		PM	10.2	B
7. Washington St/Goldfinch St	Signal	AM	25.8	C
		PM	29.5	C
8. Washington St/Front St	Signal	AM	9.0	A
		PM	16.7	B
9. Washington St/First Ave	Signal	AM	11.8	B
		PM	24.2	C
10. Washington St/Fourth Ave	Signal	AM	17.2	B
		PM	39.3	D
11. Washington St/Fifth Ave	Signal	AM	11.7	B
		PM	16.7	B

Table 3.15-3. Existing Study Area Intersection Operations

Intersection	Control Type	Peak Hour	Existing	
			Delay[1]	LOS[2]
12. Washington St/8th Ave/SR-163 Off-Ramp	Signal	AM	7.1	A
		PM	16.3	B
13. Washington St/Richmond St/SR-163 On-Ramp	Signal	AM	15.3	B
		PM	9.2	A
14. Norman St/Park Blvd/El Cajon Blvd	Signal	AM	29.4	C
		PM	43.8	D
15. University Ave/Fourth Ave	Signal	AM	21.2	C
		PM	23.6	C
16. University Ave/Fifth Ave	Signal	AM	13.9	B
		PM	17.1	B
17. Robinson Ave/Fourth Ave	Signal	AM	16.1	B
		PM	14.0	B
18. Robinson Ave/Fifth Ave	Signal	AM	9.8	A
		PM	19.2	B
19. Bachman Pl/North Access Dwy (Future)	DNE[5]	AM	—	—
		PM	—	—
20. Arbor Dr/Front Street	AWSC[3]	AM	8.7	A
		PM	8.5	A
21. Arbor Dr/First Ave	MSSC[4]	AM	9.6	A
		PM	8.4	A

Source: LLG 2019.

Notes:

[1] Average delay expressed in seconds per vehicle.

[2] LOS = Level of Service

[3] AWSC = All-Way Stop Control

[4] MSSC = Minor Street Stop Controlled intersection. Worst-case delay reported.

[5] DNE = Intersection does not exist under Existing conditions

As shown in Table 3.15-3, all of the intersections are calculated to operate at LOS D or better under existing conditions.

Existing Street Segment Operations

Table 3.15-4 summarizes the existing operations of the 17 street segments within the study area.

Table 3.15-4. Existing Study Area Street Segment Operations

Street Segment	Functional Classification	Capacity (LOS E)	ADT	LOS	V/C
Hotel Circle South					
I-8 Eastbound Ramps to Bachman Place	2-Lane Collector	15,000	14,670	0.978	**E**
Bachman Place to Camino De La Reina	2-Lane Collector	15,000	14,360	0.957	**E**
Bachman Place					
Hotel Circle South to Hillcrest Campus Boundary	2-Lane Collector	10,000	9,830	0.983	**E**
Hillcrest Campus Boundary to Arbor Drive	2-Lane Collector	10,000	10,650	1.065	**F**
Washington Street					
India Street to University Avenue	4-Lane Major Arterial	40,000	26,620	0.666	C
University Avenue to First Avenue	4-Lane Major Arterial	40,000	24,580	0.615	C
First Avenue to Fourth Avenue	4-Lane Major Arterial	40,000	25,830	0.646	C
Fourth Avenue to Fifth Avenue	4-Lane Major Arterial	40,000	30,800	0.770	D
Fifth Avenue to Sixth Avenue	4-Lane Major Arterial	40,000	36,610	0.915	**E**
Sixth Avenue to Richmond Street	4-Lane Major Arterial	40,000	40,100	1.003	**F**
Richmond Street to Normal Street	6-Lane Major Arterial	50,000	30,660	0.613	C
Front Street Arbor Drive to Washington Street	2- Lane Collector (one way)	17,500	5,630	0.322	A
First Avenue					
Arbor Drive to Washington Street	2 – Lane Collector (one way)	17,500	4,920	0.281	A
Washington Street to University Avenue	2- Lane Collector	8,000	5,020	0.628	D
University Avenue to Robinson Avenue	2- Lane Collector	8,000	5,970	0.746	D
Fourth Avenue					
Washington Street to Robinson Avenue	2- Lane Collector (one way)	17,500	10,080	0.576	C
Fifth Avenue					
Washington Street to Robinson Avenue	3- Lane Collector (one-way with one lane dedicated for multi-modal)	17,500	10,880	0.622	C

Source: LLG 2019.
Notes: Capacities are based on the City's Roadway Classification Table
ADT = Average Daily Traffic.
V/C = volume to capacity ratio.
Bold typeface indicates segments operating at LOS E or F.

As shown in Table 3.15-4, the following study area street segments were calculated to operate at LOS E or F under existing conditions:

- Hotel Circle South, I-8 Eastbound Ramps to Bachman Place (LOS E)
- Hotel Circle South, Bachman Place to Camino De La Reina (LOS E)
- Bachman Place, Hotel Circle South to Hillcrest Campus Boundary (LOS E)
- Bachman Place, Hillcrest Campus Boundary to Arbor Drive (LOS F)

- Washington Street, Fifth Avenue to Sixth Avenue (LOS E)
- Washington Street, Sixth Avenue to Richmond Street (LOS F)

Existing Metered Freeway Ramps

Table 3.15-5 summarizes the existing ramp meter operations at the SR-163 southbound on-ramp at Washington Street. It should be noted that the calculations shown in Table 3.15-5 are per lane. There are two lanes on the on-ramp, one high-occupancy vehicle (HOV) lane and one SOV lane.

Table 3.15-5. Existing Metered Freeway Ramps

Location/Condition	Peak Hour	Peak Hour Flow (F) (veh/hr/ln)	Calculated (Most Restrictive)				Observed[1]	
			Discharge Rate (veh/hr/ln)	Excess Demand E (veh/hr/ln)	Delay (min/ln)	Queue (Vehicles)	Delay (min/ln)	Queue (Vehicles)
Washington Street to Southbound SR-163								
Existing								
HOV	AM	46	306	0	0	0	0	0
SOV	PM	414	306	108	21	108	4.6	37

Source: LLG 2019.

Notes: No. of Lanes = 1 SOV + 1 HOV

[1] The delay and queue are the actual observed in the field.

3.15.2 Regulatory Framework

Transportation and traffic on and around the Hillcrest Campus are guided by plans and policies developed by the federal government, State of California, and regional transportation programs. Applicable regulations that pertain to the proposed 2019 LRDP are described below.

3.15.2.1 Federal

Highway Capacity Manual

The HCM, prepared by the federal Transportation Research Board, is the result of a collaborative multi-agency effort between the Transportation Research Board, Federal Highway Administration, and American Association of State Highway and Transportation Officials. The HCM contains concepts, guidelines, and computational procedures for computing the capacity and quality of service of various highway facilities, including freeways, signalized and unsignalized intersections, rural highways, and the effects of transit, pedestrians, and bicycles on the performance of these systems. The latest edition of the HCM (2016 6th edition) was utilized for the transportation analysis of the proposed 2019 LRDP.

Americans with Disabilities Act of 1990

The ADA prohibits discrimination on the basis of disability in employment, state and local government, public accommodations, commercial facilities, transportation, and telecommunications. To be protected by the ADA, one must have a disability or have a relationship

or association with an individual with a disability. An individual with a disability is defined by the ADA as a person who has a physical or mental impairment that substantially limits one or more major life activities, a person who has a history or record of such impairment, or a person who is perceived by others as having such impairment. The ADA does not specifically name all of the impairments that are covered. Numerous standards and guidance documents have been developed to facilitate the proper implementation of the ADA. Title 28, Part 36, of the Code of Federal Regulations prohibits discrimination on the basis of disability by public accommodations and requires places of public accommodation and commercial facilities to be designed, constructed, and altered in compliance with the accessibility standards established by this part. The regulation includes Appendix A of Part 36, Standards for Accessible Design, establishing minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility. As a public institution, UC San Diego must make each of its programs, services, and activities accessible to and usable by qualified persons with disabilities. Accordingly, UC San Diego has created the UC San Diego Disability Access Guidelines to enable compliance with the federal ADA mandates, which includes information about different types of disabilities, typical access problems, how to accommodate persons who have disabilities, and how to make campus programs and public areas of UC San Diego accessible.

3.15.2.2 State

Senate Bill 743

On September 27, 2013, Governor Brown signed SB 743, which creates a process to change the way transportation impacts are analyzed under CEQA. SB 743 requires the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. Aside from changes to transportation analysis, SB 743 also included several important changes to CEQA that apply to transit oriented developments, including aesthetics and parking.

In December 2018, the California Natural Resources Agency certified and adopted the CEQA Guidelines update, including the Guidelines section implementing Senate Bill 743 (Section 15064.3). Under OPR's revisions to the CEQA Guidelines, VMT exceeding an applicable threshold of significance may indicate a significant transportation impact. Under the VMT standard, projects within 0.25 mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should generally be presumed to cause a less than significant transportation impact. Furthermore, under the proposed CEQA Guidelines revisions, for projects other than roadway capacity projects, automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, should not be considered a significant effect on the environment. The revisions to the CEQA Guidelines allow a lead agency to elect to evaluate transportation impacts under the revised CEQA Guidelines at any time and make the revised CEQA Guidelines applicable statewide beginning July 1, 2020.

3.15.2.3 Regional and Local (Non-Regulatory)

Regional Transportation Plans and Programs

SANDAG serves as the forum for decision-making on regional issues such as growth, transportation, land use, the economy, the environment, and criminal justice. SANDAG builds consensus, makes strategic plans, obtains and allocates resources, and provides information on a broad range of topics pertinent to the region's quality of life. SANDAG is governed by a Board of Directors composed of mayors, council members, and supervisors from each of the San Diego region's 19 local governments.

SANDAG has produced the following documents that identify transportation plans and policies in the San Diego area.

San Diego Forward: The Regional Plan

SANDAG adopted the San Diego Forward: The Regional Plan on October 9, 2015 (SANDAG 2015). This plan combines the Regional Comprehensive Plan and the Regional Transportation Plan (RTP) and its Sustainable Communities Strategy (SCS). The future focus is on smart growth and sustainable development, with the provision of transportation choices. This planning effort combines land use planning with transportation goals and state-mandated greenhouse gas reduction targets.

2018 State Transportation Improvement Program (STIP)

The STIP is a biennial 5-year program of state and federally funded transportation projects developed locally and approved by the California Transportation Commission. Every 2 years, the California Transportation Commission provides an estimate of revenues available to each metropolitan area for use in developing a program of projects based on local priorities. Upon approval by the California Transportation Commission, the STIP program of projects is incorporated into the Regional Transportation Improvement Program (RTIP), which also includes other locally funded transportation projects.

2018 RTIP

The RTIP is a multi-year program of proposed major highway, arterial, transit, and non-motorized projects. Improvements to nearly all of the major highways in the San Diego region are included in the 2018 RTIP. The 2018 RTIP covers fiscal years 2016/17 to 2020/21. The 2018 RTIP, including an air quality emissions analysis, was adopted on September 28, 2018.

Congestion Management Plan (CMP)

The purpose of the state-mandated CMP is to monitor roadway congestion and assess the overall performance of the region's transportation system. Based on this assessment, the CMP contains

specific strategies and improvements to reduce traffic congestion and improve the performance of a multi-modal transportation system. SANDAG provided regular updates for the state CMP from 1991 through 2008. However, in October 2009, the San Diego region elected to be exempt from the state-mandated CMP. Since this decision, SANDAG has been meeting the federal congestion management provisions through existing SANDAG planning and performance monitoring activities, such as the RTP and other multi-modal performance monitoring efforts.

City of San Diego Plans

As discussed in other sections of this 2019 LRDP EIR, UC San Diego is part of the UC, a constitutionally created entity of the State of California, with "full powers of organization and government" (Cal. Const. Art. IX, Section 9). As a constitutionally created state entity, the UC is not subject to municipal regulations of surrounding local governments, such as the City's General Plan or land use ordinances, for uses on property owned or controlled by the UC that are in furtherance of the UC's education purposes. However, UC San Diego may consider, for coordination purposes, aspects of local plans and policies for the communities surrounding the campus when it is appropriate and feasible, but it is not bound by those plans and policies in its planning efforts. Thus, a summary of the local plans and policies for the City related to transportation and traffic are discussed below.

City of San Diego General Plan (2008)

The City's General Plan Mobility Element identifies transportation planning goals and policies related to pedestrian, transit, street and freeway systems, Intelligent Transportation Systems, TDM, bicycling, parking management, airports, passenger rail, goods movement/freight, and regional coordination and financing. The element discusses several key topics related to pedestrian-oriented planning, traffic-calming techniques, bicycle network improvements, and transit priorities. The mobility goals that are relevant to the proposed 2019 LRDP are listed below.

Walkable Communities

- A city where walking is a viable travel choice, particularly for trips of less than 0.5 miles
- A safe and comfortable pedestrian environment
- A complete, functional, and interconnected pedestrian network that is accessible to pedestrians of all abilities
- Greater walkability achieved through pedestrian-friendly street, site, and building design

Transit First

- An attractive and convenient transit system that is the first choice of travel for many of the trips made in the City
- Increased transit ridership

Street and Freeway System

- A street and freeway system that balances the needs of multiple users of the public right-of-way
- An interconnected street system that provides multiple linkages within and between communities
- Vehicle congestion relief
- Safe and efficient street design that minimizes environmental and neighborhood impacts
- Well-maintained streets

Intelligent Transportation Systems

- A transportation system that operates efficiently, saves energy, and reduces negative environmental impacts
- A safe transportation system
- A transportation system that effectively uses appropriate technologies

Transportation Demand Management

- Reduced single-occupant vehicle traffic on congested streets and freeways
- Improved performance and efficiency of the street and freeway systems by means other than roadway widening or construction
- Expanded travel options and improved personal mobility

Bicycling

- A city where bicycling is a viable travel choice, particularly for trips of less than 5 miles
- A safe and comprehensive local and regional bikeway network
- Environmental quality, public health, recreation, and mobility benefits through increased bicycling

Uptown Community Plan (2016)

The Uptown Community Plan (City of San Diego 2016a) was first adopted in 1988 and was updated on November 14, 2016. The City Council approved amendments to the plan on June 12, 2018. The plan envisions a high-quality, reliable, multi-modal transportation network that strengthens the land use vision, promotes travel choice, and fosters a clean and sustainable environment. The Mobility Element includes goals, policies, and recommendations that will lead to a robust multi-modal network that encourages walking, bicycling, and taking transit while continuing to provide for needed vehicular access in the community. The mobility goals that are relevant to the proposed 2019 LRDP are listed below.

Walkability

- Enhance pedestrian travel routes and street crossings
- Prioritize the replacement of missing sidewalks
- Create more definable pedestrian connections between the Medical Complex neighborhood and Hillcrest through the use of crosswalks, signalization, and pavement variations

Bicycling

- Install bicycle parking facilities consistent with the regional and Citywide bikeway network
- Eliminate gaps in the bicycle network by creating and completing connections between bicycle facilities

Transit

- Coordinate with MTS to improve public transit amenities such as benches, shade structures, lighting, secure bicycle parking facilities, and timetables where appropriate with input from the community
- Coordinate with MTS on the relocation of bus stops where needed and the implementation of shuttles between transit routes to improve ridership accessibility

Street and Freeway System

- Provide a complete streets network throughout the Uptown Community, safely accommodating all modes of travel and users of the public rights-of-way
- Repurpose right-of-way to provide high-quality bicycle, pedestrian, and transit facilities while maintaining vehicular access
- Implement focused intersection improvements to improve safety and operations for all modes of travel
- Implement traffic operational improvements that support and facilitate ingress and egress movements of emergency vehicles accessing the Medical Hospital Complex neighborhood

Intelligent Transportation Services

- Utilize Intelligent Transportation System improvements to improve safety, efficiency, service, and reduce congestion, including but not limited to traffic signal coordination, pedestrian and bicycle detection, traffic and transit information, and transit priority measures

Transportation Demand Management

- Encourage new commercial and institutional developments, as well as any new stand-alone parking facilities, to provide parking spaces for car-sharing
- Encourage large employers such as hospitals and the San Diego School District to provide transit passes at reduced rates to employees/students and to allow for flexible work schedules in order to shift trips to off-peak periods

Parking Management

- Encourage screening on-site parking by locating it in areas not highly visible from the street corridor or by using landscaped islands and border landscaping
- Implement belowground parking and parking structures for new development as alternatives when surface parking is inadequate or would result in large paved areas without adequate space for landscaping amenities

Mission Valley Community Plan (2013)

The current Mission Valley Community Plan was adopted by the City Council in 1984 and it was last amended in 2013. The Mission Valley Community Plan Area comprises approximately 2,418 net acres and is located near the geographic center of the City and adjacent to the Hillcrest Campus. It is part of the San Diego River floodplain, generally bounded by Friars Road and the northern slopes of the valley on the north, the eastern banks of the San Diego River on the east, the southern slopes of the valley on the south, and I-5 on the west. An update to Mission Valley Community Plan is currently underway. A Working Draft of the Mission Valley Community Plan Update was released for public review in February 2019, and the Final Draft was released in June 2019. The Final Draft is currently available for public review, and the public hearing process will begin summer 2019. The mobility goals that are relevant to the proposed 2019 LRDP are listed below.

Transportation

- Facilitate transportation into, throughout, and out of Mission Valley while seeking to establish and maintain a balanced transportation system

Public Transit

- Encourage the use of public transit modes to reduce dependency on the automobile

Parking and Good Delivery

- Provide adequate off-street parking for all new development

Bikeways

- Create an intra-community bikeway system that would provide access to the various land use developments within the valley and connect to the regional system

Pedestrian Circulation

- Improve the visual quality as well as the physical efficiency of the existing and future pedestrian circulation system

3.15.3 Project Impacts and Mitigation

The following sections address various potential impacts relating to transportation that could result due to the implementation of the proposed 2019 LRDP.

3.15.3.1 Issue 1: Circulation System Performance

Transportation Issue 1 Summary

Would implementation of the 2019 LRDP conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Impact: Implementation of the proposed 2019 LRDP would cause a conflict with an applicable plan or policy addressing the circulation system during construction and operation.

Mitigation: Intersection and segment improvements (TRA-1A–TRA-1C)

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Operational significant and unavoidable (cumulatively considerable) impacts. Temporary significant and unavoidable impact during construction.

Standards of Significance

Under Appendix G of the CEQA Guidelines, an impact is considered significant if a project would result in a conflict with an applicable plan or policy addressing the circulation system.

UC San Diego, which has not adopted its own significance criteria and thresholds, has chosen to use the City's Significance Determination Thresholds as the guide for determining impacts to the circulation system within the study area resulting from implementation of the 2019 LRDP. According to the City's Significance Determination Thresholds report dated July 2016, the proposed 2019 LRDP would be considered to have a significant impact if the net new project traffic would decrease the operations of surrounding roadways by a defined threshold. Table 3.15-6 outlines the applicable thresholds for addressing impacts to roadway segments, intersections, freeways, and ramp meters. If the proposed 2019 LRDP's traffic causes the values shown in Table 3.15-6 to be exceeded, the impacts are determined to be significant. All LOS measurements are based on HCM procedures for peak-hour conditions. The acceptable LOS for freeways, roadways, and intersections is generally "D" ("C" for undeveloped locations). For metered freeway ramps, LOS does not apply. The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 minutes. The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 minute.

Table 3.15-6. City of San Diego Traffic Impact Significance Thresholds

LOS[1] with LRDP	Allowable Increase Due to LRDP Impacts			
	Freeways	Roadway Segments	Intersections	Ramp Metering
	V/C[2]	V/C[2]	Delay[3] (sec.)	Delay[3] (min.)
E	0.010	0.02	2.0	1.0[c]
F	0.005	0.01	1.0	

Source: City of San Diego 2016b.

General Notes:

[1] LOS = Level of Service

[2] V/C = Volume to Capacity Ratio (capacity at LOS E should be used)

[3] Delay = Average control delay per vehicle measured in seconds for intersections or minutes for ramp meters

Impact Analysis

Operational Impacts

The 2019 LRDP includes the following five circulation principles that outline a strategy for fulfilling the transportation needs on the Hillcrest Campus.

- **Principle CIR-1:** Provide efficient emergency vehicle access to the Health Care District that respects the potential of traffic, noise, and visual impacts on surrounding neighborhood streets for residents.
- **Principle CIR-2:** Improve campus access and legibility with a new, hierarchical circulation network of complete streets and centralized parking structures.
- **Principle CIR-3:** Implement new campus-wide TDM strategies to reduce trips and vehicle circulation in and around the campus.
- **Principle CIR-4:** Introduce pedestrian-oriented design features that prioritize the human experience on campus.
- **Principle CIR-5:** Promote flexible vehicle circulation and parking concepts capable of responding to future changes in transportation technology and travel behavior.

The 2019 LRDP proposes the development of a user-oriented circulation system to facilitate efficient vehicular access to, from, and within the Hillcrest Campus. This would allow users to enter and exit the campus intuitively. It would also improve transportation-related facilities including parking structures, bus and shuttle stops, emergency access, and passenger drop-off and pickup areas. The 2019 LRDP would provide a combination of parking and TDM strategies to reduce the amount of vehicle travel to and from the campus and to improved multi-modal rights-of-way with enhanced pedestrian and bicycle accessibility.

Trip Generation

Implementation of the 2019 LRDP would generate new vehicular trips to the local and regional roadway network. Consistent with City guidance, the daily and peak-hour trip generation was

calculated for each phase of the 2019 LRDP using published trip rates from the City's Trip Generation Manual (2003).

The Trip Generation Manual provides the following definitions (City of San Diego 2003):

- **Driveway Trips:** The total number of trips that are generated by a site. The sum of cumulative trips plus pass-by trips.
- **Cumulative Trips:** New vehicle trips added to a community. Cumulative trips are driveway trips minus pass-by trips.
- **Pass-by Trips:** A trip that is deviated from the roadway to a site for a stop-over to sites such as retail establishments, banks, restaurants, service stations, etc. A trip made to a site from traffic already "passing by" that site on an adjacent street that contains direct access to the generator. These are existing vehicle trips in a community.

Driveway Trips

For the purposes of this analysis, the City's driveway trip rates were used to analyze the following intersections and street segments, which are adjacent to the Hillcrest Campus and would generally accommodate all trips (both pass-by trips and cumulative trips) generated by the 2019 LRDP:

Intersections

- 19. Bachman Place/North Access Driveway (future)
- 20. Arbor Drive/Front Street
- 21. Arbor Drive/First Avenue

Street Segments

- 12. Front Street, Arbor Drive to Washington Street
- 13. First Avenue, Arbor Drive to Washington Street

It should be noted that since 2019 LRDP ultimately involves a demolition of nearly all the existing Hillcrest Campus structures and a restructuring of circulation patterns, the proposed gross trips (total proposed), as opposed to the net trips (proposed uses minus existing uses to be demolished), were conservatively assigned to the Hillcrest Campus intersections and street segments listed above. This approach ensures that these facilities are designed and reconstructed to accommodate the total number of trips generated by the 2019 LRDP. The driveway trip rate calculations for the 2019 LRDP are provided in Table 9-3 of the TIA (Appendix M), and a summary of the results is provided below. The following list is of the gross vehicular driveway trips for each of the four scenarios, which correspond with the completion year of each of the major phases of the 2019 LRDP:

- **Near Term (Opening Year 2022):** Phase 1A and 1B would generate 11,354 gross driveway vehicular ADT with 715 total AM peak hour trips (578 inbound/137 outbound) and 1,154 total PM peak hour trips (340 inbound/814 outbound).

- **Year 2025:** Phases 1A through 2B combined would generate 17,962 gross driveway vehicular ADT with 1,379 total AM peak hour trips (1,029 inbound/350 outbound) and 1,901 total PM peak hour trips (594 inbound/1,307 outbound).
- **Year 2030:** Phases 1A through 4 combined would generate 22,980 gross driveway vehicular ADT with 1,846 total AM peak hour trips (1,363 inbound/483 outbound) and 2,411 total PM peak hour trips 741 inbound/1,670 outbound).
- **Year 2035 (Buildout):** Phases 1A through 5 combined would generate 24,828 gross driveway vehicular ADT with 1,988 total AM peak hour trips (1,393 inbound/595 outbound) and 2,577 total PM peak hour trips 855 inbound/1,722 outbound).

Cumulative Trips

The 2019 LRDP cumulative trips were added to the remaining intersections (#1–12) and street segments (#1–11 and #14–17) in order to analyze the impacts resulting from the 2019 LRDP. The cumulative trip rate calculations for the 2019 LRDP are provided in Table 9-2 of the TIA (Appendix M) and the results are summarized below. For each phase, the trip generation for both the proposed uses and the existing uses to be demolished were calculated. The mode splits assumptions, which divide the trips between different modes of transportation based on the 2017 UC San Diego Survey of Pedestrian and Vehicular Traffic to include 80 percent vehicular, 9 percent transit, 1 percent bicycle, and 10 percent pedestrian, were applied to the calculations for the proposed uses and the existing uses to be demolished. The vehicular trips attributable to the existing uses to be demolished were then subtracted from the vehicular trips attributable to the proposed uses in order to determine the net new vehicular cumulative trips, as follows:

- **Near Term (Opening Year 2022):** Phase 1A and 1B would generate 1,198 net new cumulative vehicular ADT with a decrease of 26 total AM peak hour trips (-35 inbound/9 outbound) and an additional 69 total PM peak hour trips (39 inbound/30 outbound). While technically a net decrease, the AM inbound trips were considered to be zero for analysis purposes.
- **Year 2025:** Phases 1A through 2B combined would generate 4,848 net new cumulative vehicular ADT with 298 total AM peak hour trips (123 inbound/175 outbound) and 445 total PM peak hour trips (223 inbound/222 outbound).
- **Year 2030:** Phases 1A through 4 combined would generate 1,629 net new cumulative vehicular ADT with 48 total AM peak hour trips (-72 inbound/120 outbound) and 105 total PM peak hour trips (124 inbound/-19 outbound). While technically a net decrease, the AM inbound trips and the PM outbound trips were considered to be zero for analysis purposes.
- **Year 2035 (Buildout):** Phases 1A through 5 combined would generate 3,464 net new cumulative vehicular ADT with 189 total AM peak hour trips (-43 inbound/232 outbound) and 270 total PM peak hour trips (238 inbound/32 outbound). While technically a net decrease, the AM inbound trips were considered to be zero for analysis purposes.

Near-Term (Year 2022) Operation Impacts

The following section presents the analysis of study area intersections and street segments under near-term (Opening Year 2022) conditions without and with Phase 1A and 1B. Near-Term (Opening Year 2022) traffic volumes were calculated for the study area by manually adding the cumulative project traffic volumes onto the existing traffic volumes. To determine potential near-term impacts, the "Year 2022" future baseline is compared to the "Year 2022 with Phase 1A and 1B of the Project" scenario to determine if the changes in transportation conditions exceed the significance thresholds. Impacts identified under Near-Term conditions are considered direct project transportation impacts. There is no definition in the City Guidelines for which analysis scenarios constitute Near-Term. However, since there would be a 5-year span between the start of Phase 1A and 1B and the start of Phase 2A and 2B in the Year 2025, there would be a relatively large amount of non-project traffic in addition to project traffic in the Year 2025 due to general growth. Therefore, impacts in the Year 2025 scenario and beyond are considered long term and cumulative.

Consistent with City guidelines and local standards of practice, traffic attributable to the proposed 2019 LRDP was not compared to an existing conditions baseline for the purposes of identifying and determining the significance of CEQA impacts. The City's Traffic Impact Study Manual (1998) and the City's CEQA Significance Determination Thresholds (2016b) recommend that environmental review address a project's transportation impacts at the time the project's development (and subsequent phases) becomes operational, and further recommend that analysis include traffic attributable to anticipated growth in background (i.e., non-project-related) development that is anticipated to exist by that future time. Expressed in other words, these guidance documents treat the comparison of project-related traffic, in isolation, against existing conditions at the time of project approval as potentially misleading to the public and decision makers and as lacking in informational value, particularly for a long-range plan such as the proposed 2019 LRDP, which would not be fully implemented until many years after it is approved.

The traffic impacts of the proposed 2019 LRDP would inevitably occur in a cumulative context in which the contribution of the proposed 2019 LRDP would combine with the contribution of other existing and anticipated development. Therefore, a baseline comparison that identifies only the change to existing conditions attributable to proposed 2019 LRDP-related traffic, as if the contribution of the proposed 2019 LRDP would occur in isolation from the contribution of other background development, would not realistically reflect future conditions as they would occur and be experienced and would risk misleading the public and decision makers. Furthermore, such a baseline comparison would lack informational value in light of the other baseline analyses this 2019 LRDP EIR provides. This 2019 LRDP EIR's comparison of future cumulative conditions in 2022 (Opening Year), 2025, 2030, and 2035 (Buildout) with traffic attributable to the 2019 LRDP in each of those years with 2022, 2025, 2030, and 2035 without the proposed 2019 LRDP (Future Conditions Baselines) would isolate the cumulative contribution of the proposed 2019 LRDP to

those future cumulative conditions and would allow determination of whether the contribution of the 2019 LRDP alone is "cumulatively considerable" in the real-world cumulative context. Because these future conditions baseline comparisons allow this 2019 LRDP EIR to isolate and determine the significance of the contribution to cumulative traffic that is attributable to the proposed 2019 LRDP alone, no further informational value would be provided by additionally presenting the potentially misleading comparison of traffic attributable to the proposed 2019 LRDP in isolation to an existing conditions baseline.

Phase 1A and 1B would construct the following roadway improvements as part of the 2019 LRDP (Figure 3.15-2, Project Feature Improvements):

- Widen Arbor Drive between Front Street and First Avenue and change to a two-way street.
- New connection between Arbor Drive and Bachman Place.
- Widen Bachman Place from the new Arbor Drive connection to the existing Bachman Parking Structure to provide two southbound lanes and one northbound lane.
- Signalize the intersection of Front Street/Arbor Drive and provide the following lane geometry:
  - North Leg – one shared left/through/right-turn lane
  - East Leg – one shared left/through/right-turn lane and one dedicated left-turn lane. This leg of the intersection would be converted from a one-way, westbound segment to a two-way segment.
  - West Leg – one shared right-turn/through lane and one dedicated left-turn lane
- Signalize the intersection of First Avenue/Arbor Drive and provide the following lane geometry:
  - North Leg – one dedicated left-turn lane and one shared left/right-turn lane
  - East Leg – one dedicated right-turn lane and one dedicated through lane
  - South Leg – one shared right-turn/through lane, one dedicated through lane, and one dedicated left-turn lane
  - West Leg – one shared through/left-turn lane. This leg of the intersection would be converted from a one-way, westbound segment to a two-way segment.

Study Area Intersections

Table 3.15-7 summarizes the peak hour intersection operations under Near-Term (Opening Year 2022) with implementation of Phases 1A and 1B.

Table 3.15-7. Near-Term (Opening Year 2022) Intersection Operations

Intersection	Control Type	Peak Hour	Near Term (Opening Year 2022)		Near Term (Opening Year 2022) plus Project		Δ[3]	Sig?[4]
			Delay[1]	LOS[2]	Delay	LOS		
Hotel Circle S/I-8 EB Ramp	AWSC[5]	AM	16.5	C	16.5	C	0.0	No
		PM	69.4	**F**	**71.7**	**F**	**1.7**	**Yes**
Hotel Circle S/Bachman Place	Signal	AM	23.0	C	23.0	C	0.0	No
		PM	30.5	C	32.1	C	1.6	No
Hotel Circle N/Camino De La Reina	Signal	AM	11.7	B	11.7	B	0.0	No
		PM	20.5	B	20.9	C	0.4	No
Washington St/Hancock St	Signal	AM	20.4	C	20.4	C	0.0	No
		PM	23.7	C	23.7	C	0.0	No
Washington St/San Diego Ave	Signal	AM	12.9	B	13.0	C	0.1	No
		PM	11.9	B	11.9	B	0.0	No
Washington St/India St	Signal	AM	12.5	B	12.5	B	0.0	No
		PM	10.3	B	10.3	B	0.0	No
Washington St/Goldfinch St	Signal	AM	25.8	C	25.8	C	0.0	No
		PM	29.8	C	29.8	C	0.0	No
Washington St/Front St	Signal	AM	9.0	A	9.2	A	0.2	No
		PM	16.6	B	16.8	B	0.2	No
Washington St/First Ave	Signal	AM	12.0	B	12.0	B	0.0	No
		PM	24.6	C	25.2	C	0.6	No
Washington St/Fourth Ave	Signal	AM	17.2	B	17.2	B	0.0	No
		PM	39.4	D	39.5	D	0.1	No
Washington St/Fifth Ave	Signal	AM	11.6	B	11.6	B	0.0	No
		PM	16.7	B	16.7	B	0.0	No
Washington St/8th Ave/SR-163 Off-Ramp	Signal	AM	7.1	A	7.1	A	0.0	No
		PM	16.3	B	16.4	B	0.1	No
Washington St/Richmond St/SR-163 On-Ramp	Signal	AM	13.7	B	13.8	B	0.1	No
		PM	9.2	A	10.5	B	1.3	No
Norman St/Park Blvd/El Cajon Blvd	Signal	AM	29.4	C	29.4	C	0.0	No
		PM	43.8	D	43.9	D	0.1	No
University Ave/Fourth Ave	Signal	AM	21.3	C	21.3	C	0.0	No
		PM	24.0	C	21.3	C	0.1	No
University Ave/Fifth Ave	Signal	AM	13.9	B	13.9	B	0.1	No
		PM	17.1	B	17.1	B	0.0	No
Robinson Ave/Fourth Ave	Signal	AM	16.1	B	16.1	B	0.0	No
		PM	14.3	B	14.3	B	0.0	No

Table 3.15-7. Near-Term (Opening Year 2022) Intersection Operations

Intersection	Control Type	Peak Hour	Near Term (Opening Year 2022)		Near Term (Opening Year 2022) plus Project			
			Delay[1]	LOS[2]	Delay	LOS	Δ[3]	Sig?[4]
Robinson Ave/Fifth Ave	Signal	AM	10.1	A	10.1	B	0.0	No
		PM	19.8	B	19.8	B	0.0	No
Bachman Pl/North Access Dwy (Future)	DNE[6]	AM	—	—	—	—	—	No
		PM	—	—	—	—	—	No
Arbor Dr/Front Street	Signal[7]	AM	8.7	A	8.8	A	0.1	No
		PM	8.5	A	10.5	B	2.0	No
Arbor Dr/First Ave	Signal[7]	AM	9.6	A	15.3	B	5.7	No
		PM	8.0	A	22.9	C	14.9	No

Source: LLG 2019.

Notes:

[1] Average delay expressed in seconds per vehicle.

[2] LOS = Level of Service

[3] Δ denotes an increase in delay due to project.

[4] Sig = Significant Project impact based on Significance Criteria.

[5] All-Way Stop Control

[6] Intersection does not exist under Near-Term (Opening Year 2022) conditions.

[7] Intersection signalized as a project improvement. Without Project analysis assumes the intersection unsignalized under exiting roadway conditions.

As shown in Table 3.15-7, the study intersections are calculated to operate at LOS D or better with the exception of the Hotel Circle South/I-8 Eastbound Ramps intersection which is calculated to operate at LOS F during the PM peak hour. Based on the City's significance criteria as summarized in Table 3.15-6, a significant direct impact would occur at this intersection.

Study Area Street Segments

Table 3.15-8 summarizes the street segment operations under the Near Term (Opening Year 2022) with implementation of Phases 1A and 1B.

Table 3.15-8. Near-Term (Opening Year 2022) Street Segment Operations

Street Segment	Existing Capacity (LOS E)[1]	Near Term (Opening Year 2022)			Near Term (Opening Year 2022) + Project			Δ[5]	Sig?[6]
		ADT[2]	V/C	LOS[3]	ADT[2]	V/C[4]	LOS[3]		
Hotel Circle South									
I-8 Eastbound Ramps to Bachman Pl	15,000	15,425	1.028	F	15,569	1.038	F	0.010	No
Bachman Pl to Camino De La Reina	15,000	**15,100**	**1.007**	**F**	**15,292**	**1.019**	**F**	**0.012**	**Yes**
Bachman Place									
Hotel Circle South to Hillcrest Campus Boundary	10,000	**9,845**	**0.985**	**E**	**10,180**	**1.018**	**F**	**0.033**	**Yes**
Hillcrest Campus Boundary to Bachman Parking Structure	10,000	**10,665**	**1.067**	**F**	**11,000**	**1.100**	**F**	**0.033**	**Yes**
Bachman Parking Structure to Arbor Drive[8]	10,000/ 22,500[9]	10,665	1.067	F	11,000	0.489	C	(0.578)	No
Washington Street									
India St to University Ave	40,000	26,792	0.670	C	26,984	0.675	C	0.005	No
University Ave to First Ave	40,000	24,748	0.619	C	25,179	0.629	C	0.010	No
First Ave to Fourth Ave	40,000	26,016	0.650	C	26,495	0.662	C	0.012	No
Fourth Ave to Fifth Ave	40,000	30,864	0.772	D	31,319	0.783	D	0.011	No
Fifth Ave to Sixth Ave	40,000	36,674	0.917	E	37,093	0.927	E	0.010	No
Sixth Ave to Richmond St	40,000	40,159	1.004	F	40,578	1.014	F	0.010	No[7]
Richmond St to Normal St	50,000	30,695	0.614	C	30,827	0.617	C	0.003	No
Front Street									
Arbor Dr to Washington St	17,500	5,640	0.322	A	9,727	0.556	C	0.234	No
First Avenue									
Arbor Dr to Washington St	17,500	4,930	0.282	A	9,017	0.515	B	0.233	No
Washington St to University Ave	8,000	5,079	0.635	D	5,271	0.659	D	0.024	No
University Ave to Robinson Ave	8,000	6,029	0.754	D	6,125	0.766	D	0.012	No
Fourth Avenue									
Washington St to Robinson Ave	17,500	10,240	0.585	C	10,276	0.587	C	0.002	No
Fifth Avenue									
Washington St to Robinson Ave	17,500	10,980	0.627	C	11,016	0.629	C	0.002	No

Source: LLG 2019.

Notes:

[1] Capacity based on roadway classification operating at LOS E.

[2] Average Daily Traffic

[3] Level of Service

[4] Volume to Capacity

[5] Δ denotes a project-induced increase in the Volume to Capacity (V/C) ratio.

[6] Sig = Significant Project impact based on Significance Criteria.

[7] Peak hour arterial analysis indicates LOS D or better operations. Therefore, no significant impact is calculated.

[8] The study street segment of Bachman Place between the Hillcrest Campus Boundary and Arbor Drive is analyzed as two segments under Near-Term (Opening Year 2022) conditions due to the widening of Bachman Place between Arbor Drive and the existing Bachman Parking Structure to a Three-Lane Collector as a project feature.

[9] No widening of Bachman Place assumed under "without Project" conditions. Three-Lane Collector capacity derived based on the City's Two-Lane and Four-Lane Collector capacities.

As shown in 3.15-8 the following study street segments are calculated to operate at LOS E or F in the Near Term (Opening Year 2022) with addition of 2019 LRDP traffic:

- Hotel Circle South, I-8 Eastbound Ramps to Bachman Place (LOS F)
- Hotel Circle South, Bachman Place to Camino De La Reina (LOS F)
- Bachman Place, Hotel Circle South to Hillcrest Campus Boundary (LOS E)
- Bachman Place, Hillcrest Campus Boundary to Bachman Parking Structure (LOS F)
- Washington Street, Fifth Avenue to Sixth Avenue (LOS E)
- Washington Street, Sixth Avenue to Richmond Street (LOS F)

Based on the City's significance criteria as summarized in Table 3.15-6, significant direct impacts would occur at the following three street segments:

- Hotel Circle South, Bachman Place to Camino De La Reina
- Bachman Place, Hotel Circle South to Hillcrest Campus Boundary
- Bachman Place, Hillcrest Campus Boundary to Bachman Parking Structure

In addition, the City's significance thresholds are exceeded along the street segment of Washington Street between Sixth Avenue and Richmond Street, which is calculated to operate at LOS F both without and with the 2019 LRDP. However, since this segment is currently built to its ultimate roadway classification as described in Section 3.15.1.1, an alternative analysis was conducted to assess segment impacts. The description of the alternative analysis can be found in Section 10.5.2 of the TIA (included as Appendix M).

The adjacent intersections at the end of the segment are calculated to operate at LOS B or better during the AM and PM peak hours under Near Term (Opening Year 2022) with project conditions, as shown in Table 3.15-8. In addition, an arterial analysis for the segment is provided in Appendix G of the TIA (included as Appendix M). The analysis determines whether (1) the intersections at the ends of the segment are calculated to operate at an acceptable LOS with the project, and (2) a peak hour Highway Capacity Manual (HCM) arterial analysis for the same segment shows that the segment operates at an acceptable LOS with the project. The arterial analysis shows that the segment is calculated to operate at LOS D or better in both directions during the AM and PM peak hours under Near Term (Opening Year 2022) with-project conditions. If both intersections at the end of the segment operate acceptably and the peak-hour HCM arterial analysis for the same segment shows the segment operates acceptably, then the project impacts are determined to be less than significant, and no mitigation is required. Therefore, since the segment is built to its ultimate

classification and both alternative analysis conditions are met, the impact of the 2019 LRDP would be less than significant.

Metered Freeway Ramp

Table 3.15-9 summarizes the Near Term (Opening Year 2022) with-project ramp meter operations.

Table 3.15-9. Near-Term Opening Year 2022 Metered Freeway Ramp Operation

Location/Condition	Peak Hour	Peak Hour Flow (F) (veh/hr/ln)	Calculated (Most Restrictive)				Observed[1]	
			Discharge Rate (veh/hr/ln)	Excess Demand E (veh/hr/ln)	Delay (min/ln)	Queue (Vehicles)	Delay (min/ln)	Queue (Vehicles)
Washington Street to Southbound SR-163								
Near Term (Opening Year 2022)								
HOV	AM	46	306	0	0	0	0	0
SOV	PM	414	306	108	21	108	4.6	37
Near Term (Opening Year 2022) with Project								
HOV	AM	46	306	0	0	0	0	0
SOV	PM	415	306	109	21	109	4.6	38
Δ 2022	—	—	—	—	0	1	0	1

Source: LLG 2019.

Notes: No. of Lanes = 1 SOV + 1 HOV

[1] The delay and queue are the actual observed in the field. For the future scenarios, the calculated delay and queue are factored based on the observed delay and queue, As shown in Table 3.15-8, using the most restrictive discharge rates obtained from Caltrans, in the Near Term (Opening Year 2022) with the addition of project traffic, the calculated delay would remain 21 minutes and one car would be added to the queue for a total of109 cars during the PM peak hour. However, based on actual field observations, the actual delay would remain at 4.6 minutes and one car would be added to the queue for a total of 38 cars during the PM peak hour. The total delay would be below the accepted threshold of 15 minutes and the increase due to project traffic would be less than the accepted threshold of 2 minutes. Therefore, the 2019 LRDP would result in a less than significant impact.

As shown in Table 3.15-9, using the most restrictive discharge rates obtained from Caltrans, in the Opening Year and with the addition of project traffic, the calculated delay would remain 21 minutes, and the queue would be 109 vehicles during the AM peak hour. However, based on actual field observations found in Appendix B of the TIA (included as Appendix M) the actual delay would remain at 4.6 minutes, and the queue would be 38 vehicles. Thus, the increase in actual delay due to the 2019 LRDP in the Year 2025 would be 0.0 minutes, and the increase in the queue would be 1 vehicle. The total delay is below the accepted threshold of 15 minutes, and the increase due to project traffic is less than the accepted threshold of 2 minutes. Therefore, the 2019 LRDP would result in a less than significant impact.

Year 2025 (Phase 2A and 2B) Operation Impacts

The following section presents the analysis of study area intersections and street segments under Year 2025 conditions without and with Phases 1A through 2B. Impacts identified under Year 2025 conditions are considered cumulative project transportation impacts.

Phase 2A and 2B of the 2019 LRDP would include the following improvements as part of the 2019 LRDP (Figure 3.15-2):

- Widen Bachman Place from the Bachman Parking Structure to the Hillcrest Campus Boundary from two lanes to three lanes to provide two southbound lanes and one northbound lane.
- Construct the north access driveway at Bachman Place and signalize the intersection. Provide the following lane geometry:
  - North Leg – one shared right-turn/through lane and one through lane
  - South Leg – one dedicated through lane and one dedicated left-turn lane
  - West Leg – one dedicated right-turn lane and one dedicated left-turn lane

In addition, the Phase 1A and 1B project improvements discussed above under Near Term (Opening Year 2022) are assumed to have been constructed under Year 2025 conditions.

Study Area Intersections

Table 3.15-10 summarizes the peak hour intersection operations under Year 2025 conditions with and without the 2019 LRDP (Phases 1A through 2B).

Table 3.15-10. Year 2025 Intersection Operations

Intersection	Control Type	Peak Hour	Year 2025		Year 2025 plus Project		Δ[4]	Sig?[5]
			Delay[1]	LOS[2]	Delay	LOS		
Hotel Circle S/I-8 EB Ramp	AWSC[3]	AM	16.9	C	18.4	C	1.5	No
		PM	74.1	**F**	**84.2**	**F**	**10.1**	**Yes**
Hotel Circle S/Bachman Place	Signal	AM	23.6	C	26.0	C	2.4	No
		PM	31.8	C	43.1	D	11.3	No
Hotel Circle N/Camino De La Reina	Signal	AM	11.8	B	12.2	B	0.4	No
		PM	21.3	C	26.7	C	5.4	No
Washington St/Hancock St	Signal	AM	20.4	C	20.5	C	0.1	No
		PM	23.8	C	24.0	C	0.2	No
Washington St/San Diego Ave	Signal	AM	13.4	C	14.1	B	0.7	No
		PM	12.1	B	12.4	B	0.3	No
Washington St/India St	Signal	AM	12.7	B	12.8	B	0.1	No
		PM	10.4	B	10.6	B	0.2	No
Washington St/Goldfinch St	Signal	AM	25.9	C	25.9	C	0.0	No
		PM	29.9	C	30.1	C	0.2	No
Washington St/Front St	Signal	AM	9.0	A	11.5	B	2.5	No
		PM	16.6	B	18.6	B	2.0	No
Washington St/First Ave	Signal	AM	12.2	B	12.4	B	0.2	No
		PM	24.9	C	24.9	C	0.0	No

Table 3.15-10. Year 2025 Intersection Operations

Intersection	Control Type	Peak Hour	Year 2025		Year 2025 plus Project		Δ[4]	Sig?[5]
			Delay[1]	LOS[2]	Delay	LOS		
Washington St/Fourth Ave	Signal	AM	17.2	B	17.6	B	0.4	No
		PM	39.7	D	40.6	D	0.9	No
Washington St/Fifth Ave	Signal	AM	11.7	B	11.7	B	0.0	No
		PM	16.8	B	16.8	B	0.0	No
Washington St/8th Ave/SR-163 Off-Ramp	Signal	AM	7.2	A	7.3	A	0.2	No
		PM	16.5	B	17.6	B	1.1	No
Washington St/Richmond St/SR-163 On-Ramp	Signal	AM	14.0	B	19.2	C	5.2	No
		PM	10.4	B	11.7	B	1.3	No
Norman St/Park Blvd/El Cajon Blvd	Signal	AM	29.9	C	30.1	C	0.2	No
		PM	44.8	D	45.1	D	0.3	No
University Ave/Fourth Ave	Signal	AM	21.4	C	21.5	C	0.1	No
		PM	24.3	C	24.4	C	0.1	No
University Ave/Fifth Ave	Signal	AM	14.0	B	14.0	B	0.0	No
		PM	17.3	B	17.3	B	0.0	No
Robinson Ave/Fourth Ave	Signal	AM	16.2	B	16.2	B	0.1	No
		PM	14.3	B	14.4	B	0.1	No
Robinson Ave/Fifth Ave	Signal	AM	10.1	B	10.1	B	0.0	No
		PM	20.0	C	20.1	C	0.1	No
Bachman Pl/North Access Dwy (Future)	DNE[5]	AM	—	—	4.2	A	—	No
		PM	—	—	4.4	A	—	No
Arbor Dr/Front Street	Signal[3]	AM	8.7	A	12.1	B	3.4	No
		PM	8.5	A	23.3	C	14.8	No
Arbor Dr/First Ave	Signal[3]	AM	9.7	A	14.6	B	4.9	No
		PM	8.4	A	25.5	C	17.1	No

Source: LLG 2019.

Notes:

[1] Average delay expressed in seconds per vehicle.

[2] LOS = Level of Service

[3] Intersection signalized as a Project improvement. Without Project analysis assumes the intersection unsignalized under exiting roadway conditions.

[4] Δ denotes an increase in delay due to project.

[5] Sig = Significant Project impact based on Significance Criteria

As shown in Table 3.15-10, the study intersections are calculated to operate at LOS D or better with the exception of the Hotel Circle South/I-8 Eastbound Ramps intersection which is calculated to operate at LOS F during the PM peak hour. Based on the City's significance criteria, a significant cumulative impact would occur at this intersection.

Study Area Segments

Table 3.15-11 summarizes the street segment operations under Year 2025 conditions with and without the 2019 LRDP (Phases 1A through 2B).

Table 3.15-11. Year 2025 Street Segment Operations

Street Segment	Capacity (LOS E)[1]	Year 2025			Year 2025 + Phase 1A–2B			Δ[5]	Sig?[6]
		ADT[2]	V/C[4]	LOS[3]	ADT	V/C	LOS		
Hotel Circle South									
I-8 Eastbound Ramps to Bachman Pl	15,000	15,630	1.042	F	16,212	1.081	F	0.039	**Yes**
Bachman Pl to Camino De La Reina	15,000	15,300	1.020	F	16,076	1.072	F	0.052	**Yes**
Bachman Place									
Hotel Circle South to Hillcrest Campus Boundary	10,000	9,980	0.998	E	11,337	1.134	F	0.136	**Yes**
Hillcrest Campus Boundary to Arbor Dr	10,000/ 22,5007	10,810	1.081	F	12,167	0.541	C	(0.540)	No
Washington Street									
India St to University Ave	40,000	27,150	0.679	C	27,926	0.698	C	0.019	No
University Ave to First Ave	40,000	25,080	0.627	C	26,825	0.671	C	0.044	No
First Ave to Fourth Ave	40,000	26,370	0.659	C	28,309	0.708	C	0.049	No
Fourth Ave to Fifth Ave	40,000	31,280	0.782	D	33,122	0.828	D	0.046	No
Fifth Ave to Sixth Ave	40,000	37,170	0.929	E	38,867	0.972	E	0.043	**Yes**
Sixth Ave to Richmond St	40,000	40,700	1.018	F	42,397	1.060	F	0.042	**Yes**
Richmond St to Normal St	50,000	31,110	0.622	C	31,643	0.633	C	0.011	No
Front Street									
Arbor Dr to Washington St	17,500	5,720	0.327	A	12,186	0.696	C	0.369	No
First Avenue									
Arbor Dr to Washington St	17,500	5,000	0.286	A	11,466	0.655	C	0.369	No
Washington St to University Ave	8,000	5,150	0.644	D	5,926	0.741	D	0.097	No
University Ave to Robinson Ave	8,000	6,110	0.764	D	6,498	0.812	D	0.048	No
Fourth Avenue									
Washington St to Robinson Ave	17,500	10,380	0.593	C	10,525	0.601	C	0.008	No
Fifth Avenue									
Washington St to Robinson Ave	17,500	11,130	0.636	C	11,275	0.644	C	0.008	No

Source: LLG 2019.

Notes:

[1] Capacity based on roadway classification operating at LOS E.

[2] Average Daily Traffic

[3] Level of Service

[4] Volume to Capacity

[5] Δ denotes a project-induced increase in the Volume to Capacity (V/C) ratio.

[6] Sig = Significant Project impact based on Significance Criteria

[7] No widening of Bachman Place assumed under "without Project" conditions. Three-Lane Collector capacity derived based on the City's Two-Lane and Four-Lane Collector capacities.

As shown in Table 3.15-11 the following study street segments are calculated to operate at LOS E or F in Year 2025 with implementation of the 2019 LRDP:

- Hotel Circle South, I-8 Eastbound Ramps to Bachman Place (LOS F)
- Hotel Circle South, Bachman Place to Camino De La Reina (LOS F)
- Bachman Place, Hotel Circle South to Hillcrest Campus Boundary (LOS F)
- Washington Street, Fifth Avenue to Sixth Avenue (LOS E)
- Washington Street, Sixth Avenue to Richmond Street (LOS F)

Based on the City's significance criteria, significant cumulative impacts would occur at the five street segments listed above.

Metered Freeway Ramp

Table 3.15-12 summarizes the ramp meter operations in Year 2025 with implementation of the 2019 LRDP (Phases 1A through 2B).

Table 3.15-12. Year 2025 Metered Freeway Ramp Operation

Location/Condition	Peak Hour	Peak Hour Flow (F) (veh/hr/ln)	Calculated (Most Restrictive)				Observed[1]	
			Discharge Rate (veh/hr/ln)	Excess Demand E (veh/hr/ln)	Delay (min/ln)	Queue (Vehicles)	Delay (min/ln)	Queue (Vehicles)
Washington Street to SB 163								
Year 2025								
HOV	AM	47	306	0	0	0	0	0
SOV	PM	419	306	113	22	114	4.8	39
Year 2025 with Project								
HOV	AM	49	306	0	0	0	0	0
SOV	PM	443	306	137	27	137	5.9	47
Δ 2025	—	—	—	—	5	23	1.1	8

Source: LLG 2019.

Notes: No. of Lanes = 1 SOV + 1 HOV

[1] The delay and queue are the actual observed in the field. For the future scenarios, the calculated delay and queue are factored based on the observed delay and queue.

As shown in Table 3.15-12, using the most restrictive discharge rates obtained from Caltrans, with addition Phase 1A through 2B traffic, the calculated delay would be 27 minutes and the queue would be 137 cars. However, based on actual field observations, the actual delay would be 5.9 minutes and the queue would be 47 vehicles. Thus, the increase in actual delay due to the 2019 LRDP in the Year 2025 would be 1.1 minutes and the increase in the queue would be 8 vehicles. The total delay would be below the accepted threshold of 15 minutes and the increase due to project traffic would be less than the accepted threshold of 2 minutes. Therefore, the 2019 LRDP would result in a less than significant impact.

Year 2030 (Phase 3 and 4) Operation Impacts

The following section presents the analysis of study area intersections and street segments under Year 2030 conditions without and with Phases 1A through 4. To determine potential impacts, the "Year 2030" future baseline is compared to the "Year 2030 with Phases 1A through 4" scenario to determine if the changes in measures of effectiveness exceed the significance thresholds. Impacts identified under Year 2030 conditions are considered cumulative project transportation impacts.

Phases 3 and 4 of the 2019 LRDP would include the following improvements as part of the 2019 LRDP (Figure 3.15-2):

- Close the north leg of the intersection of Front Street/Arbor Drive to vehicular traffic and provide the following lane geometry:
  - East Leg – one shared through/left-turn lane and one dedicated left-turn lane.
  - West Leg – one dedicated right-turn lane and one dedicated through lane.

In addition, Phase 1A through Phase 2B project improvements are assumed to have been constructed under Year 2030 conditions.

Study Area Intersections

Table 3.15-13 summarizes the peak hour intersection operations under Year 2030 with and without the 2019 LRDP (Phases 1A through 4).

Table 3.15-13. Year 2030 Intersection Operations

Intersection	Control Type	Peak Hour	Year 2030		Year 2030 plus Project		Δ[3]	Sig?[4]
			Delay[1]	LOS[2]	Delay	LOS		
Hotel Circle S/I-8 EB Ramp	AWSC[5]	AM	17.7	C	17.9	C	0.2	No
		PM	**80.5**	**F**	**85.5**	**F**	**5.0**	**Yes**
Hotel Circle S/Bachman Place	Signal	AM	24.4	C	24.4	C	0.0	No
		PM	34.5	C	40.7	D	6.2	No
Hotel Circle N/Camino De La Reina	Signal	AM	12.2	B	12.3	B	0.1	No
		PM	22.7	C	23.2	C	0.5	No
Washington St/Hancock St	Signal	AM	20.4	C	20.5	C	0.1	No
		PM	24.1	C	24.1	C	0.0	No
Washington St/San Diego Ave	Signal	AM	14.5	B	15.1	B	0.6	No
		PM	12.3	B	12.3	B	0.0	No
Washington St/India St	Signal	AM	13.0	B	13.1	B	0.1	No
		PM	10.7	B	10.7	B	0.0	No
Washington St/Goldfinch St	Signal	AM	26.1	C	26.1	C	0.0	No
		PM	30.2	C	30.3	C	0.1	No

Table 3.15-13. Year 2030 Intersection Operations

Intersection	Control Type	Peak Hour	Year 2030		Year 2030 plus Project		Δ[3]	Sig?[4]
			Delay[1]	LOS[2]	Delay	LOS		
Washington St/Front St	Signal	AM	9.0	A	10.8	B	1.8	No
		PM	16.8	B	16.9	B	0.1	No
Washington St/First Ave	Signal	AM	12.4	B	12.4	B	0.0	No
		PM	25.4	C	27.2	C	1.8	No
Washington St/Fourth Ave	Signal	AM	17.4	B	17.8	B	0.4	No
		PM	40.2	D	40.2	D	0.1	No
Washington St/Fifth Ave	Signal	AM	11.8	B	11.8	B	0.0	No
		PM	16.9	B	17.0	B	0.1	No
Washington St/8th Ave/SR-163 Off-Ramp	Signal	AM	7.3	A	7.3	B	0.0	No
		PM	16.9	B	17.2	B	0.3	No
Washington St/Richmond St/SR-163 On-Ramp	Signal	AM	16.4	B	19.2	B	2.8	No
		PM	10.6	B	10.6	B	0.0	No
Normal St/Park Blvd/El Cajon Blvd	Signal	AM	30.7	C	30.7	C	0.0	No
		PM	46.8	D	46.8	D	0.0	No
University Ave/Fourth Ave	Signal	AM	21.5	C	21.7	C	0.2	No
		PM	24.7	C	24.7	C	0.0	No
University Ave/Fifth Ave	Signal	AM	14.1	B	14.1	B	0.0	No
		PM	17.6	B	17.6	B	0.0	No
Robinson Ave/Fourth Ave	Signal	AM	16.2	B	16.3	B	0.1	No
		PM	14.4	B	14.4	B	0.0	No
Robinson Ave/Fifth Ave	Signal	AM	10.2	B	10.2	B	0.0	No
		PM	20.4	C	20.4	C	0.0	No
Bachman Pl/North Access Dwy[6] (Future)	Signal	AM	—	—	4.8	A	—	No
		PM		—	5.0	A	—	No
Arbor Dr/Front Street	Signal[7]	AM	8.8	A	12.7	B	3.9	No
		PM	8.6	A	13.5	B	4.9	No
Arbor Dr/First Ave	Signal[7]	AM	9.7	A	29.4	C	19.7	No
		PM	8.4	A	25.1	C	16.7	No

Source: LLG 2019.

Notes:

1 Average delay expressed in seconds per vehicle.

2 LOS = Level of Service

3 Δ denotes an increase in delay due to project.

4 Sig = Significant Project impact based on Significance Criteria

5 All-Way Stop Control

6 Intersection does not exist under Year 2030 without Project conditions.

7 Intersection signalized as a Project improvement. Without Project analysis assumes the intersection unsignalized under exiting roadway conditions.

As shown in Table 3.15-13, the study intersections are calculated to operate at LOS D or better with the exception of the Hotel Circle South/I-8 Eastbound Ramps intersection which is calculated to operate at LOS F during the PM peak hour. Based on the City's significance criteria, a significant cumulative impact would occur at this intersection.

Study Area Segments

Table 3.15-14 summarizes the segment operations under Year 2030 with and without the 2019 LRDP (Phases 1A through 4).

Table 3.15-14. Year 2030 Street Segment Operations

Street Segment	Capacity (LOS E)[1]	Year 2030			Year 2030 + Phase 1A-4			Δ[5]	Sig?[6]
		ADT[2]	V/C[4]	LOS[3]	ADT	V/C	LOS		
Hotel Circle South									
I-8 Eastbound Ramps to Bachman Pl	15,000	15,980	1.065	F	16,175	1.078	F	0.013	**Yes**
Bachman Pl to Camino De La Reina	15,000	15,640	1.043	F	15,901	1.060	F	0.017	**Yes**
Bachman Place									
Hotel Circle South to Hillcrest Campus Boundary	10,000	10,200	1.020	F	10,656	1.066	F	0.046	**Yes**
Hillcrest Campus Boundary to Arbor Dr	10,000/ 22,500[7]	11,050	1.105	F	11,506	0.511	C	(0.594)	No
Washington Street									
India St to University Ave	40,000	27,760	0.694	C	28,021	0.701	C	0.007	No
University Ave to First Ave	40,000	25,640	0.641	C	26,226	0.656	C	0.015	No
First Ave to Fourth Ave	40,000	26,950	0.674	C	27,602	0.690	C	0.016	No
Fourth Ave to Fifth Ave	40,000	31,980	0.800	D	32,599	0.815	D	0.015	No
Fifth Ave to Sixth Ave	40,000	37,990	0.950	E	38,560	0.964	E	0.014	No
Sixth Ave to Richmond St	40,000	41,600	1.040	F	42,170	1.054	F	0.014	**Yes**
Richmond St to Normal St	50,000	31,800	0.636	C	31,979	0.640	C	0.004	No
Front Street									
Arbor Dr to Washington St	17,500	5,840	0.334	A	8,273	0.473	B	0.139	No
First Avenue									
Arbor Dr to Washington St	17,500	5,110	0.292	A	8,273	0.473	B	0.181	No
Washington St to University Ave	8,000	5,260	0.658	D	5,521	0.690	D	0.032	No
University Ave to Robinson Ave	8,000	6,250	0.781	D	6,380	0.798	D	0.017	No

Table 3.15-14. Year 2030 Street Segment Operations

Street Segment	Capacity (LOS E)[1]	Year 2030			Year 2030 + Phase 1A-4			Δ[5]	Sig?[6]
		ADT[2]	V/C[4]	LOS[3]	ADT	V/C	LOS		
Fourth Avenue									
Washington St to Robinson Ave	17,500	10,610	0.606	C	10,659	0.609	C	0.003	No
Fifth Avenue									
Washington St to Robinson Ave	17,500	11,380	0.650	C	11,429	0.653	C	0.003	No

Source: LLG 2019.

Notes:

[1] Capacity based on roadway classification operating at LOS E.

[2] Average Daily Traffic

[3] Level of Service

[4] Volume to Capacity

[5] Δ denotes a project-induced increase in the Volume to Capacity (V/C) ratio.

[6] Sig = Significant Project impact based on Significance Criteria.

[7] No widening of Bachman Place assumed under "without Project" conditions. Three-Lane Collector capacity derived based on the City's Two-Lane and Four-Lane Collector capacities

As shown in Table 3.15-14, the following study street segments are calculated to operate at LOS E or F in Year 2030 with implementation of the 2019 LRDP:

- Hotel Circle South, I-8 Eastbound Ramps to Bachman Place (LOS F)
- Hotel Circle South, Bachman Place to Camino De La Reina (LOS F)
- Bachman Place, Hotel Circle South to Hillcrest Campus Boundary (LOS F)
- Washington Street, Fifth Avenue to Sixth Avenue (LOS E)
- Washington Street, Sixth Avenue to Richmond Street (LOS F)

Based on the City's significance criteria, significant cumulative impacts would occur at the following street segments:

- Hotel Circle South, I-8 Eastbound Ramps to Bachman Place
- Hotel Circle South, Bachman Place to Camino De La Reina
- Bachman Place, Hotel Circle South to Hillcrest Campus Boundary
- Washington Street, Sixth Avenue to Richmond Street

It should be noted that a significant impact is calculated along Washington Street between Fifth Avenue and Sixth Avenue under Year 2025 conditions, whereas no significant impact is identified under Year 2030 conditions. This is due to the demolition of the existing 370-bed hospital, 37,100 SF of commercial office space and 131,000 SF of medical office space under Year 2030 conditions, which would result in a decrease in project related traffic as compared to Year 2025 conditions. The significant impact along Washington Street between Fifth Avenue and Sixth Avenue would return under Year 2035 conditions.

Metered Freeway Ramp

Table 3.15-15 summarizes the ramp meter operations in Year 2030 with implementation of the 2019 LRDP (Phases 1 through 4).

Table 3.15-15. Year 2030 Metered Freeway Ramp Operation

Location/Condition	Peak Hour	Peak Hour Flow (F) (veh/hr/ln)	Calculated (Most Restrictive)				Observed[1]	
			Discharge Rate (veh/hr/ln)	Excess Demand E (veh/hr/ln)	Delay (min/ln)	Queue (Vehicles)	Delay (min/ln)	Queue (Vehicles)
Washington Street to SB 163								
Year 2030								
HOV	AM	48	306	0	0	0	0	0
SOV	PM	428	306	122	24	123	5.3	42
Year 2030 + Project								
HOV	AM	49	306	0	0	0	0	0
SOV	PM	445	306	139	27	139	5.9	48
Δ 2030	—	—	—	—	3	16	0.6	6

Source: LLG 2019.

Notes: No. of Lanes = 1 SOV + 1 HOV

[1] The delay and queue are the actual observed in the field. For the future scenarios, the calculated delay and queue are factored based on the observed delay and queue, as described in the text.

As shown in Table 3.15-15, using the most restrictive discharge rates obtained from Caltrans, with addition of 2019 LRDP traffic, the calculated delay would be 27 minutes and the queue would be 139 cars. However, based on actual field observations, the actual delay would be 5.9 minutes and the queue would be 48 vehicles. Thus, the increase in actual delay due to the 2019 LRDP in Year 2030 would be 0.6 minutes and the increase in the queue would be 6 vehicles. The total delay would be below the accepted threshold of 15 minutes and the increase due to project traffic would be less than the accepted threshold of 2 minutes. Therefore, the 2019 LRDP would result in a less than significant impact.

Year 2035 (Phase 5) Operation Impacts

The following section presents the analysis of study area intersections and street segments under Year 2035 conditions without and with buildout (Phases 1A through 5) of the 2019 LRDP. To determine potential impacts, the "Year 2035" future baseline is compared to the "Year 2035 with Phases 1A through 5" scenario to determine if the changes in measures of effectiveness exceed the significance thresholds presented. Impacts identified under Year 2035 conditions are considered cumulative transportation impacts. Phase 5 would not include any additional roadway improvements. The Phase 1A through Phase 4 improvements are assumed to have been constructed under Year 2035 conditions.

Study Area Intersections

Table 3.15-16 summarizes the peak hour intersection operations under Year 2035 with project buildout (Phases 1A through 5).

Table 3.15-16. Year 2035 Intersection Operations

Intersection	Control Type	Peak Hour	Year 2035		Year 2035 plus Project		Δ[3]	Sig?[4]
			Delay[1]	LOS[2]	Delay	LOS		
Hotel Circle S/I-8 EB Ramp	AWSC[5]	AM	19.7	C	20.3	C	0.6	No
		PM	**94.1**	**F**	**104.0**	**F**	**9.9**	**Yes**
Hotel Circle S/Bachman Place	Signal	AM	26.4	C	26.4	C	0.0	No
		PM	**41.1**	**D**	**55.8**	**E**	**14.7**	**Yes**
Hotel Circle N/Camino De La Reina	Signal	AM	12.3	B	12.3	B	0.0	No
		PM	26.2	C	28.0	C	1.8	No
Washington St/Hancock St	Signal	AM	33.4	C	34.6	C	1.2	No
		PM	44.0	D	46.3	D	2.3	No
Washington St/San Diego Ave	Signal	AM	17.4	B	18.1	B	0.7	No
		PM	14.4	B	14.6	B	0.2	No
Washington St/India St	Signal	AM	17.8	B	18.1	B	0.3	No
		PM	22.1	C	22.6	C	0.5	No
Washington St/Goldfinch St	Signal	AM	26.6	C	26.7	C	0.1	No
		PM	30.9	C	31.1	C	0.2	No
Washington St/Front St	Signal	AM	9.7	A	12.7	B	3.0	No
		PM	17.4	B	17.8	B	0.4	No
Washington St/First Ave	Signal	AM	13.0	B	13.0	B	0.0	No
		PM	27.7	C	33.7	C	6.0	No
Washington St/Fourth Ave	Signal	AM	26.4	C	26.4	C	0.0	No
		PM	59.9	E	60.4	E	0.5	No
Washington St/Fifth Ave	Signal	AM	11.7	B	11.7	B	0.0	No
		PM	22.6	C	23.2	C	0.6	No
Washington St/8th Ave/SR-163 Off-Ramp	Signal	AM	8.5	A	8.5	A	0.0	No
		PM	**101.2**	**F**	**102.6**	**F**	**1.4**	**Yes**
Washington St/Richmond St/SR-163 On-Ramp	Signal	AM	**54.9**	**D**	**68.9**	**E**	**14.0**	**Yes**
		PM	28.4	C	29.3	C	0.9	No
Norman St/Park Blvd/El Cajon Blvd	Signal	AM	34.1	C	34.1	C	0.0	No
		PM	43.0	D	43.1	D	0.1	No
University Ave/Fourth Ave	Signal	AM	18.0	B	18.1	B	0.1	No
		PM	23.6	C	23.6	C	0.0	No
University Ave/Fifth Ave	Signal	AM	15.5	B	15.6	B	0.1	No
		PM	17.2	B	17.4	B	0.2	No

Table 3.15-16. Year 2035 Intersection Operations

Intersection	Control Type	Peak Hour	Year 2035		Year 2035 plus Project			
			Delay[1]	LOS[2]	Delay	LOS	Δ[3]	Sig?[4]
Robinson Ave/Fourth Ave	Signal	AM	14.8	B	15.0	B	0.2	No
		PM	14.0	B	14.0	B	0.0	No
Robinson Ave/Fifth Ave	Signal	AM	11.6	B	11.6	B	0.0	No
		PM	15.7	B	15.8	B	0.1	No
Bachman Pl/North Access Dwy[6] (Future)	Signal	AM	—	—	6.0	A	—	No
		PM	—	—	5.4	A	—	No
Arbor Dr/Front Street	Signal[7]	AM	9.1	A	9.7	A	0.6	No
		PM	8.7	A	13.7	B	5.0	No
Arbor Dr/First Ave	Signal[7]	AM	9.9	A	28.2	C	18.3	No
		PM	8.5	A	27.3	C	18.8	No

Source: LLG 2019.

Notes:

[1] Average delay expressed in seconds per vehicle.

[2] LOS = Level of Service

[3] Δ denotes an increase in delay due to project.

[4] Sig = Significant Project impact based on Significance Criteria

[5] All-Way Stop Control

[6] Intersection does not exist under Year 2030 without Project conditions.

[7] Intersection signalized as a Project improvement. Without Project analysis assumes the intersection unsignalized under exiting roadway conditions.

As shown in Table 3.15-16, the following study intersections are calculated to operate at LOS E or F in Year 2035 with project buildout:

- Hotel Circle South/I-8 Eastbound Ramps (LOS F during the PM peak hour)
- Hotel Circle South/Bachman Place (LOS E during the PM peak hour)
- Washington Street/Fourth Avenue (LOS E during the PM peak hour)
- Washington Street/8th Avenue/SR-163 Southbound Off-Ramp (LOS F during the PM peak hour)
- Washington Street/Richmond Street/SR-163 On-Ramp (LOS E during the AM peak hour)

Based on the City's significance criteria, a significant cumulative impact would occur at the following intersections because the increase in delay exceeds the thresholds identified in Table 3.15-6:

Hotel Circle South/I-8 Eastbound Ramps

- Hotel Circle South/Bachman Place
- Washington Street/8th Avenue/SR-163 Southbound Off-Ramp
- Washington Street/Richmond Street/SR-163 On-Ramp

Study Area Segments

Table 3.15-17 summarizes the street segment operations in Year 2035 with project buildout (Phases 1A through 5).

Table 3.15-17. Year 2035 Street Segment Operations

Street Segment	Capacity (LOS E)[1]	Year 2035			Year 2035 + Phases 1A -5			Δ[5]	Sig?[6]
		ADT[2]	V/C[4]	LOS[3]	ADT	V/C	LOS		
Hotel Circle South									
I-8 Eastbound Ramps to Bachman Pl	15,000	18,500	1.233	F	18,916	1.261	F	0.028	**Yes**
Bachman Pl to Camino De La Reina	15,000	23,800	1.587	F	24,354	1.624	F	0.037	**Yes**
Bachman Place									
Hotel Circle South to Hillcrest Campus Boundary	10,000	19,300	1.930	F	20,270	2.027	F	0.097	**Yes**
Hillcrest Campus Boundary to Arbor Dr	10,000/ 22,500[7]	17,000	1.700	F	17,970	0.799	D	(0.901)	No
Washington Street									
India St to University Ave	40,000	38,600	0.965	E	39,154	0.979	E	0.014	No
University Ave to First Ave	40,000	25,900	0.648	C	27,147	0.679	C	0.031	No
First Ave to Fourth Ave	40,000	27,200	0.680	C	28,586	0.715	C	0.035	No
Fourth Ave to Fifth Ave	40,000	37,300	0.933	E	38,616	0.965	E	0.032	**Yes**
Fifth Ave to Sixth Ave	40,000	41,100	1.028	F	42,312	1.058	F	0.030	**Yes**
Sixth Ave to Richmond St	40,000	41,800	1.045	F	43,012	1.075	F	0.030	**Yes**
Richmond St to Normal St	50,000	47,100	0.942	E	47,481	0.950	E	0.008	No
Front Street									
Arbor Dr to Washington St	17,500	7,900	0.451	B	8,938	0.511	B	0.060	No
First Avenue									
Arbor Dr to Washington St	17,500	7,500	0.429	A	8,938	0.511	B	0.082	No
Washington St to University Ave	8,000	9,100	1.138	F	9,654	1.207	F	0.069	**Yes**
University Ave to Robinson Ave	8,000	16,300	2.038	F	16,577	2.072	F	0.034	**Yes**
Fourth Avenue									
Washington St to Robinson Ave	17,500	12,900	0.737	D	13,004	0.743	D	0.006	No
Fifth Avenue									
Washington St to Robinson Ave	17,500	14,000	0.800	D	14,104	0.806	D	0.006	No

Source: LLG 2019.

Notes:

[1] Capacity based on roadway classification operating at LOS E.

[2] Average Daily Traffic

[3] Level of Service

[4] Volume to Capacity

[5] Δ denotes a project-induced increase in the Volume to Capacity (V/C) ratio.

[6] Sig = Significant Project impact based on Significance Criteria.

[7] No widening of Bachman Place assumed under "without Project" conditions. Three-Lane Collector capacity derived based on the City's Two-Lane and Four-Lane Collector capacities.

As shown in Table 3.15-17, the following study street segments are calculated to operate at LOS E or F in Year 2035 with project buildout:

- Hotel Circle South, I-8 Eastbound Ramps to Bachman Place (LOS F)
- Hotel Circle South, Bachman Place to Camino De La Reina (LOS F)
- Bachman Place, Hotel Circle South to Hillcrest Campus Boundary (LOS F)
- Washington Street, India Street to University Avenue (LOS E)
- Washington Street, Fourth Avenue to Fifth Avenue (LOS E)
- Washington Street, Fifth Avenue to Sixth Avenue (LOS F)
- Washington Street, Sixth Avenue to Richmond Street (LOS F)
- Washington Street, Richmond Street to Normal Street (LOS E)
- First Avenue, Washington Street to University Avenue (LOS F)
- First Avenue, University Avenue to Robinson Avenue (LOS F)

Based on the City's significance criteria, significant cumulative impacts would occur at the following street segments because the change in the volume-to-capacity (V/C) ratio exceeds the threshold identified in Table 3.15-6:

- Hotel Circle South, I-8 Eastbound Ramps to Bachman Place
- Hotel Circle South, Bachman Place to Camino De La Reina
- Bachman Place, Hotel Circle South to Hillcrest Campus Boundary
- Washington Street, Fourth Avenue to Fifth Avenue
- Washington Street, Fifth Avenue to Sixth Avenue
- Washington Street, Sixth Avenue to Richmond Street
- First Avenue, Washington Street to University Avenue
- First Avenue, University Avenue to Robinson Avenue

Metered Freeway Ramp

Table 3.15-18 summarizes the Year 2035 with project ramp meter operations.

Table 3.15-18. Year 2035 Metered Freeway Ramp Operation

Location/Condition	Peak Hour	Peak Hour Flow (F) (veh/hr/ln)	Calculated (Most Restrictive)				Observed[1]	
			Discharge Rate (veh/hr/ln)	Excess Demand E (veh/hr/ln)	Delay (min/ln)	Queue (Vehicles)	Delay (min/ln)	Queue (Vehicles)
Washington Street to SB 163								
Year 2035								
SOV	AM	68	306	0	0	0	0	0
SOV	PM	611	306	305	60	306	13.1	105
Year 2035 + Project								
SOV	AM	71	306	0	0	0	0	0
SOV	PM	643	306	337	66	337	14.5	116
Δ 2035	—	—	—	—	6	31	1.4	11

Source: LLG 2019.

Notes: No. of Lanes = 1 SOV + 1 HOV

[1] The delay and queue are the actual observed in the field. For the future scenarios, the calculated delay and queue are factored based on the observed delay and queue, as described in the text.

As shown in Table 3.15-18, using the most restrictive discharge rates obtained from Caltrans (the rates at which cars are fed onto the freeway ramps), with the addition of project traffic, the calculated delay would be 66 minutes, and the queue would be 337 cars. However, based on actual field observations, the actual delay would be 14.5 minutes, and the queue would be 116 vehicles. The increase in delay due to project buildout in the Year 2035 would be 1.4 minutes, and the increase in the queue would be 11 vehicles. The total delay would be below the accepted threshold of 15 minutes, and the increase due to project traffic would be less than the accepted threshold of 2 minutes. Therefore, the 2019 LRDP would result in a less than significant impact.

Transit Facilities

As discussed in Section 3.15.1.1, MTS bus service is currently provided to the Hillcrest Campus. The bus route served in the immediate Hillcrest Campus area is Route 3. Route 10 is approximately 0.25-mile distance from the Hillcrest Campus. In addition, UC San Diego provides shuttle service between the La Jolla and Hillcrest Campuses. The shuttle provides services from the Hillcrest Campus to the Thornton Pavilion at the La Jolla Campus with eight stops in between.

The 2019 LRDP proposes improvements to overall transit access for the Hillcrest Campus. The current bus stop located in front of the Medical Offices South building on southbound Front Street would be relocated near the corner of the First Avenue and Arbor Drive intersection. The bus stop would be converted to a transit stop connecting with municipal and UC San Diego transit routes, helping to bridge the last mile gap for campus commuters and patients. In addition to continuing its shuttle service between the La Jolla and Hillcrest Campuses, UC San Diego will also provide new shuttle service to and from the MTS Green Line transit station at Fashion Valley, approximately 1.5

miles from the campus. Therefore, the 2019 LRDP would not conflict with UC San Diego's Transportation Program addressing transit facilities, and impacts would be less than significant.

Bicycle Facilities

As discussed in Section 3.15.1.1, the surrounding roadways have existing bicycle facilities that serve the Hillcrest Campus. The 2019 LRDP includes an improved bicycle circulation concept that promotes the use of alternative transportation to improve overall traffic congestion in and around the Hillcrest Campus. New Class II bicycle lanes on the First Avenue extension would facilitate safer bicycle travel into the Health Care District by providing a dedicated and visible space for bicyclists that would connect with existing and proposed City bicycle facilities beyond the Hillcrest Campus boundary. In addition, the Bachman Place widening would allow for new bicycle and pedestrian infrastructure, separated from vehicular lanes that would transform the street into a multi-modal connection to the campus and the adjacent Medical Complex and Hillcrest neighborhoods. Therefore, the 2019 LRDP would not conflict UC San Diego's Transportation Program addressing bicycle facilities, and impacts would be less than significant.

Pedestrian Facilities

As discussed in Section 3.15.1.1, many of the surrounding roadways provide pedestrian access to the Hillcrest Campus. The 2019 LRDP intends to improve pedestrian mobility within the campus footprint and would also improve pedestrian connectivity to and from Hillcrest, one of the most walkable neighborhoods in San Diego. Pedestrian improvements would be integrated throughout the Hillcrest Campus. The 2019 LRDP would prioritize pedestrian access to the Open Space District by removing vehicular access (except emergency vehicles) from Dickinson Street and the northernmost section of Front Street. Within the Health Care District, wide pedestrian walkways, defined streetscapes, and pedestrian bridges would serve as key wayfinding elements and would be complemented by signage, public art, and special lighting installations. A new pedestrian connection would also be provided along the proposed north access driveway from Bachman Place up to the central campus area. A 12-foot-wide, multi-use path would facilitate pedestrian and bicycle travel on a grade-separated trail adjacent to bi-directional vehicle travel lanes. In addition, the Bachman Place widening would allow for improved pedestrian infrastructure along this street that connects the Hillcrest Campus, Medical Complex and Hillcrest Neighborhoods to the Mission Valley neighborhood. Therefore, the 2019 LRDP would not conflict with UC San Diego's Transportation Policy addressing pedestrian facilities, and impacts would be less than significant.

Construction Impacts

Development under the proposed 2019 LRDP would involve the net new construction of 1.6 million gsf over five specific phases and would include demolition, clearing and grubbing, and grading. The details of each construction phase are discussed in Chapter 2, Project Description.

Trip Generation

Construction under the proposed 2019 LRDP would involve various types of equipment, such as bulldozers, scrapers, backhoes, and other earth-moving equipment; pile drivers; dump trucks; cranes; trucks; concrete mixers; and generators. Phase 4 of construction is expected to generate the most trips, with 448 workers, 299 heavy-duty truck trips (149 trucks in and out), and 60 vendor truck trips. Therefore, this phase is considered to have the worst-case averaged daily trip generation that would occur during construction.

The worst-case daily construction trip generation is summarized in Table 3.15-19.

Worst-case construction activities are calculated to generate 1,850 ADT with 532 total AM peak hour trips (490 inbound/42 outbound) and 218 total PM peak-hour trips (42 inbound/176 outbound).

Table 3.15-19. Worst Case Construction Trip Generation

Number and Type of Trips	Daily Trips			AM Peak Hour (w/PCE)			PM Peak Hour (w/PCE)		
	ADT	PCE[1]	PCE Adjusted ADT	In	Out	Total	In	Out	Total
448 Worker Vehicles	896	1.0	896	448	0	448	0	134	134
30 Vendor Trucks	60	1.0	60	3	3	6	3	3	6
149 Heavy Duty Trucks	298	3.0	894	39	39	78	39	39	79
Total Phase 4 Demolition Construction Trips			**1,850**	**490**	**42**	**532**	**42**	**176**	**218**

Source: LLG 2019.
Notes: PCE = passenger car equivalence

Year 2025 Interim Operation + Construction Traffic Analysis

Year 2025 reflects the worst-case interim operation scenario when operation and construction activities occur simultaneously. In this scenario, Phases 1A through 2B would be complete and in operation; the remaining on-site structures would be in operation, including the existing hospital; and construction of Phase 3 would be under way. This condition would be a conservative, worst-case scenario, as peak construction trips were assumed, although in reality, some phases of construction would generate fewer trips. Additionally, the condition would be temporary due to the temporary nature of construction activities.

Study Area Intersections

Table 3.15-20 summarizes the peak-hour intersection operations under Year 2025 Interim Operation + Construction Traffic conditions.

Table 3.15-20. Year 2025 Interim Intersection Operations with Construction Traffic

Intersection	Control Type	Peak Hour	Year 2025		Year 2025 + Phase 1A-2B + Construction		Δ[3]	Sig?[4]
			Delay[1]	LOS[2]	Delay	LOS		
Hotel Circle S/I-8 Eastbound Ramps	AWSC[5]	AM	16.9	C	32.2	D	15.3	No
		PM	**74.1**	**F**	**96.2**	**F**	**22.1**	**Yes**
Hotel Circle S/Bachman Place	Signal	AM	23.6	C	**57.5**	**E**	**33.9**	**Yes**
		PM	31.8	C	52.4	D	20.6	No
Hotel Circle N/Camino De La Reina	Signal	AM	11.8	B	12.4	B	0.6	No
		PM	21.3	C	30.3	C	9.0	No
Washington St/Hancock St	Signal	AM	20.4	C	20.6	C	0.2	No
		PM	23.8	C	24.1	C	0.3	No
Washington St/San Diego Ave	Signal	AM	13.4	C	14.1	B	0.7	No
		PM	12.1	B	12.7	B	0.6	No
Washington St/India St	Signal	AM	12.7	B	14.0	B	1.3	No
		PM	10.4	B	10.8	B	0.4	No
Washington St/Goldfinch St	Signal	AM	25.9	C	26.6	C	0.7	No
		PM	29.9	C	30.2	C	0.3	No
Washington St/Front St	Signal	AM	9.0	A	11.7	B	2.7	No
		PM	16.6	B	20.2	C	3.6	No
Washington St/First Ave	Signal	AM	12.2	B	23.5	C	11.3	No
		PM	24.9	C	27.6	C	2.7	No
Washington St/Fourth Ave	Signal	AM	17.2	B	18.5	B	1.3	No
		PM	39.7	D	41.4	D	1.7	No
Washington St/Fifth Ave	Signal	AM	11.7	B	12.0	B	0.3	No
		PM	16.8	B	19.6	B	2.8	No
Washington St/8th Ave	Signal	AM	7.2	A	32.7	C	25.5	No
		PM	16.5	B	39.6	D	23.1	No

Source: LLG 2019.

Notes:

[1] Average delay expressed in seconds per vehicle.

[2] LOS = Level of Service

[3] Δ denotes an increase in delay due to project.

[4] Sig = Significant Project impact based on Significance Criteria.

[5] All-Way Stop Control

As shown in Table 3.15-20, the following study intersections are calculated to operate at LOS E or F:

- Hotel Circle South/I-8 Eastbound Ramps (LOS F during the PM peak hour)
- Hotel Circle South/Bachman Place (LOS E during the PM peak hour)

Based on the City's significance criteria as summarized in Table 3.15-6, a significant direct impact would occur at both of these intersections.

Study Area Street Segments

Table 3.15-21 summarizes the Year 2025 Interim Operation + Construction Traffic street segment operations.

Table 3.15-21. Year 2025 Interim Street Segment Operations with Construction Traffic

Street Segment	Capacity (LOS E)[1]	Year 2025			Year 2025 + Phase 1A-2B + Construction			Δ[5]	Sig?[6]
		ADT[2]	V/C[4]	LOS[3]	ADT	V/C	LOS		
Hotel Circle South									
I-8 Eastbound Ramps to Bachman Pl	15,000	**15,630**	**1.042**	**F**	**16,774**	**1.118**	**F**	**0.076**	**Yes**
Bachman Pl to Camino De La Reina	15,000	**15,300**	**1.020**	**F**	**16,676**	**1.112**	**F**	**0.092**	**Yes**
Bachman Place									
Hotel Circle South to Hillcrest Campus Boundary	10,000	**9,980**	**0.998**	**E**	**12,499**	**1.250**	**F**	**0.252**	**Yes**
Hillcrest Campus Boundary to Arbor Dr	10,000/22,500[7]	**10,810**	**1.081**	**F**	13,329	0.592	C	(0.489)	No
Washington Street									
India St to University Ave	40,000	27,150	0.679	C	28,079	0.702	C	0.023	No
University Ave to First Ave	40,000	25,080	0.627	C	27,169	0.679	C	0.052	No
First Ave to Fourth Ave	40,000	26,370	0.659	C	28,691	0.717	C	0.058	No
Fourth Ave to Fifth Ave	40,000	31,280	0.782	D	33,485	0.837	D	0.055	No
Fifth Ave to Sixth Ave	40,000	**37,170**	**0.929**	**E**	**39,202**	**0.980**	**E**	**0.051**	**Yes**
Sixth Ave to Richmond St	40,000	**40,700**	**1.018**	**F**	**42,732**	**1.068**	**F**	**0.050**	**Yes**
Richmond St to Normal St	50,000	31,110	0.622	C	31,748	0.635	C	0.013	No
Front Street									
Arbor Dr to Washington St	17,500	5,720	0.327	A	12,530	0.716	C	0.389	No
First Avenue									
Arbor Dr to Washington St	17,500	5,000	0.286	A	11,810	0.675	C	0.389	No
Washington St to University Ave	8,000	5,150	0.644	D	6,079	0.760	D	0.166	No
University Ave to Robinson Ave	8,000	6,110	0.764	D	6,574	0.822	D	0.058	No
Fourth Avenue									

Table 3.15-21. Year 2025 Interim Street Segment Operations with Construction Traffic

Street Segment	Capacity (LOS E)[1]	Year 2025			Year 2025 + Phase 1A-2B + Construction			Δ[5]	Sig?[6]
		ADT[2]	V/C[4]	LOS[3]	ADT	V/C	LOS		
Washington St to Robinson Ave	17,500	10,380	0.593	C	10,554	0.603	C	0.010	No
Fifth Avenue									
Washington St to Robinson Ave	17,500	11,130	0.636	C	11,304	0.646	C	0.010	No

Source: LLG 2019.

Notes:

[1] Capacity based on roadway classification operating at LOS E.

[2] Average Daily Traffic

[3] Level of Service

[4] Volume to Capacity

[5] Δ denotes a project-induced increase in the Volume to Capacity (V/C) ratio.

[6] Sig = Significant Project impact based on Significance Criteria

[7] No widening of Bachman Place assumed under "without Project" conditions. Three-Lane Collector capacity derived based on the City's Two-Lane and Four-Lane Collector capacities.

As shown in Table 3.15-21, the following study street segments are calculated to operate at LOS E or F:

- Hotel Circle South, I-8 Eastbound Ramps to Bachman Place (LOS F)
- Hotel Circle South, Bachman Place to Camino De La Reina (LOS F)
- Bachman Place, Hotel Circle South to Hillcrest Campus Boundary (LOS F)
- Washington Street, Fifth Avenue to Sixth Avenue (LOS E)
- Washington Street, Sixth Avenue to Richmond Street (LOS F)

Based on the City's significance criteria, identified in Table 3.15-6, significant impacts are calculated at the five street segments listed above.

Mitigation Measures

The following section identifies mitigation measures to reduce the 2019 LRDP's direct and cumulative operational and construction impacts. Mitigation measure locations are shown on Figure 3.15-3, Proposed Mitigation for Significant Impacts.

Operational

Phases 1A and 1B (Year 2022) Direct Impacts

The recommended mitigation measures to reduce the 2019 LRDP's direct impacts are summarized below.

Intersections

Hotel Circle South/I-8 Eastbound Ramp Intersection

While the 2019 LRDP would result in a direct impact to the current intersection configuration of Hotel Circle South/I-8 Eastbound Ramp, the impact would be mitigated prior to the completion of Phase 1A of the 2019 LRDP by the Legacy International Center project, which also has a significant impact at this intersection. This intersection is located along the Legacy International Center project's frontage and is conditioned to be improved by that project. To mitigate the impact at this intersection, the Legacy International Center project will provide full-width dedication (varying width up to 28 feet) along the project frontage and construct an additional eastbound and westbound travel lane. Existing conditions will be matched at the western and eastern limits of the site with appropriate transitions. The Legacy International Center project has been approved by the City, is bonded, and is currently under construction, with an anticipated opening date of January 2020. The mitigation measure would be implemented by the Legacy International Center project prior to Phase 1A of the 2019 LRDP; therefore, no direct impact would occur from implementation of the 2019 LRDP, and UC San Diego would not be required to implement any mitigation at this intersection.

Table 3.15-22 shows the level of significance after mitigation implemented by the Legacy International Center project to the impacted intersection.

Table 3.15-22. Near-Term (Opening Year 2022) Intersection Mitigation Analysis

Intersection	Control Type	Peak Hour	Near Term (Opening Year 2022)		Near Term (Opening Year 2022) + Project		Near Term (Opening Year 2022) + Project + Mitigation		
			Delay	LOS	Delay[1]	LOS[2]	Delay	LOS	Δ[3]
Hotel Circle S/I-8 EB Ramps	AWSC[4]	PM	69.4	F	71.1	F	58.7	F	(10.7)

Source: LLG 2019.

Notes:

[1] Average delay expressed in seconds per vehicle.

[2] Level of Service

[3] Δ denotes a decrease in delay as compared to Near-Term conditions with the addition of Project trips and proposed mitigation measures.

[4] AWSC – All-Way Stop Control

As shown in Table 3.15-22, implementation of the Legacy International Center project's mitigation measure described previously would eliminate the proposed 2019 LRDP's impact at the Hotel Circle South and I-8 Eastbound Ramp intersection in the Near-Term Opening Day 2022 scenario to less than significant.

Street Segments

Hotel Circle South from Bachman Place to Camino De La Reina

The following mitigation measure would be implemented to reduce impacts at this street segment:

> **TRA-1A: Hotel Circle South from Bachman Place to Camino De La Reina.** To address the impacts along the Hotel Circle South segment from Bachman Place to Camino De La Reina, the roadway shall be widened to a Three-Lane Collector prior to occupancy of Phase 1A. However, the provision of a third lane along the majority of this segment is physically infeasible due to the existing roadway width, right-of-way, and the location of the support columns for the I-8 undercrossing on Hotel Circle South. A portion of the segment near Camino De La Reina would be restriped to provide three lanes, which would improve operations and partially mitigate the impact. However, the impact would be considered significant and unavoidable.

Bachman Place from Hotel Circle South to the Hillcrest Campus Boundary

The following mitigation measure would be implemented to reduce impacts at this street segment:

> **TRA-1B: Bachman Place from Hotel Circle South to the Hillcrest Campus Boundary.** To address the impact to Bachman Place from Hotel Circle South to the Hillcrest Campus Boundary, a second southbound lane shall be constructed prior to occupancy of Phase 1A. However, improvements to the adjacent segment of Bachman Place from the Hillcrest Campus Boundary to the Bachman Parking Structure, which would be improved as a project feature (as described in Chapter 2, Project Description, of this 2019 LRDP EIR), cannot be completed until the existing Bachman Parking Structure is removed during Phase 2B. To provide a cohesive improvement program, UC San Diego proposes completing the improvements to Bachman Place between Hotel Circle South and the Hillcrest Campus Boundary when the adjacent segment of Bachman Place to the south is improved during Phase 2B. Therefore, a temporary significant and unavoidable impact would occur along this segment between the completion of Phase 1A to the completion of Phase 2B. At the completion of Phase 2B, the mitigation measures would be implemented, and the impact would be mitigated to a less than significant level.

Bachman Place from the Hillcrest Campus Boundary to the Bachman Parking Structure

To address the impacts along the Bachman Place segment from the Hillcrest Campus Boundary to the Bachman Parking Structure, a second southbound lane shall be constructed prior to the occupancy of Phase 1A. This improvement is a project feature but cannot be completed until the existing Bachman Parking Structure is removed during Phase 2B. Therefore, a temporary significant and unavoidable impact would occur along this segment between the completion of

Phase 1A and the completion of Phase 2B. At the completion of Phase 2B, the project design feature would be implemented, and the impact would be reduced to a less than significant level.

Phases 2A and 2B (Year 2025) Cumulative Impacts

Phases 2A and 2B of the 2019 LRDP would result in significant cumulative impacts at one study area intersection and five street segments. The recommended mitigation measures are summarized below.

Intersections

Hotel Circle South/Interstate-8 Eastbound Ramp Intersection

The mitigation measure implemented by the Legacy International Center project described previously under Phases 1A and 1B (Year 2022) Direct Impacts would also eliminate the 2019 LRDP's cumulative impact to this intersection under Year 2025 conditions. Table 3.15-23 shows the level of significance after implementation of the Legacy International Center project's mitigation measure to the impacted intersection.

Table 3.15-23. Year 2025 Intersection Mitigation Analysis

Intersection	Control Type	Peak Hour	Near Term (Year 2025)		Year 2025 + Project		Year 2025 + Project + Mitigation		
			Delay	LOS	Delay[1]	LOS[2]	Delay	LOS	Δ[3]
Hotel Circle S/I-8 EB Ramps	AWSC[4]	PM	74.1	F	84.2	F	69.7	F	(4.4)

Source: LLG 2019.

Notes:
1 Average delay expressed in seconds per vehicle.
2 Level of Service
3 Δ denotes a decrease in delay as compared to Year 2025 conditions with the addition of Project trips and proposed mitigation measures.
4 AWSC – All-Way Stop Control

As shown in Table 3.15-23, implementation of the Legacy International Center project's mitigation measure would reduce the proposed 2019 LRDP's contribution to the Year 2025 Scenario cumulative impact at the Hotel Circle South and I-8 Eastbound Ramp intersection to less than significant.

Street Segments

Hotel Circle South from Interstate 8 Eastbound Ramps to Bachman Place

This street segment was analyzed assuming no improvements are implemented prior to the 2019 LRDP. The Legacy International Center project also has a significant impact along this street segment. A portion of the segment is located along the Legacy International Center project's frontage and is conditioned to be improved by the Legacy International Center project. The

following improvement is conditioned to be constructed by the Legacy International Center project (LLG 2019):

> Widen Hotel Circle South between the I-8 Eastbound Ramps and the Legacy International Center driveway to a 4-lane Collector with a continuous left-turn lane. To mitigate the project's direct impact, the Legacy International Center project is conditioned to provide full-width dedication (varying width up to 28 feet) and improvement to implement the ultimate classification of a 4-lane Collector on Hotel Circle South. Hotel Circle South is classified as a four-lane Collector but only built as a two-lane roadway. Existing conditions of a 2-lane Collector with two-way left-turn lane will be matched at the western and eastern limits of the site.

With Legacy International Center project implementation of this improvement, which would occur prior to the completion of Phase 1A of the 2019 LRDP, the 2019 LRDP would not result in a cumulative impact between the I-8 Eastbound Ramp and the Legacy International Center project driveway under Year 2025 conditions.

As noted in the Legacy International Center Traffic Study, the Legacy International Center project also significantly impacts the remainder of this segment from the Legacy International Center project driveway to Bachman Place. Widening the roadway to a Three-Lane Collector with a continuous left-turn lane would mitigate the significant impact. The widening would include two eastbound lanes and one westbound lane. However, there is an existing 30-foot irrevocable offer of dedication on Hotel Circle South along this roadway segment. Based on a feasibility review, this widening is deemed technically infeasible due to building structures fronting Hotel Circle South (Vagabond Inn) that would allow only a 2-foot parkway, which is not sufficient to include a sidewalk per City standards. Therefore, this mitigation cannot be implemented. Hence, the impact to Hotel Circle South from the Legacy International Center project driveway to Bachman Place was considered significant and unmitigated by the Legacy International Center project and is also significant and unavoidable for the 2019 LRDP under Year 2025 conditions.

Hotel Circle South from Bachman Place to Camino De La Reina

Mitigation Measure TRA-1A, widening the roadway to a Three-Lane Collector, would mitigate the 2019 LRDP's significant impact. However, the provision of a third lane along the majority of this segment is physically infeasible due to the existing roadway width, right-of-way, and location of the support columns for the I-8 undercrossing on Hotel Circle South. Therefore, this impact is considered significant and unavoidable. A portion of the segment near Camino de La Reina would be restriped to provide three lanes, which would improve operations and partially mitigate the impact.

Bachman Place from Hotel Circle South to the Hillcrest Campus Boundary

Mitigation Measure TRA-1B would also mitigate the cumulative impact under Year 2025 conditions to this street segment. Table 3.15-24 shows the level of significance after mitigation to the impacted segment.

Table 3.15-24. Year 2025 Street Segment Mitigation Analysis

Street Segment	Capacity (LOS E)[1]	Year 2025		Year 2025 + Phase 1A–2B		Year 2025 + Phase 1A-2B + Mitigation		
		ADT/LOS[2]	V/C[3]	ADT/LOS	V/C	ADT/LOS	V/C	Δ[4]
Hotel Circle South: I-8 Eastbound Ramps to the Legacy International Center Project Driveway	15,000/30,000 [5]	15,630/ F	1.042	16,212/ F	1.081	16,212/ C	0.540	(0.502)
Bachman Place: Hotel Circle South to Hillcrest Campus Boundary	10,000/22,500 [6]	9,980/E	0.998	11,337/ F	1.134	11,337/ C	0.504	(0.494)

[1] Capacity based on roadway classification operating at LOS E.

[2] Average Daily Traffic/Level of Service

[3] Volume to Capacity

[4] Δ denotes a decrease in delay in the Volume to Capacity (V/C) ratio as compared to Year 2025 conditions with the addition of project trips and proposed mitigation measures.

[5] The Legacy International Center project will widen this segment to a Four-Lane Collector with center-turn lane with a LOS E capacity of 30,000 ADT.

[6] It is recommended the 2019 LRDP widen Bachman Place to a Three-Lane Collector to provide a second southbound lane. Three-Lane Collector capacity derived based on the City of San Diego's Two-Lane and Four-Lane Collector capacities.

As shown in Table 3.15-24, implementation of the Legacy International Center project's mitigation measure and Mitigation Measure TRA-1B would reduce the proposed 2019 LRDP's contribution to the Year 2025 cumulative impacts along these segments to less than significant.

Washington Street from Fourth Avenue to Sixth Avenue

To address the impacts along the Washington Street segment from Fourth Avenue to Sixth Avenue, Washington Street would need to be widened from Fourth Avenue to Sixth Avenue to a Six-Lane Major Arterial. However, the Uptown Community Plan Update EIR ultimately found this improvement to be infeasible because it is inconsistent with the proposed Uptown Community Plan Update and a significant and unavoidable impact was identified (City of San Diego 2016c). Therefore, the impact is also considered significant and unavoidable for the 2019 LRDP.

Washington Street from Sixth Avenue to Richmond Street

To address the impacts along the Washington Street segment from Sixth Avenue to Richmond Street, Washington Street would need to be widened from Sixth Avenue to Richmond Street. This street segment is built out and the provision of additional lanes is not considered physically feasible. Furthermore, this street segment is classified as a Four-lane Major Arterial in the Uptown Community Plan and is currently built as such. Further widening would not be consistent with the

overall mobility vision and other proposed Uptown Community Plan policies. Therefore, this impact is considered significant and unavoidable for the 2019 LRDP.

Phases 3 and 4 (Year 2030) Cumulative Impacts

Phases 3 and 4 of the 2019 LRDP would result in significant cumulative impacts at one study area intersection and four street segments. The following summarizes the recommended mitigation measures.

Intersections

Hotel Circle South/I-8 Eastbound Ramp Intersection

The mitigation measure implemented by the Legacy International Center project described previously under Phases 1A and 1B (Year 2022) Direct Impacts would also mitigate the cumulative impact under Year 2030 conditions at this intersection. Table 3.15-25 shows the level of significance after implementation of the Legacy International Center project's mitigation.

Table 3.15-25. Year 2030 Intersection Mitigation Analysis

Intersection	Control Type	Peak Hour	Year 2030		Year 2030 + Project		Year 2030 + Project + Mitigation		
			Delay	LOS	Delay[1]	LOS[2]	Delay	LOS	Δ[3]
Hotel Circle S/I-8 EB Ramps	AWSC[4]	PM	80.5	F	85.5	F	71.0	F	(9.5)

Source: LLG 2019.

Notes:
1 Average delay expressed in seconds per vehicle.
2 Level of Service
3 Δ denotes a decrease in delay as compared to Year 2030 conditions with the addition of project trips and proposed mitigation measures.
4 AWSC – All-Way Stop Control

As shown in Table 3.15-25, implementation of the Legacy International Center project's mitigation measure would reduce the proposed 2019 LRDP's contribution to the Year 2030 Scenario cumulative impact at the Hotel Circle South and I-8 Eastbound Ramp intersection to a less than significant level.

Street Segments

Hotel Circle South from Interstate 8 Eastbound Ramps to Bachman Place

The Legacy International Center project's mitigation measure described previously for this segment under Phase 2A and 2B (Year 2025) Cumulative Impacts would also mitigate the 2019 LRDP's cumulative impact between the I-8 Eastbound Ramps and the Legacy International Center project driveway under Year 2030 conditions. Similarly, the 2019 LRDP's cumulative impact between the Legacy International Center project driveway and Bachman Place would remain significant and unavoidable.

Hotel Circle South from Bachman Place to Camino De La Reina

Implementation of Mitigation Measure TRA-1A, widening the roadway to a Three-Lane Collector, would mitigate the 2019 LRDP's significant impact. However, the provision of a third lane along the majority of this segment is physically infeasible due to the existing roadway width, right-of-way, and the location of the support columns for the I-8 undercrossing on Hotel Circle South. Therefore, this impact is considered significant and unavoidable. A portion of the segment near Camino de La Reina would be restriped to provide three lanes, which would improve operations and partially mitigate the impact.

Bachman Place from Hotel Circle South to Hillcrest Campus Boundary

Mitigation Measure TRA-1B would also mitigate the cumulative impact under Year 2030 conditions to this street segment. Table 3.15-26 shows the level of significance after mitigation to the impacted segment.

Table 3.15-26. Year 2030 Street Segment Mitigation Analysis

Street Segment	Capacity (LOS E)[1]	Year 2030		Year 2030 + Phase 1A-2B		Year 2030 + Phase 1A-2B + Mitigation		
		ADT/ LOS[2]	V/C[3]	ADT/LOS	V/C	ADT/LOS	V/C	Δ[4]
Hotel Circle South: I-8 Eastbound Ramps to the Legacy International Center Project Driveway	15,000/30,000 [5]	15,980/ F	1.065	16,175/ F	1.078	16,175/ C	0.539	(0.526)
Bachman Place: Hotel Circle South to Hillcrest Campus Boundary	10,000/22,500[6]	10,200/F	1.020	10,656/F	1.066	10,656/C	0.474	(0.546)

Source: LLG 2019.

Notes:

[1] Capacity based on roadway classification operating at LOS E.

[2] Average Daily Traffic/Level of Service

[3] Volume to Capacity

[4] Δ denotes a decrease in delay in the Volume to Capacity (V/C) ratio as compared to Year 2025 conditions with the addition of project trips and proposed mitigation measures.

[5] The Legacy International Center project will widen this segment to a Four-Lane Collector with center-turn lane with a LOS E capacity of 30,000 ADT.

[6] It is recommended the 2019 LRDP widen Bachman Place to a Three-Lane Collector to provide a second southbound lane. Three-Lane Collector capacity derived based on the City's Two-Lane and Four-Lane Collector capacities.

As shown in Table 3.15-26 implementation of the Legacy International Center project's mitigation measure and Mitigation Measure TRA-1B would reduce the proposed 2019 LRDP's contribution to the Year 2030 cumulative impacts along these segments to less than significant.

Washington Street from Sixth Avenue to Richmond Street

To address the impacts along the Washington Street segments from Sixth Avenue to Richmond Street, Washington Street would need to be widened from Sixth Avenue to Richmond Street. This

street segment is currently built out and the provision of additional lanes is not considered physically feasible. Furthermore, this street segment is classified as a Four-Lane Major Arterial in the Uptown Community Plan and is currently built as such. Further widening would not be consistent with the overall mobility vision and other proposed Uptown Community Plan policies. Therefore, this impact is considered significant and unavoidable.

Phase 5 (Year 2035) Cumulative Impacts

Phase 5 of the 2019 LRDP would result in significant cumulative impacts at four study intersections and seven street segments. The following summarizes the recommended mitigation measures to reduce these impacts.

Intersections

Hotel Circle South/I-8 Eastbound Ramp Intersection

The mitigation measure implemented by the Legacy International Center project described previously under Phases 1A and 1B (Year 2022) Direct Impacts would also mitigate the cumulative impact under Year 2035 conditions at this intersection.

Hotel Circle South/Bachman Place Intersection

The following mitigation measure would be implemented to reduce impacts at this intersection:

> **TRA-1C: Hotel Circle South/Bachman Place Intersection.** Provision of right-turn overlap signal phasing at the northbound approach would mitigate the 2019 LRDP's cumulative impact under Year 2035 conditions.

This improvement would be implemented by the 2019 LRDP under Phases 2A and 2B (Year 2025) conditions to mitigate a construction-related impact. Therefore, no significant impact would be calculated under Phase 5 (Year 2035) operational conditions.

Table 3.15-27 shows the level of significance after mitigation to the impacted intersections.

Table 3.15-27. Year 2035 Intersection Mitigation Analysis

Intersection	Control Type	Peak Hour	Year 2035		Year 2035 + Phase 1A-5		Year 2035 + Phase 1A-5 + Mitigation		
			Delay[1]	LOS[2]	Delay	LOS	Delay	LOS	Δ[3]
Hotel Circle S/I-8 EB Ramps	AWSC[4]	PM	94.1	F	104.0	F	89.2	F	(4.9)
Hotel Circle S./Bachman Place	Signal	PM	41.1	D	55.8	E	24.0	C	(17.1)

Notes:

[1] Average delay expressed in seconds per vehicle.

[2] Level of Service

[3] Δ denotes a decrease in delay as compared to Year 2035 conditions with the addition of Project trips and proposed mitigation measures.

[4] AWSC – All-Way Stop Control

As shown in Table 3.15-27, implementation of the Legacy International Center project mitigation measure and 2019 LRDP Mitigation Measure TRA-1C would reduce the proposed 2019 LRDP's contribution to the Year 2035 cumulative impacts at these intersections to less than significant.

Washington Street/8th Avenue/SR-163 Southbound Off-Ramp Intersection

A significant impact was identified at this intersection in the Uptown Community Plan Update EIR with the following mitigation measure provided: "Widen Washington Street in the eastbound direction to four lanes and the eastbound direction to three lanes. Widen the SR-163 off-ramp to two lanes" (City of San Diego 2016c).

The Uptown Community Plan Update EIR ultimately found this improvement to be infeasible because it is inconsistent with the proposed Uptown Community Plan Update and a "significant and unavoidable" impact was identified. Therefore, the impact is also considered significant and unavoidable for the 2019 LRDP (City of San Diego 2016c).

Washington Street/Richmond Street/SR-163 On-Ramp Intersection

To address the impacts along the Washington Street segment from Sixth Avenue to Richmond Street, Washington Street would need to be widened from Sixth Avenue to Richmond Street. This intersection is built out and the provision of additional lanes is not considered physically feasible. Therefore, this impact is considered significant and unavoidable.

Street Segments

Hotel Circle South from I-8 Eastbound Ramps to Bachman Place

The Legacy International Center project's mitigation measure described previously for this segment under Phase 2A and 2B (Year 2025) Cumulative Impacts would also mitigate the 2019 LRDP's cumulative impact between the I-8 Eastbound Ramps and the Legacy International Center project's driveway under Year 2035 conditions. Similarly, the 2019 LRDP's cumulative impact

between the Legacy International Center project driveway and Bachman Place would remain significant and unavoidable.

Hotel Circle South from Bachman Place to Camino De La Reina

Implementation of Mitigation Measure TRA-1A, widening the roadway to a Three-Lane Collector, would mitigate the 2019 LRDP's significant impact. However, the provision of a third lane along the majority of this segment is physically infeasible due to the existing roadway width, right-of-way, and location of the support columns for the I-8 undercrossing on Hotel Circle South. Therefore, this impact is considered significant and unmitigated. A portion of the segment near Camino de La Reina would be restriped to provide three lanes, which would improve operations and partially mitigate the impact.

Bachman Place from Hotel Circle South to Hillcrest Campus Boundary

Mitigation Measure TRA-1B would also mitigate the cumulative impact under Year 2035 conditions at this segment. Table 3.15-28 shows the level of significance after mitigation to the impacted segment.

Table 3.15-28. Year 2035 Street Segment Mitigation Analysis

Street Segment	Capacity (LOS E)[1]	Year 2030		Year 2030 + Phase 1A-2B		Year 2030 + Phase 1A-2B + Mitigation		
		ADT/LOS[2]	V/C[3]	ADT/LOS	V/C	ADT/LOS	V/C	Δ[4]
Hotel Circle South: I-8 Eastbound Ramps to the Legacy International Center Project Driveway	15,000/30,000[5]	18,500/F	1.233	18,916/F	1.261	18,916/C	0.631	(0.602)
Bachman Place: Hotel Circle South to Hillcrest Campus Boundary	10,000/22,500[6]	19,300/F	1.930	20,270/F	2.027	20,270/E	0.901	(1.029)

Source: LLG 2019.

Notes:

[1] Capacity based on roadway classification operating at LOS E.

[2] Average Daily Traffic/Level of Service

[3] Volume to Capacity

[4] Δ denotes a decrease in delay in the Volume to Capacity (V/C) ratio as compared to Year 2025 conditions with the addition of Project trips and proposed mitigation measures.

[5] The Legacy International Center project will widen this segment to a Four-Lane Collector with center-turn lane with a LOS E capacity of 30,000 ADT.

[6] It is recommended the 2019 LRDP widen Bachman Place to a Three-Lane Collector to provide a second southbound lane. Three-Lane Collector capacity derived based on the City's Two-Lane and Four-Lane Collector capacities.

As shown in Table 3.15-28, implementation of Mitigation Measure TRA-1B would reduce the proposed 2019 LRDP's contribution to the Year 2035 Scenario cumulative impact at the Bachman Place from Hotel Circle South to Hillcrest Campus Boundary segment to less than significant.

Washington Street from Fourth Avenue to Sixth Avenue

To address the impacts along the Washington Street segment from Fourth Avenue to Sixth Avenue, Washington Street would need to be widened from Fourth Avenue to Sixth Avenue to a Six-Lane Major Arterial. The Uptown Community Plan Update EIR ultimately found this improvement to be infeasible as it is inconsistent with the proposed Uptown Community Plan Update and a significant and unavoidable impact was identified (City of San Diego 2016c). Therefore, the impact is also considered significant and unavoidable for the 2019 LRDP.

Washington Street from Sixth Avenue to Richmond Street

To address the impacts along the Washington Street segment from Sixth Avenue to Richmond Street, Washington Street would need to be widened from Sixth Avenue to Richmond Street. This street segment is currently built out and the provision of additional lanes is not considered physically feasible. Therefore, this impact is considered significant and unavoidable.

First Avenue from Washington Street to University Avenue

A significant impact is identified along this street segment in the Uptown Community Plan Update with the following mitigation measure provided: "Restripe the roadway to a 2-lane collector with continuous two way left-turn lane" (City of San Diego 2016c).

The Uptown Community Plan Update EIR ultimately found this improvement to be infeasible as it is inconsistent with the proposed Uptown Community Plan Update and a "significant and unavoidable" impact was identified. Therefore, the impact is also considered significant and unavoidable for the 2019 LRDP (City of San Diego 2016c).

First Avenue from University Avenue to Robinson Avenue

A significant impact is identified along this street segment in the Uptown Community Plan Update with the following mitigation measure provided: "Widen the roadway to a 4-lane collector with continuous two way left-turn lane" (City of San Diego 2016c).

The Uptown Community Plan Update EIR ultimately found this improvement to be infeasible as it is inconsistent with the proposed Uptown Community Plan Update and a "significant and unavoidable" impact was identified (City of San Diego 2016c). Therefore, the impact is also considered significant and unavoidable for the 2019 LRDP.

Construction

The construction-related significant impacts at the intersection of Hotel Circle South/I-8 Eastbound Ramps, Hotel Circle South from I-8 Eastbound Ramps to Bachman Place, Hotel Circle South from Bachman Place to Camino De La Reina, Bachman Place from Hotel Circle South to Hillcrest Campus Boundary, Washington Street from Fifth Avenue to Sixth Avenue, and

Washington Street from Sixth Avenue to Richmond Avenue would also occur under the Year 2025 interim operational conditions (Operation of Phases 1A-2B, operation of remaining onsite structures including the existing hospital, and construction of Phase 3) without the addition of construction traffic.

Construction-related impacts to the Hotel Circle South and I-8 Eastbound Ramps would be reduced to a level below significance with implementation of the Legacy International Center project mitigation measure described previously under Phase 1A + 1B (Year 2022) Direct Impacts. Impacts to Bachman Place from Hotel Circle South to Hillcrest Campus Boundary would be mitigated to a level below significance by the implementation of Mitigation Measure TRA-1B. Construction-related impacts to Hotel Circle South from I-8 Eastbound Ramp to Bachman Place, Hotel Circle South from Bachman Place to Camino De La Reina, Washington Street from Firth Avenue to Sixth Avenue, and Washington Street from Sixth Avenue to Richmond Avenue would remain significant and unavoidable.

Construction-related significant impacts would also occur at the Hotel Circle South/Bachman Place intersection. This intersection was also calculated to be significantly impacted by the 2019 LRDP under Year 2035 operational conditions. However, this impact would be realized sooner with the addition of construction traffic in Year 2025. Mitigation Measure TRA-1C would reduce the impact to a level below significance.

Summary

The following provides a summary of the 2019 LRDP intersection and segment impacts following implementation of feasible mitigation measures. Some impacts would be mitigated to below a level of significance, some would result in a significant temporary impact and some would be significant and unavoidable due to the infeasibility of identified mitigation.

Impacts Mitigated to Below a Level of Significance

Intersections

- Hotel Circle South/I-8 Eastbound Ramp Intersection (Years 2022, 2025, 2030, 2035)
- Hotel Circle South/Bachman Place Intersection (Year 2035)

Segments

- Hotel Circle South from Bachman Place to Camino De La Reina Segment (Year 2022, 2025, 2030, 2035)
- Bachman Place from Hotel Circle South to the Hillcrest Campus Boundary Segment (Years 2025, 2030, 2035)

Year 2022 Temporary Significant Impacts until Phase 2B Implementation

Segments

- Bachman Place from Hotel Circle South to the Hillcrest Campus Boundary Segment (2022)
- Bachman Place from the Hillcrest Campus Boundary to the Bachman Parking Structure Segment (project feature)

Significant and Unavoidable Impacts

Intersections

- Washington Street/8th Avenue/SR-163 Southbound Off-Ramp Intersection (2035)
- Washington Street/Richmond Street/SR-163 On-Ramp Intersection (2035)

Segments

- Hotel Circle South from I-8 Eastbound Ramps to Bachman Place Segment (Year 2025, 2030, 2035)
- Washington Street from Fourth Avenue to Sixth Avenue Segment (Year 2025, 2035)
- Washington Street from Sixth Avenue to Richmond Street Segment (Year 2025, 2030, 2035)
- First Avenue from Washington Street to University Avenue Segment (2035)
- First Avenue from University Avenue to Robinson Avenue Segment (2035)

3.15.3.2 Issue 2: Induce Substantial Vehicle Miles Traveled

Transportation Issue 2 Summary

Would implementation of the 2019 LRDP conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)?

Impact: Implementation of the proposed 2019 LRDP would not cause substantial additional VMT that exceeds regional averages.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

An impact is considered significant if implementation of the 2019 LRDP would cause substantial additional VMT, or vehicle miles traveled, that exceed the regional averages for that land use.

Per SB 743, on July 1, 2020, VMT will replace LOS as the standard performance metric for analyzing transportation impacts in CEQA documents statewide. Until that time, and for purposes of this 2019 LRDP EIR, UC San Diego has elected to analyze transportation both under the traditional measures-of-effectiveness approach (Issue 1, above) and VMT (Issue 2). Significance thresholds for the VMT analysis were developed for this 2019 LRDP EIR based on the OPR

guidance. In January 2016, the OPR issued draft guidance through the Technical Advisory on Evaluating Transportation Impacts in CEQA, which provides technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures (OPR 2018). OPR released an update to the CEQA Guidelines and Technical Advisory in December 2018.

Multi-tiered criteria were developed to accurately account for vehicle travel characteristics of the 2019 LRDP and comprehensively review potential transportation impacts. The significance criteria were developed to ensure adequacy, completeness, and a good-faith effort at full disclosure of potential impacts. Table 3.15-29 summarizes the 2019 LRDP significance thresholds (multi-tiered criteria) for the VMT transportation impacts.

Table 3.15-29. 2019 LRDP Significance Thresholds (with Technical Guidance)

Tier: Scenario	Threshold
Tier I: Context Sensitive/TDM Screening Thresholds	**Based on the surrounding land uses, population density, transportation infrastructure, project-specific design, and TDM measures, determine if the 2019 LRDP is expected to cause a significant transportation impact.**
Tier II: Proximity to Transit	**If the 2019 LRDP is proposed within 0.5 miles of a major transit stop or a stop along a high-quality transit corridor it shall be presumed to have a less than significant impact on VMT**. A transit stop shall include an existing or planned/funded stop that is included in an adopted RTP. A Major Transit Stop refers to 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. A high-quality transit corridor refers to a corridor with fixed route bus service with a frequency of service interval no longer than 15 minutes during peak commute hours. This presumption would not apply, however, if project-specific or location-specific information indicates that the 2019 LRDP would still generate significant levels of VMT and therefore require further VMT analysis.
Tier III: VMT per Capita	**If the 2019 LRDP VMT per capita would not exceed 15 percent of the Regional VMT per capita, it shall be presumed to have a less than significant transportation impact.**
Tier IV: RTP/SCS Consistency	**If the 2019 LRDP is determined to be inconsistent with the RTP and Sustainable Communities Strategy (SCS), an evaluation on whether any inconsistencies result in a significant impact is required.** Projects that are consistent with the General Plan or Community Plan are also considered to be consistent with the RTP/SCS.
Tier VI: Multi-Modal Transportation Networks	**If the 2019 LRDP is determined to substantially restrict access or alter a route of a multi-modal transportation network (i.e., transit, bicycle, pedestrian), it may indicate a significant transportation impact.** When evaluating impacts to multi-modal transportation networks, the addition of new transit users, generally, should not be treated as an impact. Additional boarding and alighting may add dwell time to transit vehicles, but this is offset by the added destinations, improved proximity and accessibility, and overall improved regional mobility.

Source: OPR 2018; LLG 2019.

Notes: Safety and auto-inducing VMT were considered but not analyzed, as the 2019 LRDP does not meet OPR's requirements for VMT analysis.

Impact Analysis

To assess if the 2019 LRDP would induce substantial VMT, the 2019 LRDP was evaluated individually against the significance thresholds identified in Table 3.15-29.

Tier I: Context Sensitive/TDM Screening Thresholds

Prior to the VMT analysis, OPR recommends "screening thresholds" to help identify if a project is expected to result in a less than significant impact. For the 2019 LRDP the "screening thresholds" include surrounding land uses, population density, transportation infrastructure, project-specific design, and TDM measures. These elements, collectively, shape mobility behavior and provide a strong indication of expected project VMT. In general, higher density and mix of land uses with access to mobility options are expected to generate lower VMT.

Table 3.15-30 summarizes the key elements of the context sensitive screening thresholds relative to the 2019 LRDP.

Table 3.15-30. Context Sensitive Screening Thresholds

Context Sensitive Elements	Notes
Surrounding Area Land Use Mix	Adjacent retail and employment centers provide good land use mix.
Surrounding Area Population Density	County = 4,371 persons per square mile Hillcrest Zip Code 92103 = 8,994 persons per square mile (Hillcrest area double the regional density)
Mobility Options	Enhanced transit access and active transportation infrastructure provide mobility options.
Project-Specific Design Elements/TDM	Introduces residential and retail on campus. Increases land use mix and density. Campus TDM measures considering enhanced transit service and including shuttle or bus connections to MTS light-rail station(s). Campus TDM measures are discussed in Section 3.15.1.2.

Source: LLG 2019; ACS 2017.

Based on the review of the context sensitive elements, the 2019 LRDP is located in a higher density area with a mix of land uses. The Hillcrest Campus also has a variety of TDM measures and has access to mobility options. Therefore, the 2019 LRDP is expected to result in a less than significant impact associated with the VMT Tier I threshold.

Tier II: Proximity to Transit VMT Analysis

Per the stated significance criteria, if the 2019 LRDP is proposed within 0.5 miles of a major transit stop or a stop along a high-quality transit corridor it is presumed to have a less than significant impact on VMT. A transit stop shall include a planned and funded stop that is included in an adopted RTIP. A second criterion includes that if project-specific or location-specific information indicates that a project would generate significant levels of VMT, further analysis would be required.

The SANDAG 2050 RTP and SCS identify transit's expanding role to meet local and regional mobility needs. Targets have been set in the CAP to increase transit mode share within Transit Priority Areas (TPAs). TPAs, in general, include areas within 0.25 mile of a major transit station or a station along a high-quality transit corridor. A high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

Bus service is provided by the MTS to the Hillcrest Campus. Route 3 provides direct access to the campus and is considered a high-quality transit corridor with 15-minute headways during the peak commute hours. As stated above, a high-quality transit corridor means a corridor with fixed route bus service with frequency of service intervals no longer than 15 minutes during peak commute hours. Thus, the Hillcrest Campus is located in a high-quality transit corridor. Therefore, the 2019 LRDP is located within a TPA as defined by SANDAG.

In addition, the UC San Diego shuttle currently provides shuttle service between the La Jolla and Hillcrest Campuses with eight stops in between. The shuttle operates on weekdays departing at 5:30 a.m. from the UC San Diego Medical Center La Jolla with 30-minute headways. Shuttle service ends at 9:15 p.m. at the Hillcrest Campus. However, this service would be redundant with the MTS Blue Line light-rail transit line once available in 2021 and, therefore, would be discontinued. Instead, UC San Diego would facilitate improved access to nearby transit stations. These improvements may include a new shuttle service to and from the MTS Green Line transit station (light-rail transit) at Fashion Valley Transit Center in Mission Valley, approximately 1.5 miles north of the campus, and/or to the MTS Blue Line light-rail transit at Old Town station approximately 4 miles west of the campus. UC San Diego would continue to monitor and make adjustments to its commuter and mobility programs and services to respond to market trends and evolving and disruptive technology and industry changes.

Improvements to overall transit access for the site is a critical consideration of the 2019 LRDP. As transportation trends shift, the Hillcrest Campus's ability to provide its patients, employees, and residents with alternatives to single-occupancy vehicular transportation will be essential to its ongoing success. The 2019 LRDP proposes to relocate the current bus stop located in front of the Medical Offices South building on southbound Front Street to a new location near the corner of the First Avenue and Arbor Drive intersection. The bus stop would be converted to a transit stop connecting with municipal and UC San Diego transit routes, helping to bridge the last mile gap for campus commuters and patients. While the campus is currently served by existing bus service, future campus TDM measures described in the 2019 LRDP circulation principles consider opportunities for additional MTS route service at this new transit stop.

Therefore, since the Hillcrest Campus is located within a TRA, is served by a high-quality transit corridor and is not expected to generated high VMT, transportation impacts would be less than significant associated with the VMT Tier II threshold.

Tier III: VMT per Capita

A detailed VMT analysis was conducted for the 2019 LRDP per OPR's guidelines.

The analysis took into account all population types (e.g., residential, health care, research, retail) as a "blended" trip type to best represent the dominant campus travel patterns. The analysis was conducted using navigation/GPS data and represents an independent data source. This data source is commonly referred to as "Big Data" analytics. The following is a summary of steps involved in calculating the 2019 LRDP and region-wide VMT:

- **Step 1:** Determine the average trip length (two-way trips) between the Hillcrest Campus and the County representing the LRDP VMT average trip length. In addition, determine the average trip length within the County representing the Regional VMT average trip length.
- **Step 2:** Determine the Hillcrest Campus auto mode split based on the Transportation Report. Similarly, obtain the auto mode split for the region using the SANDAG San Diego Regional Transportation Study.
- **Step 3:** Determine the Hillcrest Campus service population using auto, representing the "auto population." Similarly, determine the total "auto population" for the region.
- **Step 4:** Using the average trip length from Step 1 and auto population from Step 3, calculate the VMTs per capita for both the 2019 LRDP and the region.

Regional Baseline VMT

The County was divided into population subregions to determine the Regional VMT per capita. This represents a more accurate baseline since urban areas have different characteristics than rural areas in terms of population density, auto mode choices and trip lengths. The subregions were obtained from U.S. Census Bureau 2017 American Community Survey (U.S. Census Bureau 2019). The average trip lengths were GPS based and represent a data size of over 40 million over the course of one year.

Table 3.15-31 summarizes the data used and the resultant Regional VMT per capita. The "trip based" regional VMT per capita was calculated at 25.90.

Table 3.15-31. County of San Diego – Existing Baseline

Land Use Setting/Population Density	Population Density (Capita per Square Miles)	Total Population	Auto Mode Split Total	Daily Auto Trips (roundtrip)	Average Auto Trip Length (roundtrip, miles)	Total VMT	VMT per Capita
Urban/higher	3,415	2,441,727	85.0%	7,342,216	16.7	58,904,806	25.1
Suburban/medium	2,419	676,067	89.6%	2,129,199	17.1	17,409,926	26.9
Rural/lower	less than 700	219,891	88.5%	642,356	22.0	7,177,388	32.1
	Total	**3,337,685**	**87.7%**	**10,133,771**	**17.1**	**83,492,119**	**25.9**

Source: LLG 2019.

Notes:

Populations, densities, and auto mode splits obtained from US Census Bureau data – American Community Survey 2017 (U.S. Census Bureau 2019).

NCHRP Research Report 868 - Cell Phone Location Data for Travel Behavior Analysis, 2018 reports Call Detail Records (CDR) are estimated to generate 3.5 daily person trips per Capita. This compares with the FHWA Travel Model Validation and Reasonableness Checking Manual, 2010, which estimates 4.0 daily person trips per capita. The average between the CDR and FHWA rate was selected at 3.75 daily person trips per capita. By way of comparison, the Massachusetts Travel Survey (MTS) determined the rate as 4.25 daily person trips per capita.

The High Vehicle Occupancy Ratio (VOR) was assumed to be 2.13 persons per vehicle. This represents the weighted average, which assumes 90 percent SOV2 with a VOR of 2.0 and 10 percent SOV3+ with a VOR of 3.5.

Average Trip Lengths based on GPS data obtained from daily, weekday trip data for a 1-year time period between September 1, 2017, and August 31, 2018. The total data sample size is approximately 40,184,000. This represents trip-based travel patterns (and not tour-based travel patterns).

Total VMT = Daily Auto Trips (roundtrip) x Average Auto Trip Length (one-way)

VMT per Capita = Total VMT/Total Population

2019 LRDP VMT

The 2019 LRDP was categorized into key land use types, which include Residential, Retail, Health Care, and Research, to determine the 2019 LRDP VMT per capita. The existing medical campus was used to determine average trip lengths using Navigation-GPS analytics. Given there is no existing regional serving retail on the campus and only 21 existing residential units, proxy sites in the immediate vicinity were used to determine average trip lengths for those uses. Average trip lengths were based on GPS data obtained from daily, weekday trip data for a 1-year time period between September 1, 2017, and August 31, 2018. The total data sample size is approximately 47,000.

The 2019 LRDP population estimates were used along with the trip generation estimates for auto mode splits and daily auto trips. As shown in Table 3.15-32, the 2019 LRDP VMT per capita was calculated at 17.4. The 2019 LRDP VMT per capita would be 33 percent lower as compared to the regional average.

Table 3.15-32. Hillcrest Campus – 2019 LRDP Regional Population Projections

Land Use Type	Campus Population Estimate	Auto Mode Split	Daily Auto Trips (roundtrips)	Average Trip Length (roundtrip, miles)	Total VMT	VMT per capita
Residential	1,697	80%	4,000	12.7	25,400	15.0
Retail	110	N/A	128	16.7	1,069	9.7
Health Care	3,750	80%	6,000	21.9	65,700	17.5
Research	1,420	80%	2,946	20.0	29,460	20.7
		Total	**13,074**	**19.2**	**121,629**	**17.4**

Notes:

Residential population assumes 1.67 person/DU ratio as reported by U.S. Census Bureau data – 2017 American Community Survey (U.S. Census Bureau 2019) for renter-occupied units in zip code 92103. There are currently 21 dwelling units on campus.

Retail population assumes 2.5 employees per KSF for 44,000 SF.

Health Care population includes medical faculty/staff includes physicians, nurses, technicians, medical residents (students) and other staff related to direct patient care.

Research population includes faculty/staff and related administration. This population also includes facilities management staff.

Daily auto mode split and trips were obtained from trip generation estimates in the UC San Diego Hillcrest LRDP Transportation Study. The Health Care auto trips (employees) were estimated assuming an 80 percent mode split and 2 trip ends per employee. The daily auto trips represent resident and faculty/staff/employee trips to best represent dominant campus travel patterns.

Average Trip Lengths based on GPS data obtained from daily, weekday trip data for a 1-year time period between September 1, 2017, and August 31, 2018. The total data sample size is approximately 47,000. Health Care and Research database specific to the Hillcrest Campus. Residential and retail proxy sites in close proximity to the campus was also obtained.

No reduction in auto mode split or average trip length was assumed despite campus trends indicating otherwise. This represents a conservative assumption.

Total SB743 VMT = Daily Auto Trips (roundtrip) x Average Auto Trip Length (one-way)

VMT per capita = Total VMT/Total Population

As shown in Table 3.15-33, the 2019 LRDP VMT per capita would not exceed 15 percent below existing VMT. Therefore, based on the Tier III significance criterion, the 2019 LRDP would result in a less than significant impact.

Table 3.15-33. 2019 LRDP Vehicle Miles Traveled Per Capita

Scenario	Regional Baseline	Significance Threshold (85% of Region VMT)	2019 LRDP	Transportation Impact? (Over Threshold)
2019 LRDP Buildout (Year 2035)	25.9	21.3	17.4	**No**

Source: LLG 2019.

Tier IV: RTP/SCS Consistency

The 2019 LRDP is located within the City's Uptown Community Plan Area. The recently adopted 2016 Uptown Community Plan identifies the Hillcrest Campus within the Medical Complex neighborhood (City of San Diego 2016a). One of the land use goals of the Uptown Community Plan is to create opportunities for new medical and professional development. The land use map designates the campus as Institutional surrounded by Office, Commercial, and High Density Residential, which are consistent with the uses included in the 2019 LRDP.

Per the 2019 LRDP significance thresholds, if a project is inconsistent with the RTP and SCS, an evaluation on whether any inconsistencies result in a significant impact is required. Several components and strategies contribute toward SB 375 per capita greenhouse gas reductions from passenger vehicles. Approximately half of the reductions would result from the Regional Plan's investments in transit projects and their operations, managed lanes, active transportation projects, and TDM measures that support teleworking (i.e., working from home or telecommuting). About one-quarter of the reductions are estimated from changing land use and population characteristics, while another quarter are projected from increases in the cost of driving (auto operating costs).

The RTP, SCS Documentation and Related Information, and regional forecast model were reviewed as sources to test consistency. The following three strategies were outlined in the SCS were evaluated to determine 2019 LRDP's consistency with each:

- Housing near High-Frequency Transit
- Land Use Development in the Regional Forecast
- Regional Transportation Network

Housing near High Frequency Transit

Per the current RTP/SCS, on a region-wide basis, the number of homes within one-half mile of transit will increase from 35 percent in 2012 to 63 percent in 2050. The Hillcrest Campus (100 percent) is captured within 0.25 mile of high-frequency transit (15-minute headways or lower), which includes major transit stops, high-quality transit corridors and shuttle stops, which would reduce trips and vehicle miles traveled.

Land Use in Regional Forecast

The proposed 2019 LRDP land uses are consistent with the current uses on site and there are no new land uses being introduced. Therefore, given that implementation of the 2019 LRDP is adequately captured in the Regional Growth forecast and that there are no departures from the land use types, the 2019 LRDP is presumed to be consistent with this SCS regional goal.

Regional Transportation Network

The Regional Transportation Network as outlined in the RTP/SCS was reviewed with respect to the 2019 LRDP. The RTP/SCS identifies potential TPA in the region. Per the RTP/SCS, the Hillcrest Campus is identified as a TPA, as discussed above. The Hillcrest Campus is also located along high-quality transit corridor. Bus service is provided by the MTS to the Hillcrest Campus. Route 3 provides direct access to the campus and is considered a high-quality transit corridor with 15-minute headways during the peak commute hours. In addition, the UC San Diego shuttle provides shuttle service between the La Jolla and Hillcrest Campuses with eight stops in between.

Therefore, based on the above review, the 2019 would be consistent with the RTP/SCS and impacts would be less than significant.

Tier V: Multi-Modal Transportation Networks

Per OPR, the criteria for determining the significance of transportation impacts must promote "the development of multimodal transportation networks." A multi-modal transportation network incorporation two or more modes of transportation. The 2019 LRDP should consider project impacts to transit systems and bicycle and pedestrian networks. For example, a project that blocks access to a transit stop or blocks a transit route itself may interfere with transit functions.

When evaluating impacts to multi-modal transportation networks, the addition of new transit users should generally not be treated as an adverse impact. An infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also promotes trip destinations, improving transit proximity and accessibility. Such development located near transit access also improves regional vehicle flow by adding less vehicle travel onto the regional network.

The proposed 2019 LRDP was reviewed to determine if access to the multi-modal networks would be affected. The pedestrian, bicycle, and transit networks were reviewed. As documented in the multi-modal reviews of the networks, the walkshed and bikeshed assessments indicate good connectivity overall (LLG 2019).

One of the objectives of the 2019 LRDP is to improve transportation-related facilities to allow for efficient vehicular, biking, and patient-oriented access and multi-modal improvements to wayfinding. The 2019 LRDP would include an improved bicycle circulation concept that would promote the use of alternative transportation and improve overall traffic congestion in and around the Hillcrest Campus. New Class II bicycle lanes on the First Avenue extension would facilitate safer bicycle travel into the Health Care District by providing a dedicated and visible space for bicyclists that would connect with existing and proposed City bicycle facilities beyond the Hillcrest Campus Boundary. In addition, the Bachman Place widening would allow for new bicycle and pedestrian infrastructure, separated from vehicular lanes, that would transform the street into a multi-modal connection between Mission Valley, the Hillcrest Campus, and the adjacent Medical Complex and Hillcrest neighborhoods. In addition, the 2019 LRDP would provide secured parking spaces for both short-term and long-term bicycle storage.

Pedestrian improvements would be integrated throughout the Hillcrest Campus. The 2019 LRDP would prioritize pedestrian access to the Open Space District by removing vehicular access (except emergency vehicles) from Dickinson Street and the northernmost section of Front Street. Within the Health Care District, wide pedestrian walkways, defined streetscapes, and pedestrian bridges would serve as key wayfinding elements and could be complemented by signage, public art, and

special lighting installations. A new pedestrian connection is also envisioned for the proposed north access driveway from Bachman Place up to the central campus area. A 12-foot-wide, multi-use path would facilitate pedestrian and bicycle travel on a grade-separated trail adjacent to bi-directional vehicle travel lanes.

The current bus stop located in front of the Medical Offices South building on southbound Front Street would be relocated to a new location near the corner of the First Avenue and Arbor Drive intersection. The bus stop would be converted to a transit stop connecting with municipal and UC San Diego transit routes, helping to bridge the last mile gap for campus commuters and patients. While the campus is currently served by the San Diego MTS Line 3 bus route, future campus TDM measures would consider pursuing opportunities for additional MTS route service at the enhanced transit stop. In addition, the UC San Diego existing shuttle provides shuttle service between the La Jolla and Hillcrest Campuses with eight stops in between. However, this service would be redundant with the MTS Blue Line light-rail transit line once available in 2021 and, therefore, would be discontinued. Instead, UC San Diego would facilitate improved access to nearby transit stations. These improvements may include a new shuttle service to and from the MTS Green Line transit station (light-rail transit) at Fashion Valley Transit Center in Mission Valley, approximately 1.5 miles north of the campus, and/or to the MTS Blue Line light-rail transit at Old Town station approximately 4 miles west of the campus. UC San Diego would continue to monitor and make adjustments to its commuter and mobility programs and services to respond to market trends and evolving and disruptive technology and industry changes.

The 2019 LRDP would result in improvements to multi-modal transportation networks to include bicycle, pedestrian and transit facilities. Therefore, the impact would be less than significant.

In conclusion, based on VMT significance criteria Tiers I through V, the 2019 LRDP would not induce substantial VMT. Implementation of the 2019 LRDP would result in a less than significant impact related to VMT.

Mitigation Measures

The proposed 2019 LRDP would result in a less than significant impact related to VMT; therefore, no mitigation measures would be required.

3.15.3.3 Issue 3: Inadequate Emergency Access

Transportation Issue 3 Summary

Would implementation of the 2019 LRDP result in inadequate emergency access?

Impact: Implementation of the 2019 LRDP would result in inadequate emergency access with construction related road closures.

Mitigation: Emergency Services Notification (HAZ-5)

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

Standards of Significance

An impact is considered significant if implementation of the 2019 LRDP would result in inadequate emergency access.

Impact Analysis

This impact is adequately addressed in Section 3.8 under Section 3.8.3.5. As discussed in Section 3.15.3.1, the 2019 LRDP planned improvements to Bachman Place would improve access and reduce congestion to and from the Hillcrest Campus. The proposed First Avenue extension north of Arbor Drive would provide for new two-way traffic on this segment that would improve the accessibility to the Hillcrest Campus for emergency vehicles. Emergency vehicles would enter the campus at the First Avenue and Arbor Drive intersection, and then proceed north on First Avenue, past the Main Hospital turnaround. In addition, construction of the north access driveway would provide additional access to the campus. It would also serve as another emergency access route from the north, thereby strengthening the emergency response routes to the Hillcrest Campus.

Temporary construction-related activities may require partial lane or road closures and/or detours during construction which would interfere with an emergency response plan or emergency evacuation plan. Access to the existing hospital Emergency Department would be maintained throughout construction. In addition, a traffic control plan would be put in place to avoid impaired emergency access during this time. If determined necessary, the Hillcrest Campus would also initiate notification of local emergency services to the campus. However, these procedures are not mandated by law and, therefore, the impact from lane closures during project construction is considered potentially significant.

Mitigation Measures

The proposed 2019 LRDP would have a temporary significant impact associated with construction-related road or lane closures. Implementation of Mitigation Measure HAZ-5, which requires prior to construction that the contractor and/or UC San Diego Project Manager notify the

Hillcrest Campus Fire Marshal and campus community at large in the event that the construction of a project requires a lane or roadway closure on campus. If determined necessary by the Hillcrest Campus Fire Marshal, local emergency services shall be notified by the Hillcrest Campus Fire Marshal of the closure. Implementation of Mitigation Measure HAZ-5 would reduce the potential for temporary significant impacts associated with constructed-related road or lane closures to a less than significant level.

3.15.4 Cumulative Impacts and Mitigation

Transportation Cumulative Issue Summary

Would implementation of the 2019 LRDP have a cumulatively considerable contribution to a cumulative transportation/traffic impact considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Issue 1: Compliance with measure of effectiveness for circulation system performance	Potentially Significant	Cumulatively Considerable
Issue 2: Induce substantial vehicle miles traveled	Less than significant	Not cumulatively considerable
Issue 3: Inadequate emergency access	Less than significant	Not cumulatively considerable

The geographic context for the analysis of cumulative transportation and traffic impacts includes the list of off-campus related projects within the study area. In addition, cumulative impacts are based on the future traffic volumes estimated by SANDAG, which includes population and socio-economic projections for all of the County.

3.15.4.1 Cumulative Issue 1: Compliance with Measures of Effectiveness for Circulation System Performance

Cumulative impacts associated with increases in traffic and exceedance of LOS standards are discussed in Section 3.15.3.1. Significant impacts are identified and mitigation measures to reduce these impacts are discussed. Some of these impacts are significant and unavoidable due to infeasibility of mitigation measures. As discussed above, implementation of the proposed 2019 LRDP would result in a cumulatively considerable contribution to a significant cumulative traffic impact after mitigation.

3.15.4.2 Cumulative Issue 2: Induce Substantial Vehicle Miles Traveled

The geographic context for the analysis of VMT is the list of projects located in the traffic study as defined in Section 3.15.1.1. The projects are listed in Table 3-1, Cumulative Projects, in Chapter 3, Environmental Setting, Impacts, and Mitigation. These projects are also located in the City's Uptown Community Plan Area and would be consistent with the goals and objectives of the policies within the plan. The cumulative projects provide a good mix of residential and retail land uses to the surrounding areas. In addition, the projects would have similar access to multi-modal networks to include pedestrian, bicycle, and transit networks. Therefore, the cumulative projects would not be expected to result in substantial additional VMT that exceeds regional averages. A significant VMT impact would not occur. The 2019 LRDP would not result in substantial additional VMT that would exceed the regional averages. The 2019 LRDP would provide improvements to the surrounding pedestrian, bicycle and transit network as described in Section 3.15.3.2. Therefore, the 2019 LRDP's contribution would not be cumulatively considerable.

3.15.4.3 Cumulative Issue 3: Inadequate Emergency Access

This impact is adequately addressed in Section 3.8 under Section 3.8.4.4, Cumulative Issue 5: Emergency Response and Evacuation Plans. As discussed in this section, compliance with applicable regulations would ensure that cumulative projects do not result in a significant cumulative impact associated with the impairment of an emergency response and evacuation plan. Under the 2019 LRDP, the planned roadway improvements would improve access and reduce congestion to and from the Hillcrest Campus. Mitigation Measure HAZ-5 would be implemented to reduce potentially significant impacts associated with temporary lane or road closures during construction. Therefore, the proposed 2019 LRDP's contribution would not be cumulatively considerable.

3.15.5 CEQA Issues Where There Is No Potential for a Significant Effect

The following section discusses the other Standards of Significance related to Transportation/Traffic contained in Appendix G of the CEQA Guidelines wherein the proposed 2019 LRDP was determined to not cause a significant effect.

Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Hillcrest Campus is located in a largely urbanized area with no farming, rural, or other non-compatible uses. One of the objectives the 2019 LRDP is to improve the roadway circulation network adjacent to and within the campus while minimizing traffic impacts on adjoining neighborhoods. The 2019 LRDP proposes the development of a more user-oriented circulation system to facilitate efficient vehicular access to and from the Hillcrest Campus. This would allow all users to enter and exit the campus intuitively while limiting adverse traffic conditions for the surrounding neighborhood.

Primary vehicular circulation would occur along the perimeter of the mesa. Primary access to the campus for Health Care District users would continue to occur by way of First Avenue. An extension of First Avenue north of Arbor Drive would allow two-way traffic to access future inpatient and outpatient facilities and associated parking.

In addition, grade improvements would be made at the intersection of Bachman Place and Arbor Drive to improve the utility of Bachman Place as a true secondary point of access to the campus. Bachman Place would be widened to provide a third travel lane and to allow for new bicycle and pedestrian infrastructure. The proposed north access driveway would connect the northern mesa area to Bachman Place, providing an alternate vehicle route to access the campus.

On- and off-site improvements by phase are discussed in Section 3.15.3.1. All improvements would be designed and constructed according to the City's roadway design standards. These improvements would not result in changes to roadway design that would cause increased hazards.

3.15.6 References

ACS (American Community Survey). 2017. "Populations, Densities, and Auto Mode Splits." U.S. Census Bureau data.

City of San Diego. 1998. City of San Diego Traffic Impact Study. Accessed January 2019. https://www.sandiego.gov/sites/default/files/legacy/development-services/pdf/industry/trafficimpact.pdf.

City of San Diego. 2003. City of San Diego Trip Generation Manual.

City of San Diego. 2008. City of San Diego General Plan. Accessed December 20, 2018. https://www.sandiego.gov/planning/genplan/#genplan.

City of San Diego. 2016a. Uptown Community Plan. November 2016. Accessed January 6, 2019. https://www.sandiego.gov/sites/default/files/uptown_community_plan_full_version.pdf.

City of San Diego. 2016b. City of San Diego's Significance Determination Thresholds. July 2016.

City of San Diego. 2016c. Final Program Environmental Impact Report for the Uptown Community Plan Update. September 2016. Accessed January 8, 2019. https://www.sandiego.gov/sites/default/files/uptown_cpu_final_peir_reduced.pdf.

OPR (Governor's Office of Planning and Research). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December 2018. Accessed April 2019. http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

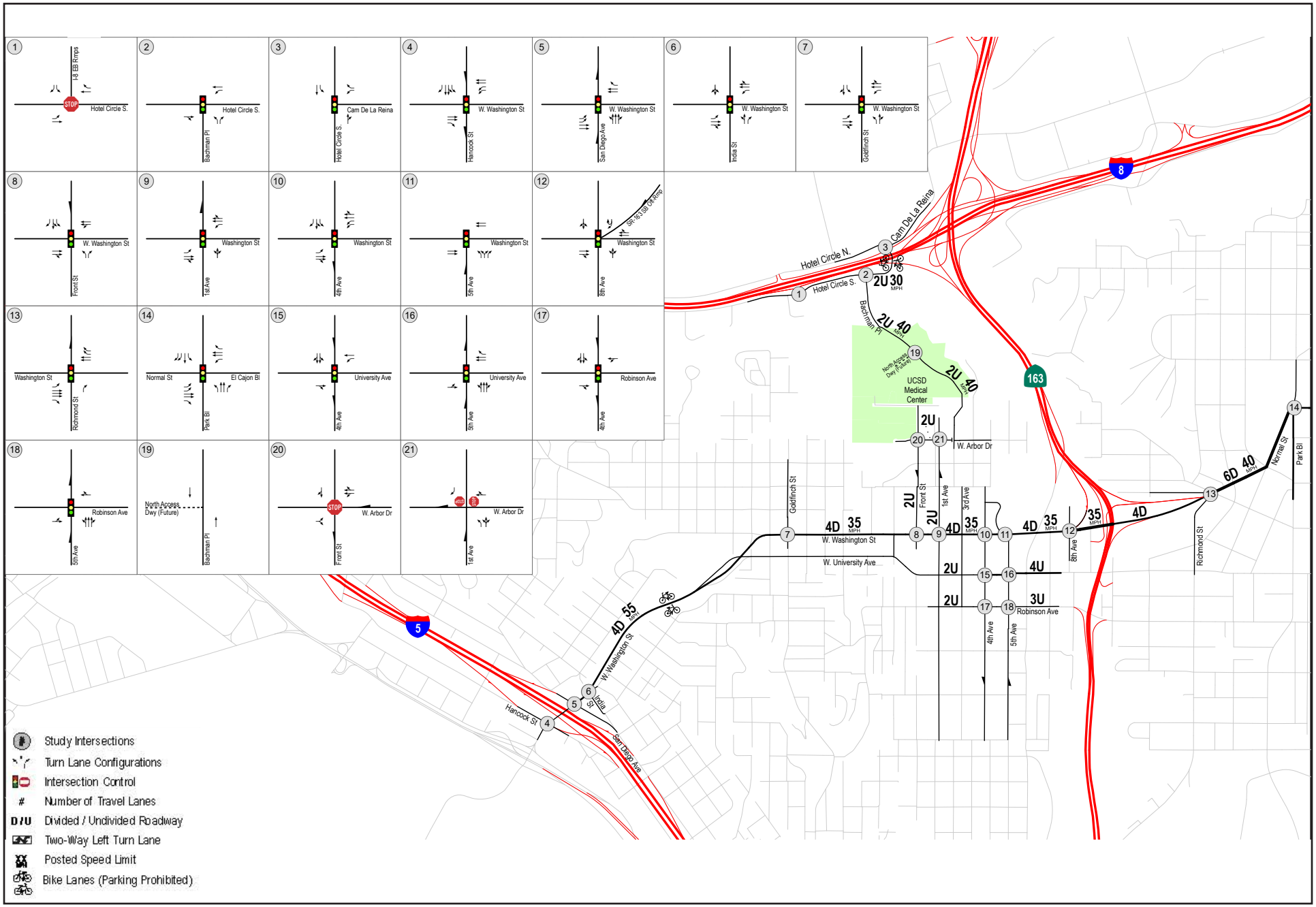
LLG (Linscott, Law & Greenspan, Engineers). 2019. UC San Diego Hillcrest Campus 2019 Long Range Development Plan – Transportation Impact Analysis. June 2019.

SANDAG. 2015. San Diego Forward: The Regional Plan. Accessed December 2018. http://sdforward.com/pdfs/Final_PDFs/The_Plan_combined.pdf.

Transportation Research Board. 2016. 2016 Highway Capacity Manual, 6th ed. October 2016.

UC San Diego (University of California, San Diego). 2019. "Transportation Demand Management Program." Accessed January 2019. http://transportation.ucsd.edu/.

U.S. Census Bureau. 2019. 2017 American Community Survey. February 7, 2017. Accessed March 2019. https://www.census.gov/programs-surveys/acs/news/data-releases.html?#.



Source: Transportation Impact Analysis UC San Diego Hillcrest Long Range Development Plan, LLG, 2018

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Figure 3.15-1
2019 LRDP Transportation Study Area

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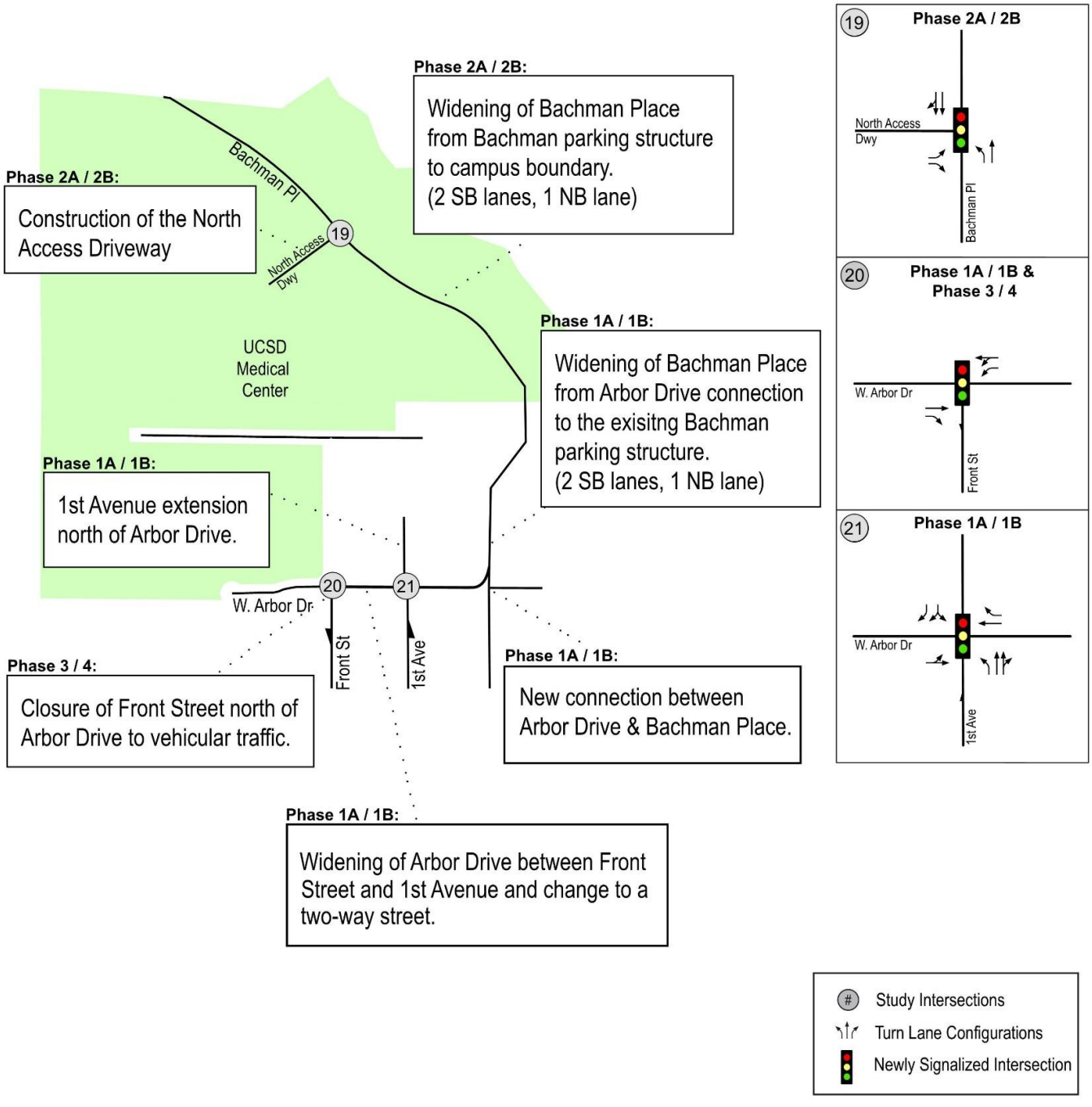

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Source: LLG 2019

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Figure 3.15-2
Project Feature Improvements

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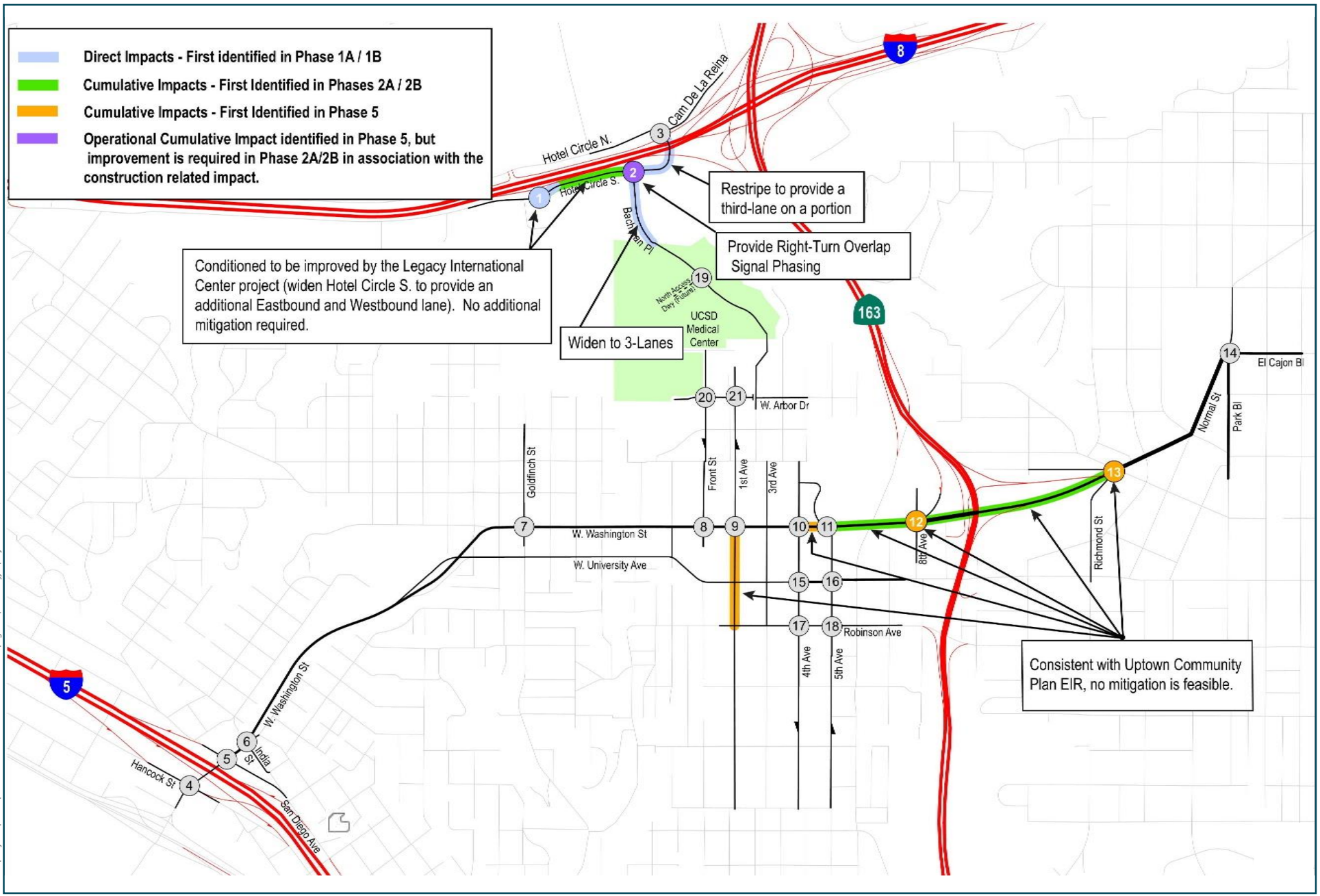

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Source: LLG 2019

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Figure 3.15-3
Proposed Mitigation for Significant Impacts

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3.16 Utilities and Service Systems

This section evaluates the potential impacts on utilities and service systems resulting from implementation of the proposed 2019 LRDP. This includes the potential for the proposed 2019 LRDP to conflict with or obstruct current capacity and future implementation of utilities and service systems, to result in significant environmental effects associated with construction of new or expanded utilities and service system facilities, or to result in a cumulatively considerable net increase of demand in services. This section is based on a variety of information obtained from documents from the City and the UC. In addition, the portions of this section pertaining to water supply rely on a WSA Report prepared by the City for the proposed 2019 LRDP (City of San Diego 2018a) (Appendix N) in accordance with the California Water Code (PRC Section 10910), as amended in 2002 by SB 610. Storm water utilities information for the proposed 2019 LRDP was taken from the UC San Diego Hillcrest Campus 2019 LRDP Drainage Report prepared by Latitude 33 (Latitude 33 2019) (Appendix H).

3.16.1 Environmental Setting

3.16.1.1 Water

Regional Water Supply

The City Public Utilities Department (PUD) and other local retail water distributors formed the SDCWA in 1944 for the purpose of purchasing Colorado River water from the Metropolitan Water District of Southern California (MWD), a large wholesale water provider. Due to the PUD's reliance on purchased water from the SDCWA and MWD, the WSA Report for the proposed 2019 LRDP (City of San Diego 2018a) (Appendix N) relies upon and includes information regarding the existing and projected supplies, supply programs, and related projects of the SDCWA and MWD, as furnished by these two agencies. The WSA Report (City of San Diego 2018a) (Appendix N) evaluates water supplies that are or will be available during normal, single dry year, and multiple dry water years during a 20-year (2020–2040) projection to meet the projected demands of the proposed 2019 LRDP, in addition to existing and planned future water demands of the PUD. The WSA Report (City of San Diego 2018a) (Appendix N) also includes details regarding identification of existing water supply entitlements, water rights, water service contracts or agreements relevant to the identified water supply for the proposed 2019 LRPD, and quantities of water received in prior years pursuant to those entitlements, rights, contracts and agreements. Refer to the approved (as of June 2019) WSA Report in Appendix N for further discussion of these topics.

Under the Water Supply Assessment law (Sections 10910 through 10915 of the California Water Code), urban water suppliers like the PUD must furnish a WSA report to the city or county (lead agency) that has jurisdiction to approve the environmental documentation for certain qualifying projects (as defined in California Water Code, Section 10912[a]), subject to CEQA. While UC San

Diego is not subject to the WSA law, it is the lead agency for the proposed 2019 LRDP and voluntarily requested preparation of a WSA to inform this 2019 LRDP EIR and as part of its ongoing cooperative planning relationship with the City.

City of San Diego Public Utilities Department

The PUD and other local retail water distributors began receiving imported Colorado River water from MWD in 1947. Today, the City is the largest of the 24 member agencies of the SDCWA, which is a regional wholesale water provider. The SDCWA not only purchases Colorado River water from MWD, but is a member agency of MWD as well and works through MWD to import water from Northern California rivers through the State Water Project (SWP) (SDCWA 2018). The SDCWA imports approximately 45 percent of its water from MWD, with the balance derived from other Colorado River import sources such as Imperial Irrigation District; Colorado River conservation sources (e.g., lining parts of the Coachella and All-American canals); SWP sources; and local resources, including surface and groundwater, recycled water, conservation, and more recently, seawater desalination.

As regional water supply purveyor within its jurisdiction, the PUD currently provides water service to more than 1.39 million persons through the treatment and delivery of more than 160,000 acre-feet per year (AFY) to its service area. The PUD's water system serves both retail and wholesale customers and its service area extends over 400 square miles, 330 of which are in the City, including the Hillcrest Campus. The water system consists of 9 raw water storage facilities (surface reservoirs) with over 569,021 acre-feet (AF) of storage capacity, 3 water treatment plants, 29 treated water storage facilities, 49 pump stations, and over 3,295 miles of transmission and distribution pipelines. In addition to supplying more than 280,000 metered service connections within its retail service area, the City maintains several emergency connections to and from neighboring water agencies, including the Santa Fe Irrigation District, the City of Poway, Olivenhain Municipal Water District, the California American Water Company, Sweetwater Authority, and the Otay Water District (City of San Diego 2018a).

In addition to delivering potable water, the PUD has a recycled water program whose objectives include optimizing the use of local water supplies, lessening reliance on imported water, and freeing up capacity in the potable system. Recycled water provides the City a dependable, year-round, locally produced and controlled water resource. The recycled water system consists of two water reclamation plants and three recycled water storage facilities, and over 98 miles of transmission and distribution pipelines. There are currently no recycled water connections, or "purple pipes," available to the Hillcrest Campus.

Urban Water Management Plans

Each water supply agency prepares a long-term water resources planning document, or urban water management plan (UWMP), and updates it every 5 years. UWMPs are used by water suppliers

when planning for and proposing new projects. The projections within the City's 2015 UWMP were forwarded to the SDCWA for use in their 2015 UWMP (SDCWA 2016), which is subsequently incorporated into MWD's UWMP to calculate the ultimate water demands of the region (City of San Diego 2018a). The City's 2015 UWMP (City of San Diego 2016) was developed in collaboration with the SDCWA and adopted by the San Diego City Council in July 2016. The 2015 UWMPs of the SDCWA and MWD, along with the City's 2015 UWMP, served as the basis for the WSA Report (Appendix N).

Existing and Projected Water Supplies

Historically, water purchased from MWD had been the principal source of supply for the SDCWA's service area. Beginning in the early 1990s when supplies imported from MWD were threatened to be drastically cut back due to widespread drought conditions, the SDCWA began implementing an aggressive water supply diversification strategy and water storage program. The need for such programs were compounded by rapid population growth in the SDCWA's service area. These actions resulted in much greater water supply reliability for the San Diego region. Nevertheless, the SDCWA has preferential rights to 24.22 percent of MWD's water supplies, including water from the Colorado River and the SWP. Because a number of factors can influence Colorado River operations and the associated delivery of water to Southern California, and in order to maximize the potential for water supplies from the river, MWD has begun working with the Imperial Irrigation District to fund and implement a joint agricultural conservation and water transfer program. Similarly, numerous hydrologic, environmental, and operational factors have the potential to alter SWP operations and dramatically reduce SWP deliveries to Southern California. These considerations, combined with an extended drought throughout the state that ended in 2017, have forced the SDCWA in recent years to develop new sources of reliable and safe water supplies to meet the future needs of its member agencies (City of San Diego 2018a).

Supply diversification and storage pursuits by the SDCWA include the acquisition and importation of additional water supplies (e.g., Imperial Irrigation District transfer, canal linings), the development of additional local water supply projects (e.g., seawater desalination, water recycling and groundwater projects), augmentation of its water supply via local and regional water storage capacity (e.g., the Emergency Storage Program and associated Olivenhain Reservoir and San Vicente Dam), and other projects under its Capital Improvement Program. For example, beginning in 2007 with deliveries from the Coachella Canal and in 2010 from the All-American Canal, the SDCWA receives 77,700 AFY of conserved water from projects to line these two Imperial County canals. The SDCWA and two of its member agencies are contracted to purchase up to 56,000 AFY of desalinated seawater from the Carlsbad Desalination Plant. And the Olivenhain Reservoir and San Vicente Dam have a combined capacity of 200,000 AF of local emergency storage capacity. Although the described contributions to the local water supply from conservation, reclamation, desalination, and emergency storage expansion have only relatively recently entered the picture,

those contributions are steadily increasing and putting a dent in the overall supply and demand equation. While the SDCWA and, accordingly, the PUD will continue to rely on imported water to meet water supply needs into the foreseeable future, the agencies' dependence on imported water is expected to continue to gradually wane with the advancement of the noted local resources. However, despite the described recent advances in local water supply generation, both agencies will also continue to rely heavily upon imported water far into the foreseeable future.

Availability of Sufficient Supplies. The adequacy of imported water supplies to serve existing and planned uses within the PUD service area, including the proposed 2019 LRDP, is demonstrated above and in greater detail in the WSA Report (Appendix N). The PUD currently purchases approximately 90 percent of its water from the SDCWA, which supplies the raw and treated water to PUD through two aqueducts consisting of five pipelines. The PUD meets or offsets the remaining approximately 10 percent of its potable water demand through four local supply resources, including local surface water, groundwater, conservation, and recycled water. In Fiscal Year (FY) 2018, water purchased by the PUD from the SDCWA totaled approximately 155,000 AF. Depending on demands, growth, and the success of local supply initiatives, the volume purchased by PUD may remain relatively constant, or it may increase to a projected maximum of approximately 295,998 AFY in year 2035 (during normal precipitation years) (City of San Diego 2018a).

The PUD's use of local water (10 percent of demand is met by local resources) is affected by both availability and water resources management policies, which include a policy to use local water first to reduce imported water purchases and associated costs. In terms of local supply resources, in addition to surface water, groundwater, and conservation savings, recycled water supplies are steadily increasing, as is the demand for them. The Local Water Supply Development Program and the Local Resources Program agreements with the MWD and SDCWA provide financial incentives to the City from the sale of recycled water. In FY 2018, the beneficial reuse of recycled water in San Diego was 13,805 AF. While landscape (irrigation) water continues to be the leading use of recycled water in the region, the customer base for recycled water has grown and become more varied over the years. There has been an over 63 percent increase in the number of recycled water meter connections over the past 10 years, with the City providing recycled water service to 721 retail meters. In addition, the City serves five wholesale meter connections to local jurisdictions.

According to the SDCWA's 2015 UWMP, future water demands in its service area are expected to be approximately 13 percent lower in Year 2020 and about 12 percent lower in year 2035 compared to demand projections made in the 2010 UWMP. Despite this relatively recent drop in demand, by 2040, total normal water demands for the SDCWA's service area are projected to reach 718,773 AFY.

Plans for Acquiring Additional Supplies. In 2013, the City approved the 2012 Long-Range Water Resources Plan (2012 LRWRP), which is a high-level strategy document that evaluates water supply and demand objectives against multiple planning objectives through year 2035. The plan

evaluates over 20 water supply options and sets the direction of where the PUD will place its future efforts in developing local water supplies. As discussed previously, conservation and recycling programs have been underway for some time; the 2012 LRWRP looks at ways to expand and increase those programs through things like conservation-oriented rate structures.

Also addressed in the LRWRP is PUD's active development of groundwater resources for municipal water supply or other beneficial uses (the City is currently finalizing several Capital Improvement Programs to utilize basin groundwater) and potable reuse (Pure Water San Diego). Under the fledgling potable reuse program, the City would maximize the use of recycled water that currently is used for non-drinking uses through advanced water purification to render it safe for use as a drinking water supply. The PUD's specific advanced water purification process uses multiple treatment barriers and ultimately results in purified water that meets all drinking water standards and is similar in quality to distilled water. Pure Water San Diego, to be implemented in phases, is expected to deliver 83 million gallons per day (mgd) of water by year 2035, equivalent to one-third of the City's water need. Phase 1 of the Pure Water San Diego program will produce 30 mgd and is expected to be operational by 2021 (City of San Diego 2018a).

UC San Diego Hillcrest Campus Water Demand

The Hillcrest Campus is dependent on potable water from the PUD for drinking, sanitation, fire protection, heating, air conditioning, medical activities, research activities, and landscape irrigation. Approximately every 3 years, the PUD calculates projected water demands within its service area for planning purposes. The projections are done by computer model to break down water use by four major sectors: commercial, industrial, residential, and public uses. Using past usage data from PUD and demographic data from SANDAG, the model can determine sector-specific water demands. The SDCWA and MWD use regional growth forecasts to calculate projected water demands within their respective service areas. The PUD's current demand projections, which are based on the SANDAG Series 13 Forecast land use, are incorporated into the City's 2015 UWMP. The process of UWMP development that is described previously, wherein City PUD demand projections are shared with the SDCWA and SDCWA projections are subsequently shared with MWD, allows for consistency between the retail and wholesale agencies' projected demands and ensures that adequate water supplies are being planned for the PUD's existing and future users, including on the Hillcrest Campus. As explained previously, the various UWMPs were used in preparation of the WSA Report for the proposed 2019 LRDP (Appendix N).

The UC Sustainable Practices Policy (UCOP 2018) requires all UC campuses to reduce their potable water use by 36 percent by the Year 2025 and to develop a water action plan that outlines how they will achieve their water reductions. The Hillcrest Campus does not have its own water action plan but would comply with applicable goals and policies of the UC San Diego La Jolla Campus Water Action Plan. They set out to (1) identify the present and future measures the campuses will implement to reduce potable water use by 20 percent from the FY 2005–2008

baseline, (2) develop and implement a solid education and outreach platform to encourage behavior change, and (3) establish benchmark goals to go beyond the 20 percent reduction in potable water use. In accordance with the UC Sustainable Practices Policy, potable water use per capita on the Hillcrest Campus is calculated by dividing the gallons of potable water used per fiscal year (based on City water meter billing data) by the weighted campus user. Under the 2019 LRDP, the Hillcrest Campus would implement an extensive array of water conservation programs, including best practices in process water recovery and reuse, tree planting and preservation, rooftop and impervious area dispersion, porous pavement, green roofs, and inclusion of bioswales, in an effort to minimize its water usage.

Water Infrastructure

Potable Water

The existing Hillcrest Campus water system is composed of pipes of various size and material and is directly served by the City at three locations. A fourth connection serves as an emergency supply for the main Inpatient Tower in the event of a shut off or fire. Two 12-inch City mains run through Front Street, with the campus main connection to the City located at the intersection of Front Street and Dickinson Street. The 12-inch mains then run east–west through Dickinson Street, ultimately connecting at the western end of Dickinson to provide a looped system. Additional connections to the City water system are located at the Arbor Drive and Front Street intersection and at the west end of Dickinson Street. All buildings are connected directly to the water system by 2-inch asbestos cement pipe, 4-inch polyvinyl chloride (PVC), and 6-inch PVC pipes. The approximately 20 fire hydrants located throughout campus are connected to the water system through 6-inch PVC pipes (Latitude 33 2017).

3.16.1.2 Wastewater

The Hillcrest Campus wastewater system provides sewage disposal for the campus predominantly through a gravity flow system. The Hillcrest Campus is currently served by a variety of private sewer mains located within nearly all of its vehicle rights-of-way. These mains ultimately converge at one of two municipal sewer basins at the edge of campus, where discharges are then sent either north to a trunk main running along I-8 or south to a University Avenue trunk main running through the Hillcrest neighborhood. The current average flow rate for the campus is 0.16 mgd, and its peak flow rate is 0.36 mgd. Table 3.16-1 summarizes average flow and peak flow during the existing condition and the projected flow rates under buildout of the 2019 LRDP in year 2035. Values for year 2035 assume that the proposed campus population increase that would occur during the progression toward the 2019 LRDP planning horizon would be proportionate to the increase in wastewater demand over the same period.

Table 3.16-1. Summary of Campus Wastewater Flows for the Existing Condition and Year 2035

Year	Average Daily Flows (mgd)	Peak Flow Demand (mgd)
Existing Condition	0.16	0.36
2035 Projected	0.47	0.93

Source: Latitude 33 2017.
Notes: mgd = million gallons per day

City sewer pipes connect to the Hillcrest Campus pipes through various points of connection. All sewage from every Hillcrest Campus building is conveyed to the main sewer lines through 4-inch or 6-inch PVC pipes. Sewage from the northern campus buildings currently flows through 8-inch PVC pipes in Bachman Place and 10-inch vitrified clay pipes that run through the undeveloped canyon. These pipes convene with a 12-inch vitrified clay pipe at the edge of the campus boundary that continues north on Bachman Place to the I-8 trunk main. The southern half of the campus sewage drains directly south through 6-inch PVC pipes that flow into City 8-inch PVC pipes in Dickinson Street. The Dickinson Street pipes gather the sewage into an 8-inch City pipe which flows south in Front Street. Sewage from buildings located on Arbor Drive, including 114 Arbor Drive (Performance Improvement Building) and 140 Arbor Drive (Outpatient Psychiatry), flows from 3-inch PVC and 4-inch pipes into the 8-inch PVC pipe in First Avenue. Sewage continues this route to the University Avenue trunk main (Latitude 33 2017).

The metropolitan sewerage system is operated by the City's Public Utilities Metropolitan Waste Water Department (MWWD). Under the MWWD, the sewerage system serves the greater San Diego population of approximately 2.2 million from 16 cities and districts The MWWD treats the wastewater generated in a 450-square-mile area stretching from Del Mar and Poway to the north, Alpine and Lakeside to the east, the Pacific Ocean to the west, and south to the international border with Mexico (City of San Diego 2018b).

Municipal wastewater in the San Diego region consists primarily of domestic sewage and, to a lesser degree, industrial wastes. Facilities used to control and treat municipal wastewater in the region include wastewater collection systems, pumping stations, transport pipelines, large and small treatment plants, reclamation plants, storage ponds, and ocean outfalls. The Hillcrest Campus and surrounding area are served by the City's Point Loma Wastewater Treatment Plant (PLWTP), as described in more detail below. Municipal wastewater treatment in the San Diego region is generally done at the secondary treatment level, which results in the removal of more than 85 percent of the biological oxygen demand and suspended solids found in municipal wastewater. Tertiary wastewater treatments are used at some treatment plants for additional removal of pollutants to reclaim wastewater for beneficial reuse meeting all state requirements. Effluent, or treated wastewater, from the wastewater treatment plants is disposed of by various means including discharge to the ocean through long deep ocean outfalls such as those at Point

Loma and South Bay, percolation into the soil, and reclamation/reuse if treated to the tertiary level. Sludge disposal at most major municipal wastewater treatment plants, including the PLWTP, consists of aerobic and anaerobic digestion and landfill disposal. Dried sludge is either disposed of at landfills or made available to the public as a soil conditioner/compost.

The Hillcrest Campus wastewater system connects to the MWWD system, with an ultimate disposal at the PLWTP, which is located on a 40-acre site on the Point Loma bluffs. On its way to the PLWTP, wastewater generated on the campus flows either north through sewer connections in Bachman Place or south through sewer connections in Front Street. PLWTP treats approximately 175 mgd of wastewater generated by residential, institutional, and industrial users in the MWWD's service area.

The PLWTP plant has a treatment capacity of 240 mgd. The current level of treatment at the PLWTP is advanced primary, which involves a combination of primary and secondary treatment methods to achieve approximately 70 percent solids removal. Primary treatment at the plant utilizes a series of physical processes to remove organic solids (e.g., screening and settling), while the plant's secondary treatment uses a bio-chemical process to remove additional remaining organic material. At this point in the advanced primary treatment process, approximately 80 percent of the total suspended solids in the wastewater have been removed. Following a final screening, the treated wastewater, called "effluent," is discharged to the ocean through the Point Loma Ocean Outfall. Regarding the waste products that are removed prior to the effluent stage, the scum that is skimmed off the surface of the water during the screening and settling stages is dewatered and taken off site for disposal, while the organic solids ("sludge") that are removed from the wastewater are pumped into one of eight digesters on site. Within the digesters, the sludge is reduced in volume through a heat and bacterial process similar to human digestion. After approximately 2 weeks, the digested sludge is pumped from the PLWTP through a 17-mile pipeline to the City's Metro Biosolids Center, adjacent to Miramar Landfill, where the sludge undergoes further processing (City of San Diego 2018b).

National Pollution Discharge Elimination System (NPDES) permits establish specific requirements for discharges from municipal and industrial sources, with these requirements affecting how sanitary and industrial wastewater is handled. The RWQCB regulates wastewater discharges from municipal wastewater treatment plants, such as the PLWTP, through the issuance of NPDES permits. Discharges of wastewater to surface water, such as that which occurs at the Point Loma Ocean Outfall, must meet the effluent limitations prescribed in the NPDES permit for the PLWTP issued by the RWQCB and further discussed in Section 3.9, Hydrology and Water Quality, of this 2019 LRDP EIR (USEPA 2018).

The City received a modified permit, or waiver, from secondary treatment requirements of the Clean Water Act in 1995 for its operations at the PLWTP. This modified permit was renewed in

2002 and then again in 2010. Through a combination of factors, including industrial source control, advanced primary treatment of wastewater, a deep ocean outfall and comprehensive environmental monitoring, the USEPA and the RWQCB agreed that the PLWTP fully protects the ocean. The City submitted an application for renewal of its modified permit in 2015; the USEPA and RWQCB approved the modified permit in April 2017 (USEPA 2017).

In order to continue complying with its permits and USEPA and RWQCB requirements, discharges to the City's sewer system from the Hillcrest Campus are regulated under three permits:

- **Industrial User Discharge Permit from the City of San Diego.** This permit is for industrial process wastewater and includes discharges from a variety of activities, including biological and chemical research, film processing, area and equipment washdown, cooling tower bleed, boiler blowdown, metal finishing operations, radioactive and silver-bearing waste treatment, vehicle washing, and sanitary usage.
- **Phase II Small MS4 General Permit (WQ Order No. 2013-0001-DWQ), Non-Traditional Permittee (Section F).** NPDES General Permit NO. CAS000004 for storm water discharges from small municipal separate storm sewer systems (MS4s) (General Permit).
- **Construction General Permit Construction General Permit (Order No. 2009-009-DWQ).** NPDES General Permit No. CAS000002 for storm water discharges associated with construction and land disturbance activities **(**O'Connell 2018**).**

3.16.1.3 Storm Water Drainage

For a discussion of existing storm water drainage facilities on the Hillcrest Campus, refer to Section 3.9 of this 2019 LRDP EIR.

3.16.1.4 Electric Power Facilities

Electricity on the Hillcrest Campus is provided by SDG&E. The Hillcrest Campus is currently fed from three different SDG&E substation circuits: (1) Old Town Substation Circuit 493, (2) Kettner Substation Circuit 139, and (3) Substation F Circuit 140. The primary point of connection for Old Town Circuit 493 passes through the undeveloped canyon on the northern side of campus through 12-kilovolt overhead power lines. This circuit feeds into the electric vault and main service switchgear located adjacent to 326 Dickinson Street (Facilities Engineering Building) at the most northern end of the mesa top. This circuit is then fed underground and distributed to the various buildings on campus, such as the main hospital, Medical Offices North Building, West Wing, CUP, Clinical Teaching Facility, North Annex Building, and other support facilities. Kettner Substation Circuit 139 feeds the Arbor Parking Structure, buildings located north of Dickinson Street and west of pedestrian bridge, and other offices east of Front Street. The Substation F Circuit 140 overhead power line runs south and powers 135 Dickinson Street and the Bachman Parking Structure.

3.16.1.5 Natural Gas Facilities

Natural gas on the Hillcrest Campus is delivered by SDG&E, with the majority of the natural gas commodity provided by the California Department of General Services. The consumption of natural gas on the campus is associated with the hospital, offices, and other buildings. A main SDG&E natural gas feed enters the campus underground from the north between the existing CUP and Clinical Teaching Facility originating in Bachman Place. The existing CUP uses natural gas combustion to power its three boilers. These boilers provide steam, which is used to generate heating hot water and domestic hot water across the Hillcrest Campus (Latitude 33 2017). Additional SDG&E gas lines of various sizes are located in Front Street, First Avenue, Dickinson Way and Arbor Drive and serve the remaining buildings on campus. There are approximately 11 SDG&E gas meters scattered throughout the campus located at various buildings.

3.16.1.6 Telecommunications Facilities

The Hillcrest Campus is currently supplied with telecommunications services through various private companies. Typical telecommunications systems on campus include voice frequency, digital, fiber optic, wireless, Ethernet video over Internet Protocol, and voice over Internet Protocol. The infrastructure is located underground in vaults and conduit and aboveground on overhead power lines with pole mounted cable and transformers. Antennas may also be mounted in towers or on roofs.

3.16.1.7 Solid Waste

The UC system, including each of its facilities and campuses, is highly committed to sustainable practices and dramatically reducing its solid waste streams. One component of these ambitious sustainability commitments is ensuring that the UC system produces as little waste as possible. Collectively, UC campuses and medical centers diverted 69 percent of municipal solid waste from landfills including construction and demolition waste (C&D) in 2017–2018. The campuses sent approximately 1.6 pounds of municipal solid waste per person per day to the landfill. The UC Sustainable Practices Policy (UCOP 2018) set the goal that the UC system would achieve zero waste by 2020 at all locations other than health locations. Minimum compliance for zero waste is 90 percent diversion of its municipal solid waste from landfills by 2020.

While its health facilities are not committed to zero waste, the Hillcrest Campus is committed to dramatically decreasing solid waste. Waste at the Hillcrest Campus is generally composed of total solid waste, which includes municipal solid waste, recycling, and all forms of regulated waste. This includes but is not limited to regulated medical waste, biohazardous waste, pharmaceutical waste, universal waste, and construction and demolition waste. Unlike UC academic campuses, at UC San Diego Health locations, including the Hillcrest Campus, diversion rates and reduction targets use total solid waste rather than municipal solid waste (UC 2018).

Waste generated on the Hillcrest Campus is either disposed or diverted. UC San Diego Environmental Services (EVS) is responsible for recycling and solid waste and medical waste management on the Hillcrest Campus. Daily operations include the coordination of trash compactor services and maintenance, ensuring that all dumpsters and collection units are regularly maintained and emptied, monitoring loading docks for pallets, and providing mobile containers for emergencies and special events (on a recharge basis). Solid waste at the Hillcrest Campus is collected and deposited in approved bins for each waste stream throughout the campus and then transported to the delivery areas located at designated docks and loaded into solid waste or recycling compactors. Currently, these compactors are considered "break-away" containers, meaning Republic Services disposal trucks transport the entire container that is then replaced with an empty container. This municipal (special) solid waste is transported for off-site disposal at the Republic Services Copper Mountain Landfill in Yuma, Arizona (Moore 2019). Regular municipal waste is transported to the Republic Services Sycamore Landfill in Santee, California.

Regulated medical waste on the Hillcrest Campus is collected in approved containers by waste stream and transported to the same area as solid waste but in secured storage cages. The waste is loaded into box trucks or tractor trailers and transported by Stericycle, Inc. to a special regulated medical waste treatment location. For the Hillcrest Campus, this treatment location is the Stericycle Autoclave Facility in Vernon, California, for steam sterilization, which processes approximately 5.25 million pounds of regulated medical waste per month, or to a Stericycle medical waste incinerator in Salt Lake City, Utah, per regulation (Moore 2019). In 2018, Stericycle managed approximately 1400 tons of municipal solid waste, approximately 10 tons of pharmaceutical waste, approximately 925 tons of recycling, and approximately 145 tons of regulated medical waste on the Hillcrest Campus.

All chemical waste recycling or disposal on the Hillcrest Campus is managed through EH&S. Hazardous materials collected by EH&S for disposal are packaged and labeled properly, which includes segregating incompatible materials, placing them in appropriate sealed containers, and identifying all components with approximate concentrations. Chemical wastes are further segregated by type and consolidated, bulked, or compacted before a licensed hauler transports them from the campus to permitted off-campus facilities for incineration, treatment, recycling, or other forms of disposal. Some special projects may require a department to contract directly with a waste disposal vendor. In these cases, any waste removal must first be approved by EH&S. EH&S comprehensively reviews the waste manifest documents, the waste hauler information, and the disposal facility status prior to waste shipment. EH&S also tracks the waste until it reaches the final destination and is disposed. EH&S maintains manifest documents, as required by state and federal regulations, and produces documentation during regulatory agency audits. UC San Diego also pays annual hazardous waste taxes based on the volumes of waste disposed. It should be noted that the Hillcrest Campus is not permitted as a disposal facility and thus does not dispose of chemical hazardous wastes on the site. Within 90 days, the waste is shipped off the campus by

licensed transporters for recycling, treatment, and/or disposal at licensed treatment storage or disposal facilities in California and other states.

The Republic Landfill in Yuma, Arizona, currently serves the Hillcrest Campus and would continue to acquire municipal solid waste under the proposed 2019 LRDP (Hamilton, pers. comm. 2019). Municipal solid waste treated at this location can process up to 9 pounds of waste per 34-yard trash compactor (Moore 2018). In order to align with the UC Sustainable Practices Policy goals for solid waste reduction, the amount of waste sent to the Republic Landfill from the Hillcrest Campus is expected to decrease. Looking ahead, UC San Diego intends to manage their waste streams more locally in order to reduce impacts and costs. With a new waste contract pending, it is expected that the Hillcrest Campus would establish a relationship with Miramar Landfill in the near future for safe disposal of municipal solid waste and possibly on-site steam-sterilized regulated medical waste, which is allowed by regulation to be disposed to a landfill.

Methods of waste diversion at the Hillcrest Campus include reduction, reuse, recycling, composting, medical devise reprocessing, and donation. UC health locations, including the Hillcrest Campus, have been directed by the UC Sustainable Practices Policy (UCOP 2018) to use the definitions set forth in Practice Greenhealth to set medical center–specific goals for waste diversion and reduction. Practice Greenhealth's overall focus for waste includes promoting zero waste policies, reducing the volume and toxicity of waste produced by the health care sector, and implementing safe and sustainable disposal options as alternatives to incineration. Practice Greenhealth is a leading membership and networking organization for organizations in the health care community that have made a commitment to sustainable, environmentally friendly preferable practices and sets forth goals for achieving a higher standard of care (Practice Greenhealth 2018a). By setting these goals, UC medical facilities are to achieve Practice Greenhealth's Partner for Change Award. The UC Sustainable Practices Policy (UCOP 2018) has set target commitments and award achievement dates for the various UC San Diego Health facilities. UC San Diego Health (including both the La Jolla and the Hillcrest Campuses) is to receive the Partner for Change Award recognition by August 31, 2019, and has to set target commitments for waste reduction by January 1, 2020. UC San Diego Health has already achieved the Partner for Change Award in 2018 and 2019, prior to the requirement to achieve this level by August 31, 2019. In addition, UC San Diego Health has also achieved a Greening the OR Award in 2019 specifically for efforts made to reduce waste in the operating room.

Minimum qualifications for the Practice Greenhealth's Partners for Change Award include goals for waste diversion for UC San Diego Health facilities, including Hillcrest Campus, as follows:

- Provide current year waste, energy, and water data, as well as number of staffed beds, operating rooms, and patient days
- Must recycle 15 percent or more of the total waste stream

- Must have a mercury elimination program in place with a plan for total elimination
- Must demonstrate the breadth of the environmental programs and continuous improvement

Practice Greenhealth is a membership organization for the greening of health care that encourages health care facilities to apply for this award every year to assist in reviewing and tracking the facilities' metrics and celebrating facilities' successes (Practice Greenhealth 2018b). Practice Greenhealth's overall goals that UC San Diego may integrate into the Hillcrest Campus to achieve sustainability on campus include the following (Practice Greenhealth 2018b):

- Virtual elimination of mercury
- Reduction of the quantity and toxicity of health care waste from manufacturing, purchase, and use of products and materials to improved end-of-life management
- Minimization of the use and exposure to hazardous chemicals, including persistent, bioaccumulative, and toxic substances
- Reduction of the health care's environmental footprint through resource conservation and other measurable environmental improvements
- Integration of sustainable design and building techniques with environmentally sound operational practices to create true healing environments

To achieve the previously described waste reduction standards, the Hillcrest Campus operates the following waste reduction and diversion programs and is always looking for opportunities to expand the programs to increase resource conservation and diversion:

- **Single Stream Recycling.** Aluminum cans, beverage and food containers, mixed paper, plastic bottles or containers, and molded Styrofoam packaging are collected at individual collection points around the campus. Confidential documents are destroyed and recycled appropriately.
- **Strategic Sourcing.** The increase in reusable items, reduction in packaging, and implementation of take-back programs on campus are employed.
- **Edible Food Donation.** Edible, wholesome food that has been overproduced is weighed and measured to inform upstream decision-making to reduce food waste but is also donated to on-campus or off-campus food distribution networks that serve the over 500,000-person food-insecure population in the region.
- **Food Waste Composting.** Food scraps from the medical center kitchens are collected and recovered by to Resource Management Group to be used for animal feed and/or compost.
- **Construction and Demolition Debris.** UC San Diego follows the UC Green Building Policy, which encourages LEED-certified buildings for non-acute care facilities and

the recycling of construction wastes in order to divert as much as 75 percent of wastes from landfills and on-site recycling of aluminum, plastics, and glass.

- **Education and Research.** Education and monitoring for proper waste stream segregation and regulatory compliance.

In addition to reducing the amount of discarded materials, the Hillcrest Campus implements waste reduction through its sustainable procurement policy which is directed at the University's business operations and practices. For example, all requests for proposals and contract agreements are requested and provided electronically, paper copies are shredded and recycled, and copier toner cartridges are collected and recycled. The Hillcrest Campus is also committed to building projects that minimize their operational footprint on all levels, including solid waste, as evidenced by the fact that the future campus under the 2019 LRDP would include all new non-acute care or medical center buildings and major renovations acquiring LEED certification.

In 2018, UC San Diego Health disposed of 30 pounds of total waste and recycling per adjusted patient day (UCOP 2018). In 2017, the UC San Diego Hillcrest and La Jolla Medical Centers started the first composting program with approximately 252,000 pounds of waste composted between December 2016 and June 2017. Both of the UC San Diego Hillcrest and La Jolla Medical Centers also undertook operating room recycling training for its staff (UC 2017).

3.16.2 Regulatory Framework

Applicable federal, state, and local (non-regulatory) regulations pertaining to utilities and service systems are discussed below.

3.16.2.1 Federal

Leadership in Energy and Environmental Design

The U.S. Green Building Council is committed to transforming the way buildings are designed, constructed, and operated through the LEED certification program. LEED acts as a certification program for buildings and communities to guide their design, construction, operations and maintenance toward sustainability. LEED is based on prerequisites and credits that a project meets in order to achieve a certification level or certified, Silver, Gold, or Platinum. Under the 2019 LRDP, all non-acute care buildings on the Hillcrest Campus would be LEED certified.

Telecommunications Act of 1966

The Telecommunications Act of 1996 amended the Communications Act of 1934. It provided major changes in laws affecting cable television, telecommunications, and the Internet. The law's main purpose is to stimulate competition in telecommunication services. The law specifies (1) how local telephone carriers can compete, (2) how and under what circumstances local exchange carriers can provide long-distance services, and (3) the deregulation of cable television services.

3.16.2.2 State

Assembly Bill 341

In 2011, the state legislature enacted AB 341 (PRC Section 42649.2), increasing the diversion target to 75 percent statewide. AB 341 also requires the provision of recycling service to commercial facilities that generate 4 cubic yards or more of solid waste per week and multi-family facilities with five or more units.

Assembly Bill 1826

In October 2014, Governor Brown signed AB 1826 Chesbro (Chapter 727, Statutes of 2014), requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. For businesses that generate 8 or more cubic yards of organic waste per week, this requirement began on April 1, 2016, while those that generate 4 cubic yards of organic waste per week must have an organic waste recycling program in place beginning January 1, 2017. The requirement becomes more stringent in following years. Multi-family properties are regulated but are only required to divert green waste and non-hazardous wood waste. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including certain multi-family residential dwellings, as described previously, starting on January 1, 2016. Mandatory recycling of commercial organics would be phased in over time, and an exemption process is available for rural counties.

California Assembly Bill 1881

AB 1881, the Water Conservation in Landscaping Act of 2006, requires the California Department of Water Resources to prepare an updated Model Water Efficient Landscaping Ordinance (Model Ordinance) in accordance with specified requirements to conserve water through efficient irrigation and landscaping. By January 1, 2010, local agencies were to adopt either the updated Model Ordinance or a local landscape ordinance that is at least as effective in conserving water as the Model Ordinance. In response, the City amended its Landscape Regulations (SDMC Chapter 14, Article 2, Division 4) and Landscape Standards in April 2016. The Landscape Standards implement the requirements of the Landscape Regulations. All landscape plans and installations are required to be in compliance with the Landscape Standards.

California Integrated Waste Management Act – Assembly Bill 939

The California Integrated Waste Management Act of 1989 (AB 939) established the current organization, structure, and mission of CalRecycle with an integrated waste management hierarchy that consists of the following (in order of importance): source, reduction, recycling, composting, and land disposal of solid waste. AB 939 requires counties to develop an integrated waste management

plan that describes local waste diversion and disposal conditions, and lays out realistic programs to achieve the waste diversion goals. Under the provisions of this statute, the UC is not subject to this and other regulations pertaining to solid waste. However, according to the bill, the UC is "encouraged" to adopt reduction measures similar to those imposed on local agencies.

California Senate Bill 610

Sections 10910 through 10915 of the California Water Code were amended by the enactment of SB 610 in 2002. SB 610 requires an assessment of whether available water supplies are sufficient to serve the demand generated by a proposed project, as well as the reasonably foreseeable cumulative demand in the region over the next 20 years under average normal year, single dry year, and multiple dry year conditions. Under SB 610, water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in Water Code, Section 10912[a]) subject to CEQA. For the purposes of SB 610, "project" means any of the following:

1. A proposed residential development of more than 500 dwelling units.
2. A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
3. A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
4. A proposed hotel or motel, or both, having more than 500 rooms.
5. A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
6. A mixed-use project that includes one or more of the projects specified in this subdivision.
7. A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project.

Because the UC campuses are not subject to local planning regulations, the Hillcrest Campus is not required to comply with California Water Code, Sections 10910 through 10915. Nonetheless, UC San Diego requested City PUD prepare the WSA Report (Appendix N) to determine the proposed 2019 LRDP's conformance with SB 610 requirements and to confirm availability of sufficient water supply to meet the 2019 LRDP's projected demand.

Mandatory Collocation Act

California Government Code, Section 65850.6, holds that colocation facilities shall be permitted uses not subject to a city or county discretionary permit process as long they satisfies certain criteria, which include height, location, bulk scale and size requirements, as well as consistency with applicable planning documents and CEQA. This act is intended to encourage and expedite the provision of collocated telecommunications facilities.

UC Sustainable Practices Policy

The UC Sustainable Practices Policy (UCOP 2018), developed in 2004 and updated as recently as 2018, establishes goals in 10 areas of sustainable practices for both individual building projects and overall facilities operations: green building design, clean energy, transportation, climate protection, sustainable building operations, waste reduction and recycling, environmentally preferable purchasing, sustainable foodservice, sustainable water systems, and sustainability at UC San Diego Health locations (UCOP 2018). Most relevant to this discussion are the goals and policies related to energy use (i.e., green building design, clean energy, sustainable building operations), solid waste (i.e., waste reduction and recycling), water supply (i.e., sustainable water systems), and sustainability at UC San Diego Health locations.

Specifically with regard to green building design, UC San Diego is committed to meeting UC system–wide goals of achieving LEED Silver certification or better for all new buildings and LEED certification (not necessarily Silver) for all major renovations. The policy also requires that all new non-acute care facilities or major renovation projects outperform California Energy Code, Title 24, requirements by at least 20 percent and strive to outperform by 30 percent. UC San Diego saves millions of gallons of potable water annually through implementation of a comprehensive Water Action Plan (UC San Diego 2017), which outlines the campus's methods for reducing dependence on potable water and identifies broader opportunities for water conservation. The Hillcrest Campus must comply with the goals set in the Water Action Plan. The UC Sustainable Practices Policy (UCOP 2018) identifies the goal of a 20 percent reduction in growth-adjusted potable water consumption by 2020 and 36 percent by 2025 (compared to a 3-year average baseline of FY 2005–06, FY 2006–07, and FY 2007–08).

In regards to sustainability at UC San Diego Health locations, health locations are to achieve Practice Greenhealth's Partner for Change Award and to use the definitions in Practice Greenhealth to set medical-center-specific goals for waste diversion as well as water reduction. See Section 3.16.1.7, Solid Waste, for a description of the Practice Greenhealth solid waste diversion and reduction strategies.

The UC produces an annual report to track its progress toward achieving the system-wide goal of sustainability by 2025. The annual report outlines ongoing progress of the UC's comprehensive sustainability program, including advancement in all areas of the UC Sustainable Practices Policy, as well as in research and education; Presidential Initiatives; and student, faculty, and staff engagement.

UC San Diego Climate Action Plan

In 2008, UC San Diego approved a CAP for implementing the UC San Diego's climate strategy to meet state and UC climate policies and objectives. UC San Diego's energy program has been nationally recognized for its leadership and innovation in managing energy practices to minimize campus environmental impacts. The CAP also identifies how UC San Diego will include climate

neutrality and sustainability in curriculum and research; identifies goals for reducing emissions and impacts from purchasing, campus operations, transportation, and water usage; and identifies mechanisms for tracking progress and financing mechanisms. The 2019 update to the CAP analyzes UC San Diego's historical, current, and projected emissions for incorporation into a strategy to meet UC carbon neutrality goals. Additional details regarding UC San Diego's CAP and energy programs are discussed in Sections 3.5, Energy, and 3.7, Greenhouse Gas Emissions, of this 2019 LRDP EIR.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, codified in the California Water Code, authorizes the State Water Resources Control Board to implement programs to control pollution discharged into state waters. This state law essentially implements the requirements of the federal Clean Water Act. Pursuant to this law, the RWQCB establishes the wastewater concentrations of a number of specific hazardous substances in treated wastewater discharged from the campus.

Senate Bill 1016

In 2008, the state legislature enacted SB 1016, which modified the calculation used to measure local government compliance with the California Public Resources Code requirements established by AB 939. The measurement was changed from a "diversion measurement" system to a "disposal measurement" system. This is because the goal of the solid waste management efforts is not simply to increase recycling, but to decrease the amount of waste entering landfills. The state uses an equation as follows: the amount of waste generated is equal to the amount of waste disposed plus the amount of waste diverted from disposal.

Senate Bill 1383

In 2016, the state legislature passed SB 1383, which requires CARB to develop a strategy to reduce short-lived climate pollutants to 40 percent below 2013 levels by 2030. To achieve this emissions reduction requirement, CalRecycle is required to adopt the following regulations that achieve these waste reduction goals:

- 50 percent reduction in organics disposal at landfills from 2014 levels by 2020
- 75 percent reduction in organics disposal at landfills by 2025

California Code of Regulations Title 13, Sections 2449(d)(3) and 2485

The CARB is responsible for enforcing the California Code of Regulations, Title 13, Sections 2449(d)(3) and 2485, which limit idling from both on-road and off-road diesel-powered equipment.

Urban Water Management Planning Act (California Water Code, Division 6, Part 2.6, Section 10610 et. seq.)

The Urban Water Management Planning Act was developed due to concerns for potential water supply shortages throughout California. It requires information on water supply reliability and water use efficiency measures. Urban water suppliers are required, as part of the act, to develop and implement UWMPs to describe their efforts to promote the efficient use and management of water resources.

3.16.2.3 Local (Non-Regulatory)

As a state entity, UC is not subject to municipal plans, policies, and regulations; however, the campus would continue to dispose of its solid waste at Miramar Landfill, and the following regulations are enforced by the City as a means to divert waste from the waste stream it handles, in compliance with state regulations. Details regarding City's Climate Protection Plans, including the GHG Emission Reduction Plan (City of San Diego 2002), Climate Protection Action Plan (City of San Diego 2005), and CAP (City of San Diego 2015), and County CAP that relate to energy are included in Section 3.5 of this 2019 LRDP EIR.

City of San Diego Waste Diversion Ordinances

Municipal Code, Section 66.0701 et seq., the Recycling Ordinance, enacted in 2007, requires all single-family, and most multi-family and commercial facilities, and City-permitted special events, to participate in a recycling program by separating recyclable materials from other solid waste and depositing the recyclable materials in the approved recycling containers. In 2012, the exemption threshold for the ordinance was lowered from 6 cubic yards of collection service per week to less than 4 cubic yards per week. Therefore, privately serviced businesses, commercial/institutional facilities, apartments, and condominiums generating 4 or more cubic yards of trash per week are required to recycle. This change is to comply with state-mandated requirements that resulted from AB 341. The state's mandatory recycling program also requires multi-family properties with five or more units to recycle.

Municipal Code, Section 66.0701 et seq., the 2008 Construction and Demolition (C&D) Debris Deposit Ordinance, requires that the majority of construction, demolition, and remodeling projects pay a refundable C&D debris recycling deposit and divert their debris by recycling, reusing, or donating usable materials. The ordinance is designed to keep C&D materials out of local landfills. A diversion rate of 65 percent by weight of the total C&D debris generated by the 2019 LRDP is required to be demonstrated recycled for the deposit to be released.

City of San Diego Zero Waste Plan

Adopted in July 2015, the City's Zero Waste Plan calls for handling discarded items as commodities and striving to divert them to productive use rather than disposing of them. Specific targets are as follows:

- 75 percent diversion from disposal by 2020
- 90 percent diversion from disposal by 2035
- "Zero waste" by 2040

The plan identifies a number of waste diversion strategies directed at achieving the above goals, including the following strategies that would address municipal solid waste, such as waste produced at the Hillcrest Campus:

- Developing additional organic materials recycling infrastructure
- Expanding materials accepted at the Miramar Greenery
- Promoting food processing and/or composting at Miramar Landfill

The City's Environmental Services Department estimates that compliance with existing City codes and ordinances alone (including the Refuse and Recyclable Materials Storage Regulations, Recycling Ordinance, and the Construction and Demolition Debris Deposit Ordinance) would achieve only an approximately 40 percent diversion rate, which is substantially below the current 75 percent diversion level targeted by the state and the goals of the City's Zero Waste Plan.

3.16.3 Project Impacts and Mitigation

The following sections address various potential impacts relating to utilities and service systems that could result due to the implementation of the proposed 2019 LRDP.

3.16.3.1 Issue 1: New Utilities Facilities

Utilities and Service Systems Issue 1 Summary

Would implementation of the 2019 LRDP 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?

Impact: Implementation of the proposed 2019 LRDP would require the construction of new and expanded water and wastewater infrastructure (pipelines), drainage, electric power, natural gas and telecommunications facilities, some of which could cause significant environmental effects.	**Mitigation:** Mitigation measures in Section 3.1, Aesthetics; Section 3.2, Air Quality; Section 3.3, Biological Resources; Section 3.4, Cultural and Tribal Cultural Resources; Section 3.5, Energy; Section 3.6, Geology and Soils; Section 3.8, Hazards and Hazardous Materials; Section 3.11, Noise; Section 3.15, Transportation
Significance Before Mitigation: Potentially significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the proposed 2019 LRDP may have a significant impact if it would require or result in the relocation or construction of new water or expanded water, wastewater treatment, or storm water drainage; electric power; natural gas; or telecommunications facilities, the construction of which could cause significant environmental effects.

Impact Analysis

Water Infrastructure and Facilities

UC San Diego anticipates approximately 1.6 million gsf of net new development on the Hillcrest Campus under the proposed 2019 LRDP over a series of five construction phases for a total of 2.7 million gsf of development at buildout. Growth would occur primarily through redevelopment and targeted new construction. Modifications to existing landscaping, parking, some previously undisturbed areas, and other hardscape features on the Hillcrest Campus would occur.

The existing Hillcrest Campus water system infrastructure is not adequate to serve the existing campus and, therefore, is not adequate for the future campus development proposed by the 2019 LRDP. With future campus development anticipated to generate an average flowrate of 0.80 mgd (a 240 percent increase from the campus's existing average flowrate of 0.33 mgd), new water pipes and reconfigured fire hydrants would be necessary to meet daily demand.

The future campus water distribution system would entail the privatization, or transfer of ownership from the City to UC San Diego, of the existing municipal water pipeline that runs under

Dickinson Street and then curves south along the existing Front Street rights-of-way before connecting to another City pipeline located under Arbor Drive. In addition, new water pipelines would be constructed to connect newly developed parts of the campus to the City pipeline running under Arbor Drive. The realigned segment of Bachman Place would feature a new pipeline that connects to Arbor Drive at First Street, and a new pipeline running east–west that would connect the privatized Front Street pipeline and the new pipeline under Bachman Place. The resulting figure-eight shape would ensure adequate water flow across the entire Hillcrest Campus, for both daily and emergency use, while also sharing corridors with other campus utilities and/or vehicle rights-of-way.

Off-site water utilities improvements for the Hillcrest Campus would be accomplished in construction Phases 1A, 1B, and 2A. Phase 1A water utilities improvement would consist of the privatization of the City utilities within Front Street and Dickinson Street. The dual 12-inch water mains currently serving the Hillcrest Campus would be privatized up until the new public right-of-way located at the intersection of Front Street and Arbor Drive. A new metered connection, combining several existing connection points into one dedicated feed, would be located at this intersection.

Phase 1B water utilities improvements would consist of the construction of City infrastructure within Arbor Drive and Bachman Place in conjunction with the Arbor Drive/Bachman Place connection and road improvements. A new City 12-inch water main, connecting the existing 12-inch main in Arbor Drive to the 8-inch main within Third Avenue, would allow for further redundancy of the City water system serving the campus and for the expansion of the water system on the eastern side of the campus.

Phase 2A water utilities improvements would consist of the construction of needed utilities associated with the widening of Bachman Place and the construction of the new canyon access roadway.

Infrastructure planning under the 2019 LRDP would also look to introduce the use of recycled water on site for non-potable uses including irrigation and toilet flushing to further minimize the use of potable water, where possible. This could include grey water systems or other sources of recycled water; however, there are currently no recycled water connections, or "purple pipes," available in the area surrounding the Hillcrest Campus.

With these improvements and redistribution to the existing water system, the Hillcrest Campus is anticipated to have more than adequate capacity to serve the needs of future campus development.

Wastewater Infrastructure and Facilities

Implementation of the proposed 2019 LRDP would increase the amount of on-campus building space and residential population, which would result in the generation and discharge of additional wastewater. Based on current flows and the design capacity of the existing private and public sewer mains serving the campus, the current wastewater system at Hillcrest Campus is capable of

supporting present-day peak flows. The system was determined to be within operational capacity and meet best practice requirements set forth in the City's Sewer Design Guide (2015 edition). The current average flow rate for the campus is 0.16 mgd, and its peak flow rate is 0.36 mgd. Future flows from development associated with the proposed 2019 LRDP would require a complete reworking of the current campus sewer system layout and capacity. It would require improvements and additions to expand the existing sewage service system and not overload the City's downstream infrastructure. With a future average flow rate of 0.47 mgd and peak flow rate of 0.93 mgd, a reconfigured sewer system would be necessary to distribute the increased flows more evenly to the existing municipal sewer basins.

Wastewater generated would require treatment at the PLWTP, the municipal treatment facility operated by the City. The PLWTP currently treats approximately 175 mgd of wastewater and has the capacity to treat up to 240 mgd. Based on the increase of 0.31 mgd wastewater generated by Hillcrest Campus under the proposed 2019 LRDP, it is expected that the PLWTP would continue to have the capacity to receive and treat wastewater from the campus through the 2019 LRDP planning horizon (year 2035). As such, the proposed 2019 LRDP would not require or result in the construction of new or expansion of existing wastewater treatment facilities.

A shown on Figure 2-8, Conceptual Future Campus Utilities Locations, in Chapter 2, Project Description, the future system would be composed of four new sewer mains, all of which would connect to the existing Bachman Place sewer main that runs north to Hotel Circle South. A new sewer main extending under the proposed north access driveway would provide service to the Residential District. Two new mains would connect flows from the Health Care District to a new main running along the re-aligned Bachman Place right-of-way. The new sewer system configuration would eliminate total flows to the existing Hillcrest neighborhood sewer basin south of campus despite overall increases in flows from the campus.

Off-site sewer utilities improvements for the Hillcrest Campus would be accomplished in Phases 1A, 1B, and 2A. Phase 1A off-site sewer improvements would include the privatization of the 8-inch sewer that runs within Dickinson Street and down Front Street to the existing manhole located within the intersection of Front Street and Arbor Drive. This main would not be used by the campus in future phases and would be abandoned over time as the existing buildings are demolished.

Phase 1B sewer utilities improvements would include the construction of City sewer infrastructure within Arbor Drive and Bachman Place in conjunction with the Arbor Drive/Bachman Place connection and road improvements.

Phase 2A sewer utilities improvements would include upsizing a sewer main north of the Hillcrest Campus. To maintain capacity during construction of the Replacement Hospital during Phase 3, the existing City 8-inch sewer main just north of the campus must be upsized to a 12-inch main for approximately 250-feet to the existing 12-inch main just west of Bachman Place.

With implementation of the previously described improvements to the existing sewer system and use of recycled water, the Hillcrest Campus would have adequate capacity to convey wastewater flows from campus to the City's wastewater system under the 2019 LRDP.

Storm Water Infrastructure and Facilities

As discussed in Section 3.9, implementation of the 2019 LRDP would result in land use changes including drainage modification and changes in impervious surfaces on campus. Construction of proposed development would occur in five phases and would include activities such as demolition, clearing and grading, stockpiling of soils and materials, concrete pouring, painting, and asphalt surfacing. Each phase of construction would include implementation of structural BMPs including a combination of infiltration or biofiltration basins. All construction-related activities associated with projects implemented under the 2019 LRDP would be required to comply with UC San Diego Design Guidelines, Sustainability Policies, and additional Storm Water Management Requirements for Construction Projects, which have been developed in part to reduce the potential adverse effects associated with construction activities. Projects that would disturb more than 1 acre would be subject to the NPDES Construction General Permit requirements, including the preparation of a SWPPP and implementation of BMPs to reduce the likelihood of alterations in drainage and adverse effects associated with hydromodification.

Redevelopment of the Hillcrest Campus would result in the construction of new buildings, landscaping, open space, and other features on the Hillcrest Campus that are anticipated to result in slight alterations to the existing drainage patterns of the individual sites within the campus. Much of the redevelopment would be located in areas with existing impervious surfaces. To account for these alterations to the drainage courses of the campus, storm water treatment on campus would be integrated with the natural landscape and building environment to create a system that is both functional and visually appealing. Biofilters, storm water storage basins, and retention and detention basins would all be utilized to reduce peak flows and slow and treat runoff for both the future campus build-out proposed by the 2019 LRDP, as well as the interim phases of redevelopment leading up to the final buildout. In addition, the buildout condition of the 2019 LRDP would actually reduce impervious surfaces across the Hillcrest Campus by 6 percent. Redesigned storm drainage systems on campus also intend to reduce existing erosion problems occurring in locations along the canyon edges.

In addition to campus-wide BMPs, location-specific storm water infrastructure improvements proposed for the future Hillcrest Campus include underground storm drains, bioretention basins, modular planter boxes, upsized roadway culverts and new inlets, and pervious surfaces for new treatment basins. Storm water improvements by construction phase would include the following:

- **Phase 1A.** Storm water improvements would include a 24-inch underground storm drain construction and localized inlets with connector pipes to the Bachman Place

storm drain within Arbor Drive and Bachman Place. Two retention basin also satisfying water quality treatment requirements would be installed: one located just east of Bachman Drive and one located at the existing bus turnaround. Treated runoff would discharge to the existing concrete swale just north of Bachman Place. Phase 1A storm water improvements would also include the construction of a new 24-inch storm drain pipe along the frontage of the Outpatient Pavilion, ultimately tying into the new 24-inch storm drain within Arbor Drive.

- **Phase 1B.** No new construction would occur in Phase 1B; therefore, only construction storm water management BMPs would be required during this phase. No permanent post-construction storm water improvements or BMPs would be required for Phase 1B.
- **Phase 2A.** Storm water improvements would include the abandonment of the existing northerly canyon drainage outlets during the construction of the new north access driveway and the construction of a new concrete swale. Curb inlets would be constructed along the proposed north access driveway to treat runoff. On-site storm water detention and treatment basins would be constructed near proposed Residential Buildings 1 and 2 (R-1 and R-2) or provided through vaults placed within the road. In addition, curb inlets would be installed along Front Street to treat discharged flows.
- **Phase 2B.** Storm water improvements associated with the widening of Bachman Place from the Bachman Parking Structure to Hotel Circle South would include upsizing existing roadway culverts and installing new inlets and treated with water quality control devices within Bachman Place to treat direct street runoff.
- **Phase 3.** To adequately convey runoff from the new hospital area, a new 24-inch storm drain system would be constructed along the portion of the First Avenue extension to convey drainage north. A new 24-inch storm drain would be constructed under the existing staircase along the northern hillside, ultimately tying into the drainage built in the new north access driveway. A water quality treatment basin would be constructed near the new hospital.
- **Phase 4.** No new construction would occur in Phase 4, only demolition. Therefore, only construction storm water management BMPs would be required during this phase. No permanent post-construction storm water improvements or BMPs would be required for Phase 4.
- **Phase 5.** Storm water runoff from Residential Buildings 3 and 4 (R-3 and R-4) would be conveyed by a new 18-inch storm water drain to a new water quality treatment basin. The basin would be constructed on the site of the existing Arbor Parking Structure. Drainage from the water quality basin would ultimately discharged to the existing headwall located in the existing western canyon via a new 18-inch storm water drain.

New BMPs installed in redevelopment areas are not expected to result in adverse environmental effects. With the incorporation of the proposed Site Design, Source Control and Treatment Control

BMPs s and the continued implementation of UC San Diego Design Guidelines, policies, and the Storm Water Management Plan and other regulatory requirements, no significant impacts related to new or expanded storm water infrastructure would occur.

Electric Power, Natural Gas, and Telecommunications Facilities

With the implementation of the 2019 LRDP, all current electric power, natural gas, and telecommunications facilities would be undergrounded. The future campus would use electricity from two sources: (1) electricity generated on campus at the proposed new CUP's cogeneration facility and (2) 100 percent carbon-free electricity purchased from the UC Regents through the UC Regents Direct Access Program and delivered by SDG&E. Future campus development proposed by the 2019 LRDP would require the establishment of three major load components for its normal power usage: Office of Statewide Health Planning and Development (OSHPD) loads, non-OSHPD loads and residential loads. Based on the development proposed, one circuit would be dedicated for non-OSHPD loads, one circuit for residential loads, and one plus one circuits for the OSHPD loads. The one plus one arrangement would entail a secondary circuit from another SDG&E substation and would provide full redundancy and improved reliability for the campus's electrical system.

Parking structures and lighting along the new north access driveway would use electricity from the UC Regents through the UC Regents Direct Access Program, which is 100 percent carbon-free electricity. Once the hospital and CUP are constructed in Phase 3, all new medical center buildings and parking facilities would be connected to and powered by the CUP. Residential projects proposed in partnership with private residential developers, including Residential Sites A and B and the Mixed-Use Residential/Wellbeing Center, would also be tied into the grid and use 100 percent carbon-free energy from the UC Regents Direct Access Program. Emergency generators would be installed within the future Outpatient Pavilion, the Multi-Use Building, the Replacement Hospital, and the various parking structures around campus for use in case of a power outage.

The Hillcrest Campus is committed to meeting the UC system–wide goals of achieving LEED Silver certification or better for new buildings and major renovations for non-acute care facilities. In addition to LEED certification, new buildings or major renovations under the 2019 LRDP would be required under the UC Sustainable Practices Policy to outperform California Energy Code, Title 24, requirements by at least 20 percent and are encouraged to strive for 30 percent or more.

Regarding clean energy, UC set standards to achieve at least 40 percent of natural gas combusted on site at each campus and health location, to be replaced with directed biogas by 2025. Under the 2019 LRDP, the new CUP is anticipated to consist of a cogeneration plant, which would include a turbine that generates electricity from natural gas combustion and "waste" heat that is put to productive use. The campus would use directed biogas produced at UC-owned biogas plants as an offset for 40 percent of its natural gas use.

Telecommunications services would continue to be distributed to the Hillcrest Campus by private companies under the 2019 LRDP. In order to accommodate increased services associated with future campus development, these private distributors would be responsible for updating their own systems and facilities to satisfy their customers. It is anticipated that upgraded facilities would be required to provide adequate capacity or bandwidth to the redeveloped campus.

Development under the 2019 LRDP is aimed at upgrading existing utilities systems to provide redundancy across its systems, improve infrastructure reliability, and promote a more resilient campus overall. The campus is set to move away from conventional energy sources and move towards renewable energy, thereby, decreasing reliance on existing providers.

Additionally, the 2019 LRDP would include the following two utilities and infrastructure principles to assist in creating a more energy-efficient and sustainable campus:

- **Principle UT-3:** Reduce utility infrastructure impacts on surrounding campus contexts. This includes co-locating utility uses within a single corridor, shielding aboveground utility equipment, and avoiding locating utility infrastructure near where people are likely to be.
- **Principle UT-4:** Design future projects with measures to reduce storm water runoff and integrate with other campus-wide, UC San Diego, and local government storm water systems and strategies.

While the anticipated campus growth under the proposed 2019 LRDP would require construction of new, relocated, and expanded potable and recycled water, wastewater, storm water drainage, electric power, natural gas, and telecommunications infrastructure, the majority of the new/expanded infrastructure would be constructed in existing roads or other developed areas of campus. Upgrades to this infrastructure may extend to off-campus connections, and would require approval of permits from the City. Some facilities, including the two new storm drain pipelines proposed to be constructed through the canyon and the undergrounding of aboveground utilities, would potentially result in significant environmental impacts. Therefore, implementation of the proposed 2019 LRDP would require or result in the relocation or construction of new utilities infrastructure that could cause a significant environmental effect. These impacts are addressed and mitigated in other 2019 LRDP EIR sections, including Section 3.2, Air Quality; Section 3.3, Biological Resources; Section 3.4, Cultural and Tribal Cultural Resources; Section 3.6, Geology and Soils; and Section 3.11, Noise.

Mitigation Measures

The proposed 2019 LRDP would have a potentially significant impact associated with the construction of new utilities infrastructure. However, mitigation measures identified in other 2019 LRDP EIR sections, including Mitigation Measures AES-2A and AES-2B (Section 3.1, Aesthetics); AIR-2 and AIR-3 (Section 3.2, Air Quality); BIO-1A–1D, BIO-2A–2D, and BIO-

3A–3O (Section 3.3, Biological Resources); CUL-1 and CUL-2A and CUL-2B (Section 3.4, Cultural and Tribal Cultural Resources); ENE-1 (Section 3.5, Energy); GEO-5 (Section 3.6, Geology and Soils); HAZ-2A–HAZ-2D (Section 3.8, Hazards and Hazardous Materials); NOI-1A–1D and NOI-2A and NOI-2B (Section 3.11, Noise); and TRA-1A–1C (Section 3.15, Transportation), would reduce impacts to a less than significant level with regard to new water, wastewater, storm water drainage, electric power, natural gas, and telecommunications facilities.

3.16.3.2 Issue 2: Water Supply Availability

Utilities and Service Systems Issue 2 Summary

Would implementation of the 2019 LRDP have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Impact: Sufficient water supplies from existing entitlements and resources would be available to serve the proposed 2019 LRDP and associated impacts would not occur.

Mitigation: No mitigation is required.

Significance Before Mitigation: Less than significant

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would result in insufficient water supplies available to serve the 2019 LRDP and reasonably foreseeable future development during, normal, dry, and multiple dry years.

Impact Analysis

The WSA Report prepared for the 2019 LRDP (City of San Diego 2018a) (Appendix N) provides an assessment of the availability of water supplies for the project and was prepared in compliance with SB 610. It was approved by the City Council in June 2019. The WSA Report (City of San Diego 2018a) (Appendix N) concludes that the water demand projections for the 2019 LRDP are accounted for in the regional water resource planning documents of the City, SDCWA and MWD. The water resource planning documents identify current and future water supplies, as well as actions necessary to develop the future water supplies, needed to meet the demands of the 2019 LRDP and the demands of the other existing and planned development projects within the PUD service area. The finding made in the WSA Report (City of San Diego 2018a) (Appendix N) of availability of sufficient water supplies applies to normal, single dry, and multiple dry water years over a 20-year projection to meet both the anticipated and unanticipated demands of the 2019 LRDP. As such, the 2019 LRDP is consistent with the demand assumptions identified in the

relevant long-term water resources planning documents as described below and detailed in Appendix N to this 2019 LRDP EIR.

Based on the 2015 UWMPs of the City and the SDCWA, there is sufficient water planned and projected to supply the 2019 LRDP's estimated annual average usage. As shown in Table 3.16-2, the total estimated water demands of the proposed 2019 LRDP are 645,111 gallons per day (GPD), or 722.62 AFY, by 2040. These estimates represent projected demand that is greater than what was planned for in the City's 2015 UWMP, wherein the planned water demand of the Hillcrest Campus in 2040 is 358,892 GPD, or 402.01 AFY. The difference between the estimated planned and projected demand is calculated to be 286,219 GPD, or 320.61 AFY (City of San Diego 2018b).

By request of the City to the SDCWA, this potential water supply shortfall would be accounted for through use of the accelerated forecasted growth (AFG) identified in the SDCWA's 2015 UWMP. The purpose of the AFG component of the demand forecast is to estimate, on a regional basis, additional demand associated with proposed projects not yet included in local jurisdictions' general plans and to plan for additional sufficient regional supplies to reliably meet the water demand of those projects (such as the proposed 2019 LRDP) (City of San Diego 2018b). Accordingly, due to the presence of the AFG component of the SDCWA's 2015 UWMP, the City would have sufficient water supply for the proposed 2019 LRDP, and the campus would be consistent with water demand assumptions in the regional water resource planning documents of the City, the SDCWA and MWD. The difference of 320.61 AFY in planned versus projected demands shown in Table 3.16-2 would be covered by the AFG; therefore, the proposed 2019 LRDP would not result in a significant impact on regional water supplies. Further discussion of the regional demand for potable water is provided below under Section 3.16.4, Cumulative Impacts and Mitigation, and in Appendix N to this 2019 LRDP EIR.

Table 3.16-2. Water Demand Analysis

City Planned Water Demands for Project (2015 UWMP)			
		Estimated Potable Water Demand	
Category	Quantity	GPD	AFY
SANDAG Series 13: 2040			
Multi-family Residential[1]	97 DUs	17,072	19.12
Employees[2]	5,697 persons	341,820	382.89
	Total	**358,892**	**402.01**
Projected Water Demands for Long-Range Development Plan by Year 2040			
Category	**Quantity**	**GPD**	**AFY**
Existing Demand[3]	—	280,723	314.45
Additional Employees[2]	1,340 persons	80,400	90.06
Additional Outpatients/Visitors	500 persons	30,000	33.60
Additional Irrigation[4]	13.5 acres	54,000	60.49
Additional Recreational Pool[5]	13,454.72 square feet	6,728	7.54

Table 3.16-2. Water Demand Analysis

City Planned Water Demands for Project (2015 UWMP)			
		Estimated Potable Water Demand	
Category	Quantity	GPD	AFY
CUP Expansion	73,000 square feet	17,260	19.33
Additional Multi-Family Residential	1,000 DUs	176,000	197.15
Total		645,111	722.62
Net Water Demands			
Projected Demand		645,111	722.62
City of San Diego 2015 UWMP – Planned Demand		358,892	402.01
SDCWA AFG – Planned Demand		286,219	320.61
Net Unanticipated Demands		0	0

Source: City of San Diego 2018b.

Notes: AFG = accelerated forecasted growth; AFY = acre-feet per year; CUP = Central Utilities Plant; DU = dwelling unit; GPD = gallons per day; SANDAG = San Diego Association of Governments; UWMP = urban water management plan

[1] Multi-family residential water consumption is based on the City's water demand factor of 176 gallons per day per dwelling unit (GPD/DU). This demand factor accounts for 80 gallons per capita per day (GPCD) (inclusive of minor landscaping demand) and 2.2 persons per household.

[2] Average employee (e.g., administrative, operations, retail, faculty), outpatient, and visitor water use is based on the City's acceptable standard water demand factor of 60 GPCD.

[3] This analysis covers new "additional" demand along with existing water demand as transferable to the development at buildout (e.g., current CUP, irrigation, and number of inpatients/outpatients, visitors, residents, employees) Existing water demand was estimated from billing records and meter data provided by UC San Diego.

[4] Irrigation was estimated at 4,000 GPD/acre (City's Facility Design Guidelines).

[5] Swimming pool water usage is estimated at 50 GPCD/100 square feet (American Society of Plumbing).

It should be noted that UC San Diego's potable water usage conservation practices include installing water-efficient plumbing fixtures in all new developments and replacing aging infrastructure with water efficient fixtures, installing aerators in laboratory sinks, converting to drought tolerant and low water vegetation, replacing sprinklers with high-efficiency rotating nozzles, capturing and reusing water from the fire-sprinkler and hydrant testing for use in the CUP cooling towers, and collecting condensation from heating and air conditioning units, reverse osmosis system wastewater and cooling tower blow down for reuse in toilet flushing and irrigation. Therefore, the Hillcrest Campus demand for potable water would continue to be reduced through these and other conservation practices integrated into new development.

Mitigation Measures

Implementation of the proposed 2019 LRPD would not result in insufficient water supplies available to serve the 2019 LRDP from existing entitlements and resources; therefore, no mitigation is required.

3.16.3.3 Issue 3: Wastewater Treatment Capacity

Utilities and Service Systems Issue 3 Summary

Would implementation of the 2019 LRDP result in a determination by wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demands in addition to the provider's existing commitments?

Impact: Implementation of the 2019 LRDP would not exceed the wastewater treatment provider's capacity.

Mitigation: No mitigation is required.

Significance Before Mitigation: Less than significant

Significance After Mitigation Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the proposed 2019 LRDP may have a significant impact if it would result in a determination by wastewater treatment provider who serves or may serve the 2019 LRDP that it has adequate capacity to serve the 2019 LRDP's projected demands in addition to the provider's existing commitments.

Impact Analysis

Implementation of the proposed 2019 LRDP would increase the amount of on-campus building space by approximately 1.6 million gsf of net new development, including approximately 979 new residential units. The ultimate buildout of the campus would include 2.7 million gsf and up to 1,000 residential units. Such increases would result in the generation and discharge of additional wastewater from the Hillcrest Campus. The additional wastewater associated with implementation of the proposed 2019 LRDP would require treatment at the PLWTP, the municipal treatment facility operated by the City.

As identified in Table 3.16-1, the total existing average daily sewage flow for the Hillcrest Campus is 0.16 mgd with a peak hour flow of 0.36 mgd. To calculate for future campus wastewater demand, values for year 2035 assume that the proposed campus population increase associated with buildout of the 2019 LRDP would be proportionate to the increase in wastewater demand over the same period. Thus, the projected future year 2035 average daily wastewater flow would be approximately 0.47 mgd and the future peak hour flow would be approximately 0.93 mgd. The PLWTP currently treats approximately 175 mgd of wastewater from a 450-square-mile area, which includes the Hillcrest Campus. However, the PLWTP has the capacity to treat up to 240 mgd of wastewater, or 65 mgd more than it treats currently. Thus, the PLWTP would have adequate capacity to receive and treat wastewater from the Hillcrest Campus associated with implementation of the 2019 LRDP through its planning horizon year 2035. A less than significant wastewater treatment capacity impact would occur.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact with regard to wastewater treatment capacity; therefore, no mitigation is required.

3.16.3.4 Issue 4: Compliance with Solid Waste Regulations

Utilities and Service Systems Issue 4 Summary

Would implementation of the 2019 LRDP comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Impact: The 2019 LRDP would comply with statues and regulations related to solid waste management.

Mitigation: No mitigation is required.

Significance Before Mitigation: Less than significant

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if the 2019 LRDP would fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Impact Analysis

During pre-construction demolition, clearing/grubbing, and grading activities, the projects identified in the 2019 LRDP would produce excavated soils, green waste, concrete/asphalt, scrap metal, and other construction and demolition waste. The following types of debris would likely be generated during construction: metals, concrete/asphalt, brick/masonry, wood, drywall, carpet/carpet padding, ceramic tile, roofing materials, doors, windows, and fixtures. Operation of new, renovated and expanded facilities would contribute additional non-recyclable/non-reusable waste which would be deposited at Republic Landfill in Yuma Arizona, after accounting for waste reduction and diversion. A new waste management contract using local landfills in the County and potential on-site steam sterilization technology that will include waste reduction goals is currently in review for the future campus. To minimize the amount of municipal solid waste destined for disposal during construction and demolition, construction phases would utilize cut and fill from subsequent phases. The Hillcrest Campus would also continue to expand its campus-wide waste prevention and recycling programs.

The UC Sustainable Practices Policy (UCOP 2018) sets forth specific goals for UC San Diego Health locations. As described in Section 3.16.1.7, the future Hillcrest Campus under the 2019 LRDP would be required to achieve the Practice Greenhealth's Partner for Change Award and to

set specific waste diversion and reduction goals as a premier health care facility by year 2020. These goals would include virtual elimination of mercury, reduction of the quantity and toxicity of the facility, minimization of use and exposure to hazardous chemicals, and reduction of the facility's environmental footprint through resource conservation and other measurable environmental improvements, and integration of sustainable design and building techniques with environmentally sound operational practices. UC San Diego Health has already achieved the Partner for Change Award in 2018 and 2019, prior to the requirement to achieve these commitments by August 31, 2019. In addition, UC San Diego Health has also achieved a Greening the OR Award in 2019 specifically for efforts made to reduce waste in the operating room. Currently, UC San Diego is developing policy and reduced waste targets specific to health centers.

In the future, the Hillcrest Campus would continue to implement, promote and improve the campus-wide comprehensive waste prevention and recycling programs to make progress towards reducing its waste streams. Annual reporting to the Office of the President, as required by the Sustainability Practices Policy, would ensure the campus continues to broaden its waste management and diversion programs to monitor progress on existing programs and use those data to identify additional methods for reducing, capturing and diverting more of its municipal solid waste and total solid waste. In addition, the Hillcrest Campus participated in its first food waste composting program and would continue to expand its participation in that program in accordance with AB 1826 and SB 1383. In accordance with the UC Sustainable Practices Policy, development under the 2019 LRDP would promote design features, technological adaptations, and/or planning principles for future campus development to conserve resources and minimize waste products.

Furthermore, although the UC is not subject to state or local regulations pertaining to solid waste management and diversion, the UC has adopted and is implementing reduction measures similar to those imposed on local agencies to do their part in managing and reducing waste in a sustainable fashion. The programs noted previously would continue to expand as the Hillcrest Campus population and development expands under the proposed 2019 LRDP. Therefore, UC San Diego at the Hillcrest Campus would align with state and local solid waste management and diversion goals by setting aggressive goals and advancing its methods for reducing solid waste disposed of at the local landfill system. Impacts would be less than significant.

Mitigation Measures

Compliance with solid waste regulations would be less than significant; therefore, no mitigation is required.

3.16.4 Cumulative Impacts and Mitigation

Utilities and Service Systems Cumulative Issue Summary

Would implementation of the 2019 LRDP have a cumulatively considerable contribution to a cumulative utilities and service systems impact considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Issue 1: Cumulative demand for water, wastewater, storm water drainage, electric power, natural gas, or telecommunications facilities	Less than significant	Not cumulatively considerable
Issue 2: Cumulative demand beyond water supply availability	Less than significant	Not cumulatively considerable
Issue 3: Cumulative demand for wastewater treatment capacity	Less than significant	Not cumulatively considerable
Issue 4: Compliance with solid waste regulations.	Less than significant	Not cumulatively considerable

Cumulative Issue 1: New Utilities Facilities

The geographic context for the analysis of cumulative impacts in regards to water, wastewater, storm water drainage, electric power, natural gas, and telecommunications facilities is the Hillcrest Campus and surrounding Uptown community. A significant cumulative impact would result if combined cumulative projects would require the need for new or expanded utilities facilities that result in significant environmental effects. New water, wastewater, storm water drainage, electric power, natural gas, and telecommunications facilities would be constructed within the campus and the City throughout the planning horizon of the proposed 2019 LRDP. These new facilities could result in new significant physical impacts on the environment, mostly associated with construction activities and placement within sensitive resource areas. Most significant environmental impacts associated with construction activities would be temporary and localized, including road closures, noise, and air quality impacts as the surrounding community is mostly built out. Most cumulative projects would undergo CEQA review, similar to the 2019 LRDP. Compliance with existing regulations and implementation of mitigation measures similar to those identified for the 2019 LRDP would result in a less than significant cumulative significant impact.

As discussed in Sections 3.16.3.1 new off-site utilities infrastructure would be constructed in construction Phases 1A, 1B, and 2A under the 2019 LRDP. As such, most new infrastructure or related facilities would be constructed in already developed areas or roadways. If the facilities were to result in secondary environmental impacts; mitigation measures identified in this 2019

LRDP EIR would enable the campus to mitigate any potential impacts. Therefore, implementation of the proposed 2019 LRDP is not anticipated to have a cumulatively considerable contribution to the described impacts related to these facilities.

Cumulative Issue 2: Water Supply

The geographic context for the analysis of cumulative impacts in regards to water supply is the City water service area. A significant cumulative impact would occur if the combination of projects within the City resulted in insufficient water supplies, which would result in the need for new or expanded entitlements. The City's potable water system relies on raw water storage facilities, water treatment plants, and miles of transmission and distribution lines. In addition, the City operates a recycled water system containing two water reclamation plants, three recycled water storage facilities, and miles of transmission and distribution lines. The City PUD relies on purchased water from the regional wholesale water provider, the SDCWA, who in turn purchases imported water from MWD. As such, the City relies on long-term water resources planning documents of the SDCWA and MWD to support their own regional planning efforts on water supply.

The City prepares a UWMP (the most recent of which was completed in 2015) to evaluate whether there would be sufficient supplies to accommodate future growth and ensure long-term reliability for the region, including the identification of alternative water supply sources to alleviate the risk of unforeseen water shortages (City of San Diego 2007, 2018a). The 2015 UWMP takes into account regional population growth and future supplies, including supply development, conservation and potable reuse. To address regional demand, the City requires projects of a certain size to prepare WSAs, in accordance with SB 610/221, which take into consider new demands for potable water and whether those demands have been accounted for in the regional growth forecasts used to project demand in the UWMP. Projects that are not contained in the regional growth forecasts are accounted for in the regional water supply plans through use of the AFG demand increment in the SDCWA's 2015 UWMP. The purpose of the AFG component of the demand forecast is to estimate, on a regional basis, additional demand associated with projects not yet included in local jurisdictions' general plans and to plan for additional sufficient regional supplies to reliably meet the water demand of those projects (such as the proposed 2019 LRDP) (City of San Diego 2018a).

During implementation of the proposed 2019 LRDP, the population of the San Diego area is expected to continue to increase, which would result in an increase in the demand for water. As discussed in Section 3.16.3.2, the WSA Report was prepared for the 2019 LRDP(City of San Diego 2018a) (Appendix N) to determine whether adequate supplies would be available to provide water to the San Diego region, including the Hillcrest Campus, through the proposed 2019 LRDP planning horizon and through 2040. The report analyzed current and future water supplies; new sources of local water being developed; and current and future demands for water in the San Diego region. The WSA Report (City of San Diego 2018a) (Appendix N) concluded that the City PUD would have

sufficient water supply available in year 2035 (an up through 2040) to meet the City additional water demand and that of the Hillcrest Campus associated with the proposed 2019 LRDP.

Table 3.16-3 compares the projected normal year water supply (local and purchased/imports) to demands from existing and future developments over a 20-year projection from 2020 to 2040, with demands and supplies shown in AFY and given in five, 5-year increments. As shown in Table 3.16-3, the estimated water supply would meet the City's projected water demand of 200,984 AF in 2020 and increasing to 273,408 AF in 2040 for these developments. No water shortages or associated impacts are expected to occur. The WSA Report (City of San Diego 2018a) (Appendix N) also analyzed water demands under single dry and multiple dry year scenarios, based on data in the SDCWA's 2015 UWMP and determined that under both the single dry and multiple dry year scenarios, local water supplies are projected to remain relatively consistent from 2020 to 2040 (City of San Diego 2018a). Therefore, cumulatively significant water supply impacts are not anticipated in the region, and no new or expanded entitlements are needed to satisfy projected demands.

Table 3.16-3. Projected Normal Supply and Demand Comparison

Normal Year Demands/Supplies	Demand and Supplies (AFY)				
	2020	2025	2030	2035	2040
Water Demand (with wholesale and conservation)	200,984	242,038	264,840	273,748	273,408
Local Water Supplies					
Recycled Water (City service area only)	13,650	13,650	13,650	13,650	13,650
Local Surface Supply	22,900	22,800	22,700	22,600	22,500
Groundwater	3,100	3,100	3,100	3,100	3,100
Sub-Total Local Supplies	**39,650**	**39,550**	**39,450**	**39,350**	**39,250**
Water Supply from SDCWA (purchased water)	161,334	202,488	225,390	234,398	234,158
Total City Water Supplies	**200,984**	**242,038**	**264,840**	**273,748**	**273,408**
Estimated Water Shortages	0	0	0	0	0

Source: City of San Diego 2018a.
Notes: AFY = acre-feet per year; SDCWA = San Diego County Water Authority

With regional demands in mind, City PUC estimated UC San Diego's incremental demand for potable water as described in Section 3.16.3.2 and determined there would be sufficient supplies to accommodate campus growth under the 2019 LRDP, indicating that it could rely on the AFG to meet that demand. In addition, UC San Diego has an aggressive conservation policy to reduce potable water usage through implementation of its Water Action Plan, which outlines the campus's methods for reducing dependence on potable water and identifies broader opportunities for water conservation (UC San Diego 2017). The Hillcrest Campus does not have its own water action plan and would therefore comply with the goals and policies of the La Jolla Campus Water Action Plan. The La Jolla Campus Water Action Plan was developed to fulfill the UC Sustainable Practices

Policy's goal of reducing UC San Diego's per capita water consumption by 20 percent in 2020 and 36 percent by 2025 (UCOP 2018). Based on the foregoing specific conclusions, it can be substantiated that there is sufficient planned water supply available to serve the proposed 2019 LRDP's future water demands in normal, single dry year, and multiple dry water year forecasts, in addition to other existing and planned future water demands of the PUD. Associated cumulative impacts to regional water supply would be less than significant and the implementation of the proposed 2019 LRDP would result in a less than cumulatively considerable impact.

Cumulative Issue 3: Wastewater Treatment

The geographic context for the analysis of cumulative impacts related to wastewater treatment capacity is the wastewater service area is the PLWTP service area. A significant cumulative impact would occur if combined cumulative projects would result in inadequate wastewater treatment capacity. As discussed in Section 3.16.1.3, the PLWTP currently treats approximately 175 mgd of wastewater generated within the region, which includes the Hillcrest Campus and cumulative projects listed in Chapter 3, Environmental Setting, Impacts, and Mitigation. However, because the PLWTP currently has the capacity to treat up to 240 mgd, it is anticipated that the plant would have adequate capacity to receive and treat wastewater from future development occurring in the City, including the proposed redevelopment of the Hillcrest Campus and associated cumulative projects. According to the City, the MWWD is on track to adequately meet all of the City's wastewater needs through 2050; therefore, the cumulative impact cause by regional growth on wastewater treatment capacity would be less than significant (City of San Diego 2007). Since the Hillcrest Campus's future demands for wastewater treatment under the proposed 2019 LRDP would be adequately served by the existing PLWTP, the 2019 LRDP's contribution to regional wastewater treatment capabilities would not be cumulatively considerable.

Cumulative Issue 4: Solid Waste Regulations

The geographic context for the analysis of cumulative impacts related to solid waste is the County and the City landfill system. Implementation of the 2019 LRDP, as well as other regional off-campus development would increase the amount of solid waste produced in the region. However, there are extensive regulations and waste management programs in place both at the state and local level focused on increasing diversion and conversion of waste into the future, including the City's zero waste plan for its jurisdiction. As noted previously, the UC has also adopted and is implementing waste reduction measures similar to those imposed on local agencies to do their part in managing and reducing waste in a sustainable fashion. Campus programs noted previously would continue to expand as the Hillcrest Campus population grows under the proposed 2019 LRDP. Also, the Hillcrest Campus would comply with Practice Greenhealth's goals and policies set for health care facilities in order to set targets for Practice Greenhealth's Partner for Change Award recognition. Similarly, the City's Environmental Services Department is planning to develop facilities to accommodate and facilitate future waste diversion, including an organics

processing facility and food processing and/or composting area, to help address the state's mandated waste diversion requirements. UC San Diego at the Hillcrest Campus would align with state and local solid waste management and diversion goals by setting aggressive goals and advancing its methods for reducing solid waste disposal needs. Due to the aggressive waste reduction programs that have been adopted and are planned to be adopted under the 2019 LRDP, the Hillcrest Campus would comply with state and local management and reduction statutes and regulations related to solid waste and would not contribute considerably to cumulative impacts.

3.16.5 CEQA Issues Where There Is No Potential for a Significant Effect

The following section discusses the other Standards of Significance related to Utilities and Service Systems contained in Appendix G of the CEQA Guidelines wherein the proposed 2019 LRDP was determined to not cause a significant effect.

Would implementation of the 2019 LRDP generate solid waste in excess of State or local standards, or the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Growth proposed under the 2019 LRDP would increase the amount of municipal and total solid waste generated on the Hillcrest Campus as more patients are administered to the hospital, people move into the proposed on-campus housing, research students are enrolled, and new campus facilities are constructed. Solid waste would continue to be generated during both the construction of proposed facilities and the operation of campus development beyond the 2019 LRDP planning horizon. It is anticipated that the majority of construction phase C&D debris would continue to be diverted due to the campus's commitment to LEED-certified facilities. Waste diversion and disposal from the campus occurs at the Republic Landfill in Yuma, Arizona, and could shift to other permitted solid waste facilities, such as local Miramar Landfill, Sycamore Landfill or Otay Landfill, in the future. As noted in Section 3.16.1, Environmental Setting, the City can demonstrate it has more than 15 years of permitted landfill capacity at these facilities as required by the state's Integrated Waste Management Act.

Regardless of where campus waste is disposed of, the Hillcrest Campus is committed to the UC Initiative of reducing solid waste disposal needs in the future. Patients, graduate students, faculty, and staff at the Hillcrest Campus would continue to participate actively in the waste reduction and diversion efforts and programs established on campus. Waste diversion would be expected to increase as LEED-certified structures are built and more waste reduction programs are introduced, while landfill disposal rates would correspondingly decrease during the planning horizon of the proposed 2019 LRDP. Therefore, implementation of the 2019 LRDP would not generate solid waste in excess of state or local standards or affect the capacity of local solid waste infrastructure. As disposal rates decrease, UC San Diego at the Hillcrest Campus would help facilitate extending

the lifespan on the City's landfill system and not impair the region's solid waste reduction goals. Thus, impacts associated with solid waste disposal capacity and waste services would not occur.

3.16.6 References

City of San Diego. 2002. GHG Emission Reduction Plan.

City of San Diego. 2005. Climate Protection Action Plan.

City of San Diego. 2007. Final Program Environmental Impact Report for the Draft General Plan. September 2007.

City of San Diego. 2015. City of San Diego Climate Action Plan. Adopted December 2015. Accessed January 2019. https://www.sandiego.gov/sites/default/files/final_july_2016_cap.pdf.

City of San Diego. 2016. 2015 Urban Water Management Plan. June 2016.

City of San Diego. 2018a. Water Supply Assessment Report for the University of California, San Diego Hillcrest 2019 Long Range Development Plan Update Project. October 23, 2018.

City of San Diego. 2018b. Point Loma Wastewater Treatment Plant. Accessed December 5, 2018. https://www.sandiego.gov/public-utilities/customer-service/water-wastewater-facilities/point-loma.

Hamilton, Barbara. 2019. "Municipal solid waste." Comment from Barbara Hamilton (University of California, San Diego). April 29, 2019.

Latitude 33. 2017. Mapbooks. January 27, 2017.

Latitude 33. 2019. UC San Diego Hillcrest Campus 2019 LRDP Drainage Report. June 7, 2019.

Moore, Kelvin. 2019. Conversation regarding waste disposal on the Hillcrest Campus. January 2, 2019.

O'Connell, Kimberly. 2018. Conversation regarding waste discharge permits UC San Diego Hillcrest is regulated under. December 4, 2018.

Practice Greenhealth. 2018a. "History." Accessed on December 17, 2018. https://practicegreenhealth.org/about/history.

Practice Greenhealth. 2018b. "Healthcare Facility Awards." Accesses December 17, 2018. https://www.practicegreenhealth.org/awards/award-types/health-care-facility-awards.

SDCWA (San Diego County Water Authority). 2016. 2015 Urban Water Management Plan. June 2016.

SDCWA. 2018. "State Water Project." Accessed December 22, 2018. http://sdcwa.org/state-water-project.

USEPA (U.S. Environmental Protection Agency). 2017. City of San Diego's Point Loma Wastewater Treatment Plant Application for a Modified NPDES Permit under Sections 301(h) and (j)(5) of the Clean Water Act Final Decision. August 4, 2017.

USEPA. 2018. "NPDES Permit Limits." Accessed December 21, 2018. https://www.epa.gov/npdes/npdes-permit-limits.

UC (University of California). 2017. Annual Report on Sustainable Practices.

UC. 2018. Annual Report on Sustainable Practices.

UCOP (University of California Office of the President). 2018. Sustainable Practices Policy. Issued July 1, 2004. Update effective August 10, 2018. Accessed January 2019. https://policy.ucop.edu/doc/3100155/SustainablePractices.

UC San Diego. 2017. Water Action Plan. December 20 2013. Updated December 2017.

3.17 Wildfire

This section of this 2019 LRDP EIR evaluates the potential impacts of wildfires that may result from the construction and/or operation of the proposed 2019 LRDP for the Hillcrest Campus. It identifies the existing wildfire hazard conditions of the site and surrounding area and addresses impacts the proposed 2019 LRDP may have in exacerbating wildfires. The majority of the information provided in this section is based on information updated from the City, UC San Diego, CAL FIRE, and the Citygate Report San Diego Fire-Rescue Department Standards of Response Cover Review (Citygate 2017).

3.17.1 Environmental Setting

A wildfire is a nonstructural fire that occurs in vegetative fuels, excluding prescribed fires. Wildfires can occur in undeveloped areas and spread to urban areas where the landscape and structures are not designed and maintained to be ignition resistant. A wildland-urban interface is an area where urban development is located in proximity to open space or "wildland" areas. The potential for wildland fires represents a hazard where development is adjacent to open space or within close proximity to wildland fuels or designated fire severity zones.

Due to climate, topography, and native vegetation, the City is subject to both wildland and urban fires. In 2003 and 2007, the City experienced wildland fires that resulted in the loss of structures and significant burned acreage. The region's Mediterranean climate and increasingly severe dry periods associated with global warming results in large areas of very dry, native vegetation that provides fuel for wildland fires. The most critical times of year for wildland fires are late summer and fall when Santa Ana winds bring hot, dry desert air into the region. The air temperature quickly dries vegetation, thereby increasing the amount of natural fuel. The Santa Ana conditions create wind-driven fires, such as the 2003 and 2007 wildfires, which require a large number of equipment and personnel that is more than the City has available.

Development pressures increase the threat of wildland fire on human populations and property as development is located adjacent to areas of natural vegetation. The City contains more than 900 linear miles of wildland-urban interface due to established development adjacent to the open space areas and canyons. In 2005, the brush management regulations were updated to require 100-foot defensible space between structures and native wildlands (City of San Diego 2015).

CAL FIRE has mapped areas of significant fire hazards in the state through its Fire and Resources Assessment Program. These maps place areas of the state into different FHSZ based on a hazard scoring system using objective criteria for fuels, fire history, terrain influences, housing density, and occurrence of severe fire weather where urban conflagration could result in catastrophic losses. A particular fire threat within the City's Uptown Community where the Hillcrest Campus is located is the steep open space canyons that primarily extend along the edges of the neighborhoods, including

the Hillcrest Campus and I-8 in Mission Valley to the north. These heavily vegetated areas were prone to fires in the past. According to CAL FIRE's FHSZ Map of San Diego County (CAL FIRE 2009), a portion of the Hillcrest Campus lies within a local responsibility very high FHSZ. More specifically, the steep canyons that surround the campus to the north, east, and west, as well as the existing campus buildings that border the canyons, constitute a high risk.

Although a large wildfire has not occurred on the Hillcrest Campus in recorded history, portions of the campus would, under favorable fire weather conditions, facilitate spread, especially in the steep canyon areas. The buildup of dry brush within these areas provides fuel to result in potentially larger, more intense wildland fires with the greatest danger being during the hot, dry summer and fall months. Over the years, many small-scale wildfires have broken out in the canyons along Mission Valley adjacent to the Hillcrest Campus with some in more recent years being caused by homeless encampments. One of the most notable fires to occur near the Hillcrest Campus was the Normal Heights Fire in 1985. The fire started near Camino del Rio South and Litchfield Road approximately 2.2 miles northeast of the Hillcrest Campus. The fire burned 300 acres, destroyed or damaged 133 structures, and caused more than $9 million in damages. At the time, the Normal Heights Fire was considered the worst brush fire in San Diego history (City of San Diego 2018).

The Hillcrest Campus does not have its own fire department and relies on the SDFR to respond to all applicable emergencies. The SDFR has an active program that promotes the clearing of canyon vegetation from structures. The City recognized the value of fire prevention measures and adopted strenuous safety codes and a brush management program to reduce pressure on the overall response system in the long term. The City will continue to evaluate fire (and police) capacity as growth and development continues to occur in the area to ensure that station locations and staffing levels are adequate to maintain acceptable levels of service (City of San Diego 2016a).

The Hillcrest Campus employs a fire marshal and staff totaling four employees who are responsible for campus-wide fire prevention. The Hillcrest Campus Fire Marshal ensures that the campus follows the California Fire and Building Codes for construction sites with buildings being equipped with fire alarm and fire suppression systems. The City's Deputy Fire Marshal meets with the Hillcrest Campus Fire Marshal as needed to review and revise site access plans to serve the campus adequately. The Office of the State Fire Marshal delegated responsibility to the Hillcrest Campus Fire Marshal to inspect and license all buildings (Fiero 2018).

The Hillcrest Campus employs various fire protection measures to ensure adequate safety on campus. When new development, redevelopment, or site improvements occur at the Hillcrest Campus, the campus emergency access route map is amended to ensure that adequate fire protection equipment access is maintained on campus at all times. Maintenance activities for water mains and fire hydrants are managed by the UC San Diego Facilities Management, which is responsible for ensuring that the water supply for fire hydrants meets fire flow standards. All on-campus buildings

have been equipped with fire alarm, sprinkler, and fire suppression systems. Fire hydrants, sprinkler systems, standpipes, fire pumps, and the fire alarm system undergo annual testing and maintenance. UC San Diego also has an Emergency Operations Plan for the Hillcrest Campus that addresses various emergency situations including fires and other human-caused and natural disasters. There are policies for all employees that cover fire prevention, fire response, and interim life safety measures. The Hillcrest Campus also follows the SDFR fire access road policy, which allows emergency vehicles access to all areas of the Hillcrest Campus including all buildings and all fire department connections (Imroth 2018).

UC San Diego conducts annual fuel management on the Hillcrest Campus to protect the campus from wildfires. Fuel management on campus generally follows the City's Brush Management Regulations SDMC Section 142.0412 (2019), which identify a 100-foot-wide zone between structures and native wildlands divided into two sections: Zone 1, a 35-foot-wide zone extending out from the structure, and Zone 2, the remaining 65 feet that extend beyond Zone 1. Zone 1 is typically hardscape or irrigated landscaping (or a combination thereof) with the inclusion of low-fuel species and is considered part of the development footprint for a project. Zone 2 is the thinning zone where selective thinning and pruning of plants is required to reduce fuel load. No grading, grubbing, or irrigation is allowed in Zone 2, and non-native plants are identified as priority for removal, ahead of native plants. However, the Hillcrest Campus Fire Marshal may adjust zone widths and requirements depending on site conditions. Additionally, approximately 20 fire hydrants are located throughout Hillcrest Campus and the campus complies with the California Fire Code regarding fire hydrant provision.

The Hillcrest Campus Fire Marshal keeps records of fire alarm activations that have occurred in campus buildings. The Hillcrest Campus performs approximately 26 fire drills per year and provides fire safety training to all employees. During a fire drill, the Fire Marshal's staff assembles on one of the hospital floors and consults with the nursing staff. They activate the fire alarm and observe and critique the staff's responses to a simulated fire (Fiero 2019). Approximately 113 fire alarm activations occurred in 2017, and the SDFR responded to each of these alarms. The primary causes for these activations included burnt food from cooking, smoking in restrooms, construction dust, and system malfunction (Fiero 2018). In the event of a fire on the Hillcrest Campus, mass notification would be sent to staff and employees through a paging system or "all user" email. Additionally, a fire alarm system equipped in the buildings would sound, notifying occupants of smoke or fire. The hospital command center would be opened, and the Emergency Operations Plan would be activated to take one of two options: evacuate or shelter-in-place. The appropriate actions taken would depend on the severity of the fire and proximity to patient care areas. The decision to choose either of the two options would be done in collaboration with the SDFR command and the Hillcrest Campus Fire Marshal. The preferred option is to shelter-in-place because evacuation of a hospital is very difficult and complex. In the event that evacuation is necessary, patients would

be evacuated outside to a pre-designated holding area with quick access to ingress and egress options until they can be transferred to another hospital location (Imroth 2018).

The SDFR is responsible for responding to emergencies that occur in the communities that surround the Hillcrest Campus and on the campus itself. The SDFR provides emergency/rescue services, hazard prevention, and safety education to ensure the protection of life, property and the environment, including education about vegetation management to protect properties from wildfires in canyon areas. The City has 52 fire stations responsible for protecting 343 square miles and a population of 1,419,845 persons (City of San Diego 2018). If additional support is needed, SDFR relies on automatic aid agreements with jurisdictions adjacent to the City. These agreements ensure that the closest engine company or medic unit will respond to an incident on the Hillcrest Campus, regardless of their jurisdiction.

The Uptown Community, including the Hillcrest Campus, is served primarily by three fire stations. Fire Station 3 is located approximately 2.2 miles south of the Hillcrest Campus at 725 West Kalmia Street. The total district service area for this station is 2.2 square miles serving Midtown, Balboa Park, and surrounding areas. This fire station operates one fire engine. Fire Station 5 is located at 3902 Ninth Avenue and is located approximately 0.9 mile southeast of the Hillcrest Campus. This station's district service area is 4.1 square miles serving the Hillcrest Community and its surrounding areas. Fire Station 5 operates one fire engine and one Battalion Chief's vehicle. Fire Station 5 completed a remodel in August 2018. The new building includes more than 10,000 square feet and two stories (SDGLN 2018). Fire Station 8 is located approximately 0.7 mile from the Hillcrest Campus at 3974 Goldfinch Street. This fire station serves Mission Hills and its surrounding areas with a total district service area of 2.7 miles. This station operates one fire engine (City of San Diego 2018). According to the Uptown Community Plan Update EIR (City of San Diego 2016c), there are plans for Fire Station 8 to be expanded to include new quarters and parking for fire staff that would occupy the Mission Hills Library site at 925 West Washington Street once the library is relocated (City of San Diego 2016c).

3.17.2 Regulatory Framework

3.17.2.1 Federal

There are no federal regulations that apply to the proposed 2019 LRDP with regard to wildfire hazards. The applicable state regulations and non-regulatory local regulations are discussed below.

3.17.2.2 State

California Department of Forestry and Fire Protection

CAL FIRE protects the people of California from fires, responds to emergencies, and protects and enhances more than 31 million acres of California's privately owned wildlands. CAL FIRE's firefighters, fire engines, and aircraft respond to an average of more than 5,600 wildland fires each

year, which burn more than 172,000 acres annually (CAL FIRE 2012). As part of the CAL FIRE team since 1995, the Office of the State Fire Marshal supports the CAL FIRE mission to protect life and property through fire prevention engineering programs, law, and code enforcement and education.

California Building Code

The California Building Code contains regulations that must be followed to satisfy minimum acceptable levels of safety for buildings and non-building structures. Chapter 7A focuses primarily on preventing ember penetration into buildings, which is a leading cause of structure loss from wildfires.

California Fire Code

The California Fire Code (24 CCR 9) contains regulations consistent with nationally recognized accepted practices for safeguarding, to a reasonable degree, life and property from the hazards of the following: fire and explosion; hazardous conditions in the use or occupancy of buildings or premises; and, dangerous conditions arising from the storage, handling, and use of hazardous materials and devices. It also contains provisions to assist emergency response personnel. The California Fire Code and the California Building Code use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. UC San Diego is responsible for safely and securely managing chemical supplies and complying with the California Fire Code allowances in facilities under their purview.

3.17.2.3 Local (Non-Regulatory)

As discussed in other sections of this 2019 LRDP EIR, UC San Diego is part of the UC, a constitutionally created entity of the State of California with "full powers of organization and government" (Cal. Const. Art. IX, Section 9). As a constitutionally created state entity, the UC is not subject to municipal regulations of surrounding local governments, such as the City's General Plan or land use guidelines, for uses on property owned or controlled by the UC that are in furtherance of the UC's education purposes. However, UC San Diego may consider, for coordination purposes, aspects of local plans and policies for the communities surrounding the campus when it is appropriate and feasible, but it is not bound by those plans and policies in its planning efforts. Because the Hillcrest Campus relies on fire protection from the City, local plans and policies may be relevant to the analysis of impacts resulting from implementation of the proposed 2019 LRDP. Thus, a summary of City guidelines related to wildfire is discussed below.

City of San Diego General Plan

The City's General Plan (City of San Diego 2008) sets forth goals and objectives for the development of San Diego. The Public Facilities, Services and Safety Element sets forth goals to provide the public facilities and services needed to serve the existing population and new growth. It identifies goals for the protection of life, property, and environment by delivering the highest

level of emergency and fire-rescue services, hazard prevention, and safety education. The City's General Plan Public Facilities, Services and Safety Element was recently amended in June 2018 to be compliant with SB 1241, which requires jurisdictions with very high FHSZ to address the risk of fire in the General Plan (City of San Diego 2015).

The following Public Facilities, Services, and Safety Element goals contained in the City's General Plan are relevant to the analysis found in this section (City of San Diego 2015):

- Protection of life, property, and environment by delivering the highest level of emergency and fire-rescue services, hazard prevention, and safety education
- Minimize fire hazards resulting from structural or wildland fires
- Manage fuel loads in wildland areas
- Safe, peaceful, and orderly communities

The following are the Public Facilities, Services, and Safety Element policies put forward that would implement the previously mentioned goals and are relevant to this section (City of San Diego 2015):

- **PF-D.1** Locate, staff, and equip fire stations to meet established response times
- **PF-D.2** Determine fire station needs, location, crew size and timing of implementation as the community grows
- **PF-D.12** Protect communities from unreasonable risk of wildfire within very high FHSZs
- **PF-D.13** Incorporate fire safe design into development within very high FHSZs to have fire-resistant building and site design, materials, and landscaping as part of the development review process
- **PF-D.14** Implement brush management along City maintained roads in very high FHSZs for emergency equipment and evacuation

Uptown Community Plan

The Uptown Community Plan (City of San Diego 2016a) provides policies to inform land use, development form, and public resource decisions and provides a long-range guide for the future physical development of the community. While the Uptown Community Plan addresses specific community needs, its policies and recommendations remain in harmony with the City's General Plan. A closer description of land uses within this community is included within Section 3.10, Land Use and Planning, of this 2019 LRDP EIR.

The following Public Facilities, Services, and Safety Element goals contained in the Uptown Community Plan are relevant to the analysis found in this section (City of San Diego 2016a):

- Police and fire safety services that meet the needs of the community
- A community aware of emergency issues and well prepared for emergencies

The following are the Public Facilities, Services, and Safety Element policies put forward that would implement the previously mentioned goals and are relevant to this section (City of San Diego 2016a):

- **PF-1.7** Maintain the high level of fire protection throughout Uptown
- **PF-2.1** Maintain a high level of fire protection throughout the community, particularly in the neighborhoods adjacent to natural open space

3.17.3 Project Impacts and Mitigation

The following sections address various potential impacts relating to wildfire that could result from implementation of the proposed 2019 LRDP.

3.17.3.1 Issue 1: Emergency Response Plan or Emergency Evacuation Plan

Wildfire Issue 1 Summary

Would the 2019 LRDP substantially impair an adopted emergency response plan or emergency evacuation plan?

Impact: Implementation of the 2019 LRDP could impair an adopted emergency response plan or emergency evacuation plan during temporary construction-related road closures.

Mitigation: Emergency Services Notification (HAZ-5)

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the proposed 2019 LRDP may have a significant impact if the 2019 LRDP would substantially impair an adopted emergency response plan or emergency evacuation plan.

Impact Analysis

This impact is adequately addressed in Section 3.8, Hazards and Hazardous Materials, under Section 3.8.3.5. The Hillcrest Campus currently trains and equips campus emergency response personnel to respond to fire-related emergencies. Fire safety training is required for all employees on the Hillcrest Campus in an effort to prepare all persons for a potential hazard or threat. In addition, the Hillcrest Campus implements safety training upon occupying new buildings, develops Illness and Injury Prevention Plans and Emergency Action Plans for all new buildings as necessary, and assigns a Building Safety Coordinator for each building. The Hillcrest Campus also follows the SDFR's fire access road policy, which allows emergency vehicles access to all areas of the Hillcrest Campus, including all buildings and all fire department connections.

When redevelopment or site improvements occur on the Hillcrest Campus under the 2019 LRDP, the campus emergency access route maps would be amended to ensure that adequate fire protection equipment access is maintained on campus at all times. In addition, the Hillcrest Campus Fire Marshal would continue to meet with the City's Deputy Fire Marshal as needed to review and revise site access plans to adequately serve the campus.

Construction-related activities may require temporary partial lane or road closures and/or detours during construction, which may interfere with an emergency response plan or emergency evacuation plan. Access to the existing hospital Emergency Department would be maintained throughout construction. In addition, a traffic control plan would be put in place to avoid impaired emergency response or evacuation during this time. The proposed redevelopment would occur in phases, resulting in only certain sections of the campus being in active construction at any one time. As a result, temporary lane or road closures would only occur in localized areas of the campus during the phase of construction under which it is needed for construction of the respective facilities and not throughout the entire duration of the proposed redevelopment. If determined necessary, UC San Diego would also initiate notification of local emergency services to the Hillcrest Campus. However, these procedures are not mandated by law, and therefore, the impact from lane closures during project construction is considered potentially significant.

Implementation of the proposed 2019 LRDP would include the addition of approximately 1,646 on-campus residents and 750 non-residential persons at the Hillcrest Campus, including graduate students, faculty, and staff, into an area adjacent to a CAL FIRE-designated very high FHSZ. However, the campus would continue to implement its campus-wide Emergency Operations Plan, which addresses the campus community's planned response to emergency access on the campus, and to regularly amend it, as needed, to provide the best procedures for emergency evacuation as the campus is redeveloped. In addition, operation of the proposed 2019 LRDP would include the use of a new access road, a north access driveway, which would provide an additional evacuation route for UC San Diego affiliates if a wildfire were to occur. Operational impacts associated with an adopted emergency response plan or emergency evacuation plan would be less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a temporary significant impact associated with construction-related road or lane closures. Implementation of Mitigation Measure HAZ-5 as described in Section 3.8, which requires notifications in the case of road or lane closures, would reduce impacts to less than significant.

3.17.3.2 Issue 2: Pollutant Concentrations

Wildfire Issue 2 Summary

Would the 2019 LRDP, 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?

Impact: Development under the proposed 2019 LRDP would not exacerbate wildfire risks.

Mitigation: No mitigation is required.

Significance Before Mitigation: Less than significant

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if, due to slope, prevailing winds, and other factors, it would exacerbate wildfire risks and, thereby, expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

Impact Analysis

Development under the proposed 2019 LRDP would involve the demolition and construction of structures including substantial excavation and grading. The 2019 LRDP would include new elements that could act as potential ignition sources for wildfires. These would include outdoor recreation space, open space areas, vegetation for landscaping, vehicles, and small machinery that could exacerbate wildfire risk and expose project residents and new employees to wildfire pollutants. Additionally, the Hillcrest Campus sits upon a mesa top surrounded to the north, west, and east by natural, steep sloped canyons. These canyons pose a potential risk for wildfires due to the buildup of dry brush within these areas as well as significant amounts of trash and debris from illegal encampments. New residential uses would be constructed along the western boundary of the campus under the proposed 2019 LRDP adjacent to these natural canyon areas, which could expose its occupants to pollutants from wildfires. According to CAL FIRE's FHSZ Map of San Diego County (2009), these steep canyons surrounding the Hillcrest Campus, including those structures that border the canyons, lie within a local responsibility very high FHSZ.

In order to minimize these wildfire risks, the proposed LRDP would employ fuel management techniques that include strategic ornamental landscaping on the mesa top and selective thinning on the canyon slopes. Fuel management activities would generally comply with the City's Brush Management Regulations (SDMC Section 142.0412). Per this regulation, fuel management is composed of two zones equaling a total width of 100 feet measured from the building facade into the canyon area. Zone 1 would be at minimum 35 feet wide from the building and would also be used as a fire access lane in many places. Zone 1 would have a relatively level surface and any

combination of hardscape and irrigated landscaping with low-fuel species that would be actively maintained to reduce fuel load. Zone 2 would consist of any remaining area necessary to reach the 100-foot minimum width (e.g., 65 feet wide if Zone 1 is 35 feet wide) and contain canyon vegetation that would be managed with selective thinning and pruning to reduce fuel load in accordance with SDMC Section 142.0412 while preserving natural habitat (City of San Diego 2019). No grading, grubbing, or irrigation would be allowed in Zone 2, and non-native plants would be identified as priority for removal, ahead of native plants. The Hillcrest Campus Fire Marshal would continue to have the authority to adjust zone widths and requirements depending on site conditions. In addition, new structures developed as a result of the proposed 2019 LRDP would comply with the California Building Code and California Fire Code as enforced by the Hillcrest Campus Fire Marshal, which would include ignition-resistant construction materials, automatic interior sprinklers, fire apparatus access, and emergency evacuation routes, among others.

UC San Diego would employ the following key fire protection measures as a part of the implementation of the 2019 LRDP:

- UC San Diego construction specifications would include a requirement that equipment (and trained personnel) be on site during project construction activities to extinguish small fires.
- Smoking would not be allowed in construction areas adjacent to unmaintained native vegetation areas.
- Ignition-resistant materials based on the latest California Building and Fire Codes, or other ways to fire harden structures (e.g., fire deflection walls, exterior sprinklers, ignition resistant landscape palette), would be considered during the planning of new buildings in fire-prone areas of the campus.
- New buildings would be designed to include fire department access to the satisfaction of the Hillcrest Campus Fire Marshal.
- Water capacity and delivery of a reliable water source for firefighting operations and during emergencies would be confirmed during the planning of new buildings.
- One hundred-foot-wide fuel management zones, or as otherwise approved by the Hillcrest Campus Fire Marshal, adjacent to existing and planned buildings that abut natural or other significant fuel beds would be provided.
- The Hillcrest Campus would have a campus-wide no smoking policy.
- Fire apparatus access roads throughout the campus, including at least the minimum required unobstructed travel lanes, lengths, turnouts, turnarounds, and clearances, would be maintained.
- An emergency operations plan that includes readiness and evacuation planning information would continue to be maintained.

Additionally, the implementation of the 2019 LRDP would involve redevelopment of an already developed area with the same uses and additional fire protection measures. These measures, incorporated into the design of the 2019 LRDP, include the widening of Bachman Place and the construction of a new access road. The north access driveway would extend from Bachman Place through the canyon into the northerly section of the campus. The new or widened roadways would act as firebreaks in preventing the uncontrolled spread of potential wildfires through the canyon landscape and provide the SDFR with direct access to fires in the canyon. Implementation of these fire protection measures, fuel management regulations, and compliance with associated regulations would ensure impacts to project occupants due to wildfire pollutants under the proposed 2019 LRDP is less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact to wildfire risks in compliance with appropriate state regulations, execution of a fuel management strategy, and appropriate fire protection measures; therefore, no mitigation is required.

3.17.3.3 Issue 3: Installation or Maintenance of Associated Infrastructure

Wildfire Issue 3 Summary

Would the 2019 LRDP 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?

Impact: Implementation of the 2019 LRDP would not exacerbate fire risk through the installation or maintenance of new infrastructure.	**Mitigation:** No mitigation is required.
Significance Before Mitigation: Less than significant	**Significance After Mitigation:** Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it would 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 risks or that may result in temporary or ongoing impacts to the environment.

Impact Analysis

Development under the proposed 2019 LRDP would involve substantial demolition and construction of new structures and associated infrastructure. Project development would be divided into five phases (1A, 1B, 2A, 2B, 3, 4, 5) with Phases 1A, 1B, 2A, and 2B including the construction of new off-site utilities and storm water improvements. This includes rerouting

existing storm drain pipes, constructing a new storm drain system, drainage improvements, treatment basins, and expansion of the UC San Diego water system throughout the development. Phase 2A would include the construction of a new road, a north access driveway that would originate at Bachman Place, extend south through the canyon, and terminate in the northwest section of the Hillcrest Campus at the entrance to the underground residential parking. It would be a private road with some form of controlled access for residents and hospital service vehicles onto the campus, as well as accommodation for fire/police access. Phase 2B would consist of the widening of Bachman Place to three lanes immediately north of the Hillcrest Campus Boundary to the intersection of Bachman Place and Hotel Circle South. Construction of these utilities and road improvements would have the potential to result in temporary or ongoing impacts to the environment through the excavation and grading of native habitat.

New infrastructure and roads proposed under the 2019 LRDP would be required to comply with all necessary regulations to minimize any fire risks. All new buildings and facilities associated with campus infrastructure would be constructed of ignition-resistant materials to lessen fire risk. The redevelopment of the campus would substantially upgrade existing campus electrical systems, including undergrounding electrical facilities, which would further reduce fire risk. In addition, the new north access driveway and the widening of Bachman Place would not exacerbate the spread of wildfire but, rather, act as firebreaks in preventing the uncontrolled spread of potential wildfires through the canyon landscape. This new private roadway and road widening would offer additional access to the canyon and campus, which would be wide enough to allow fire truck access and personnel to reach potential fire hazards in these areas quicker, thereby improving response times. Maintenance associated with new infrastructure would be necessary for optimal use of facilities and would consider fire risks in the area. Therefore, impacts would be less than significant.

Mitigation Measures

The proposed 2019 LRDP would have a less than significant impact to building or maintaining infrastructure that would exacerbate fire risks; therefore, no mitigation is required.

3.17.3.4 Issue 4: Flooding or Landslides

Wildfire Issue 4 Summary

Would the 2019 LRDP expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of run-off, post-fire slope instability, or drainage changes?

Impact: Implementation of the 2019 LRDP would not expose people downslope to flooding or landslides as a result of run-off, post-fire slope instability or drainage changes.

Mitigation: No mitigation is required.

Significance Before Mitigation: Less than significant

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2019 LRDP may have a significant impact if it exposes 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.

Impact Analysis

The Hillcrest Campus lies on a mesa top overlooking Mission Valley bounded to the north, east, and west by undeveloped, steep-sloped canyons. The on-site elevation ranges between 150 and 300 feet above mean sea level. These canyons contain natural vegetation that aid in anchoring the soil to the hillside and preventing unstable slopes. As discussed in Section 3.9, Hydrology and Water Quality, current drainage patterns on the Hillcrest Campus are divided into five subareas. Drainage within the Hillcrest Campus generally flows overland where it is intercepted by surface storm drain inlets and conveyed by a network of underground storm drains to natural channels at the base of the canyon. In its existing state, storm water sheet flows over the top of the mesa, which would have the potential to cause flooding or landslides as a result of post-fire instability.

Land-disturbing construction activities associated with implementation of the 2019 LRDP, such as vegetation clearing; grading and excavation of project sites; and construction of new building foundations, roads, driveways, and trenches for utilities, could result in localized alteration of drainage patterns and temporarily increase erosion and sedimentation in the construction area. Temporary flooding could also result from such activities from temporary alterations of the drainage system (reducing its capacity of carrying runoff) or from the temporary creation of a sump condition due to grading. Alterations may temporarily result in increased erosion and siltation if flows were substantially increased or routed to facilities or channels without capacity to carry the additional flow. All construction-related activities associated with projects implemented under the 2019 LRDP would be required to comply with UC San Diego's Design

Guidelines, Sustainability Policies, and additional Storm Water Management Requirements for Construction Projects, which have been developed in part to reduce the potential adverse effects associated with construction activities.

In the event that the entirety of the steep-sloped canyons on the campus are burned, unstable soils could occur due to the lack of vegetation to anchor the hillside. UC San Diego would implement BMPs to stabilize the canyon slopes and prevent sediment movement exposure to off-site adjacent occupants. These BMPs would include the placement of fiber rolls, straw waffles, or sandbags on the affected slopes, as well as erosion control mats, to stabilize and protect the burned areas.

Implementation of the 2019 LRDP anticipates the addition of approximately 1.6 million gsf of net new development to the campus constructed over five phases. Growth would occur primarily through new construction and targeted redevelopment. The 2019 LRDP would consist of substantial upgrades to existing storm water drainage infrastructure to solve issues with the current configuration. Drainage improvements would include shifting runoff from draining over the mesa top to underground piping. With this drainage configuration, the possibility of flooding or landslides as a result of running water down the slope are greatly lessened. Additionally, the proposed development under the 2019 LRDP is not introducing new land uses to the existing condition of the site. The 2019 LRDP would merely redevelop an already developed area and add additional fire protection measures. A new access road through the canyon and the widening of Bachman Place are proposed as part of the 2019 LRDP. These road improvements would add additional breaks in the canyon, which would further inhibit fire spread in that area. Therefore, impacts would be less than significant.

Mitigation Measures

The proposed 2019 LRDP would not result in significant impacts by exposing people or structures to significant risks, including downslope or downstream flooding or landslides due to runoff, post-fire slope instability, or drainage changes. No mitigation measures are required.

3.17.4 Cumulative Impacts and Mitigation

Wildfire Cumulative Issue Summary

Would implementation of the 2019 LRDP have a cumulatively considerable contribution to a cumulative wildfire impact considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Issue 1: Impair adopted emergency response plans or emergency evacuation plans	Less than significant	Not cumulatively considerable
Issue 2: Exacerbate wildfire risks	Less than significant	Not cumulatively considerable
Issue 3: Installation or maintenance of associated infrastructure	Less than significant	Not cumulatively considerable
Issue 4: Post-fire related flooding or landslides	Less than significant	Not cumulatively considerable

3.17.4.1 Cumulative Issue 1: Emergency Response Plans or Emergency Evacuation Plans

The geographic context for the analysis of cumulative impacts to emergency response plans or emergency evacuation plans is the Hillcrest Campus and immediate surrounding City area. A cumulative impact would occur if implementation of the 2019 LRDP were to impair an adopted emergency response plan or emergency evacuation plan. Construction and operation associated with future development in the surrounding City could result in activities that could interfere with adopted emergency response or evacuation plans, such as temporary construction barricades or other obstructions that could impede emergency access. Cumulative projects would be required to comply with the requirements of the SDFR and the City's traffic control requirements. Compliance with applicable regulations would ensure that cumulative projects do not result in a significant cumulative impact associated with the impairment of an emergency response and evacuation plan.

Implementation of the 2019 LRDP would require temporary road and lane closures. Construction on campus would occur in phases, resulting in only certain sections of the campus being in development at any one time. As a result, temporary lane or road closures would only occur in localized areas of the campus during the phase under which it is needed for construction of the respective facilities and not through the entire duration of the proposed redevelopment. In addition, access to the existing hospital's Emergency Department would be maintained throughout construction. A traffic control plan would be put in place to minimize impaired emergency response or evacuation during construction activities consistent with Mitigation Measure HAZ-5. The Hillcrest Campus has its adopted Emergency Operations Plan, which addresses planned

responses, instructions, and procedures to various levels of human-made or natural emergency situations for all campus staff, students, and visitors. Fire apparatus access throughout the Hillcrest Campus would continue to include roads that meet the code requirements for width, grade, clearance, turnouts, dead-end length, and turnarounds. Under the 2019 LRDP, the planned roadway improvements would improve access and reduce congestion to and from the Hillcrest Campus. Therefore, the proposed 2019 LRDP's contribution to cumulative impacts associated with the interference of an adopted emergency response or evacuation plan would not be cumulatively considerable.

3.17.4.2 Cumulative Issue 2: Pollutant Concentrations

The geographic context for the analysis of cumulative impacts related to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire is the City. Cumulative projects assessed could potentially have an impact if all projects broke out into a wildland fire simultaneously causing pollutant concentrations to flow through the air at an unprecedented rate. However, most of these projects lie within a low FHSZ according to CAL FIRE, resulting in a low likelihood of simultaneous fires. According to CAL FIRE's FHSZ Map of San Diego County (2009), the steep canyons surrounding the Hillcrest Campus, including those structures that border the canyons, lie within a local responsibility very high FHSZ. The Legacy International Center project is immediately downslope to the northwest from the Hillcrest Campus and would employ fuel management techniques to prevent any uncontrolled spread of wildfire in accordance with City standards. Although the City has developed policies to manage the fire risk, existing and future residents and structures would continue to be at risk. However, under the LRDP 2019, the Hillcrest Campus would put forth a fuel management strategy that would be reviewed and adaptively managed by the Hillcrest Campus Fire Marshal and would generally comply with the City's Brush Management Regulations (SDMC Section 142.0412), which would reduce wildland fire risks, thereby reducing people's exposure to pollutants from these fires. In addition, implementation of the 2019 LRDP would not contribute to exacerbating the risk of wildland fires because it would not result in an increase of new development or vegetative areas prone to wildfires. Therefore, the proposed 2019 LRDP's contribution to cumulative impacts associated with increased pollutants concentrations from wildland fires would not be cumulatively considerable.

3.17.4.3 Cumulative Issue 3: Installation or Maintenance of Associated Infrastructure

The geographic context for the analysis of cumulative impacts related to the installation or maintenance of associated infrastructure that may exacerbate fire risk is the Hillcrest Campus and immediate surrounding area. The nearest project to the Hillcrest Campus is the Legacy International Center project immediately downslope to the northwest. Due to their proximity, an impact could occur if both projects were to install infrastructure that would exacerbate fire risk. However, new infrastructure proposed for the Legacy International Center project and the 2019 LRDP would be required to comply with all necessary regulations to minimize any fire risks. All

new buildings and facilities would be constructed with ignition-resistant materials to lessen fire risk. Therefore, a significant cumulative impact associated with exacerbated fire risk would not occur. In addition, the new north access driveway proposed under the 2019 LRDP would not exacerbate the spread of wildfire but, rather, act as a firebreak in preventing the uncontrolled spread of potential wildfires through the canyon landscape. Therefore, the 2019 LRDP's contribution would not be cumulatively considerable.

3.17.4.4 Cumulative Issue 4: Flooding or Landslides

The geographic context for the analysis of cumulative impacts that would 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, is the Hillcrest Campus and immediate surrounding area. The nearest project to the Hillcrest Campus is the Legacy International Center project immediately downslope to the northwest. Due to their proximity, an impact could occur if post-fire conditions such as hillside instability along the Mission Valley canyon slopes caused a landslide or flooding to occur. UC San Diego would implement BMPs to stabilize the canyon slopes and prevent sediment movement exposure to off-site adjacent occupants. The 2019 LRDP would consist of substantial upgrades to existing water drainage infrastructure in order to solve issues with the current configuration. Drainage improvements would include shifting runoff from draining over the mesa top to underground piping. With this drainage configuration, the possibility of flooding or landslides as a result of running water down the slope are greatly lessened. Construction of projects considered in the cumulative analysis would involve grading and other earthmoving activities that could result in temporary and short-term localized soil erosion or landslides. However, these site-specific impacts are not expected to combine with the effects of other regional activities because compliance with UC San Diego's Design Guidelines, Storm Water Management Requirements, and associated BMPs, including construction site BMPs, would control erosion and construction-related contaminants at each construction site. Therefore, project impacts related to flooding or landslides as a result of fire would not be cumulatively considerable.

3.17.5 CEQA Issues Where There Is No Potential for a Significant Effect

All checklist items in Appendix G of the CEQA Guidelines under Wildfire are evaluated in this 2019 LRDP EIR.

3.17.6 References

CAL FIRE (California Department of Forestry and Fire Protection). 2009. Fire Hazard Severity Zones Map, San Diego County. June 12, 2009.

CAL FIRE. 2012. "About CAL FIRE." Accessed November 8, 2018. http://calfire.ca.gov/about/about.

City of San Diego. 2008. City of San Diego General Plan. March 10, 2008.

City of San Diego. 2015. Public Facilities, Services, and Safety Element. In City of San Diego General Plan. Updated June 2015.

City of San Diego. 2016a. Uptown Community Plan. November 2016.

City of San Diego. 2016c. Final Program Environmental Impact Report for the Uptown Community Plan Update. City of San Diego, Planning Department. September 2016.

City of San Diego. 2018. "About SDF." Accessed August 30, 2018. https://www.sandiego.gov/fire/about.

City of San Diego. 2019. "Section142.0412: Brush Management." In San Diego Municipal Code. February 2019.

Citygate (Citygate Associates, LLC). 2017. San Diego Fire-Rescue Department Standards of Response Cover Review. February 22, 2017.

Fiero, Jimmy. 2018. "Fire Safety on the Hillcrest Campus." Personal communication from Jimmy Fiero (UC San Diego at the Hillcrest Campus) to Morgan Weintraub (Harris & Associates). December 5, 2018.

Fiero, Jimmy. 2019. "UC San Diego Hillcrest LRDP Emergency Management." Personal communication from Jimmy Fiero (UC San Diego at the Hillcrest Campus) to Kelsey Hawkins (Harris & Associates). March 19, 2019.

Imroth, Monique. 2018. "Evacuation procedures at Hillcrest." Personal communication from Monique Imroth (UC San Diego at the Hillcrest Campus) to Morgan Weintraub (Harris & Associates). December 7, 2018.

SDGLN (San Diego Gay and Lesbian News). 2018. "Hillcrest Fire Station No. 5 Opens." August 20, 2018. Accessed December 4, 2018. https://sdgln.com/commentary/2018/08/20/hillcrest-fire-station-no-5-opens.

Chapter 4 Other CEQA Considerations

Section 15128 of the CEQA Guidelines requires that an EIR contain a brief statement disclosing the reasons why various possible significant effects of a project were found not to be significant and, therefore, would not be discussed in detail in the EIR. UC San Diego reviewed the proposed 2019 LRDP against the environmental topical areas contained in Appendix G of the CEQA Guidelines. Environmental topical areas found to have potentially significant impacts are addressed in Chapter 3, Environmental Setting, Impacts, and Mitigation, of this 2019 LRDP EIR; if certain issues under an environmental topical area were found to result in no significant impacts, they are still included in Chapter 3 but are discussed under subsection CEQA Issues Where There is No Potential for a Significant Effect. All environmental topical areas are addressed in Chapter 3 with the exception of two environmental topical areas: Agriculture and Forestry Resources and Mineral Resources. These environmental topical areas were determined to result in no impact from implementation of the 2019 LRDP and thus are addressed separately in Section 4.1, Other Effects Found Not to Be Significant, of this chapter.

In addition, Section 15126 of the CEQA Guidelines requires that all aspects of a project be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this analysis, the EIR must identify the following three components, which are also addressed in this chapter:

- Growth-inducing impacts of the proposed project (addressed in Section 4.2, Growth Inducement);
- Significant environmental effects that cannot be avoided if the project is implemented (addressed in Section 4.3, Significant and Unavoidable Environmental Impacts); and
- Significant irreversible environmental effects that would be involved in the project should it be implemented (addressed in Section 4.4, Significant and Irreversible Environmental Effects).

4.1 Other Effects Found Not to Be Significant

4.1.1 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 Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland (DOC 1997). 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 and the

Forest Legacy Program, and forest carbon measurement methodology provided in the Forest Protocols adopted by CARB.

Would implementation of the 2019 LRDP 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?

Would implementation of the 2019 LRDP conflict with existing zoning for agricultural use, or a Williamson Act contract?

The Hillcrest Campus has been designated as Urban and Built-Up Land and Other Land in the San Diego County Important Farmland Map pursuant to the Farmland Mapping and Monitoring Program (DOC 2016). Therefore, the proposed 2019 LRDP would not convert Prime Farmland, Farmland of Statewide Importance, or Unique Farmland to non-agricultural use. The UC is constitutionally exempt from local zoning and land use plan/element requirements. Due to the specific tax-exempt status of the UC, land owned by the UC is not subject to Williamson Act land use/tax contracts. Accordingly, the proposed 2019 LRDP would not conflict with existing zoning or with Williamson Act contracts.

Therefore, implementation of the 2019 LRDP would not result in impacts to agricultural resources because (1) there are no soils on campus lands that are suitable for agricultural use that are not being used for non-agricultural endeavors; (2) UC campus lands are not subject to local zoning or Williamson Act contracts to protect agricultural resources; (3) no agricultural lands exist or would be converted within or adjacent to Hillcrest Campus with implementation of the 2019 LRDP; and (4) no cumulative loss of agricultural land would occur as a result of development under the proposed 2019 LRDP. No impact would occur.

Would implementation of the 2019 LRDP 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))?

Would implementation of the 2019 LRDP result in the loss of forest land or conversion of forest land to non-forest use?

Would implementation of the 2019 LRDP 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?

The Hillcrest Campus includes approximately 28 acres of native open space in the form of vegetated slopes and canyons in the northern, eastern, and westernmost portions of the property. These open

space areas are not considered forest land because these areas do not support 10 percent native tree cover of any species and do not allow for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. Thus, there is no forest land, timberland, or timberland-zoned Timberland Production located within or adjacent to the Hillcrest Campus. Additionally, as discussed previously, the Hillcrest Campus is not currently being used or planned for agricultural purposes, and there are no current or planned agricultural or forestry uses in the immediate vicinity. Therefore, the proposed 2019 LRDP would not conflict with existing zoning for agricultural or forest land or result in the conversion of farmland or forest land to other uses. No impact would occur.

4.1.2 Mineral Resources

Would implementation of the 2019 LRDP result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Would implementation of the 2019 LRDP result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

The Hillcrest Campus has been classified as Mineral Resource Zone MRZ-3 (City of San Diego 2008). MRZ-3 areas include locations containing mineral deposits, the significance of which cannot be evaluated from available data. Additionally, as discussed in Section 3.6, Geology and Soils, the predominant formational materials that underlie the Hillcrest Campus are very old paralic deposits (Linda Vista Terrace Formation) consisting of Pleistocene siltstone, sandstone and conglomerate, and the Eocene Mission Valley Formation composed of marine and nonmarine sandstone interlaced with beds of cobble conglomerate. These formations are sedimentary deposits and may be fossiliferous but do not contain mineral resources. Thus, mineral resources do not occur on the Hillcrest Campus. Therefore, implementation of the 2019 LRDP would not result in the loss of availability of mineral resources or locally important mineral resource recovery site. No impact would occur.

4.2 Growth Inducement

As required by the CEQA Guidelines, an EIR must include a discussion of the ways in which the proposed project could directly or indirectly foster economic development or population growth, or the construction of additional housing and how that growth would, in turn, affect the surrounding environment (14 CCR 15126.2[d]). Growth can be induced in a number of ways, including the elimination of obstacles to growth or through the stimulation of economic activity within the region. The discussion of removal of obstacles to growth relates directly to the removal of infrastructure limitations or regulatory constraints that could result in growth unforeseen at the time of project approval. According to CEQA Guidelines, Section 15126.2(d), “it must not be assumed that growth

in any area is necessarily beneficial, detrimental, or of little significance to the environment." The analysis presented in this chapter discusses these factors.

4.2.1 Existing Conditions

UC San Diego's Hillcrest roots date back to 1965 when an operating agreement between the UC and the County was reached in which the UC agreed to pay to lease the County Hospital in Hillcrest, but the County would reimburse the UC for all costs associated with the care of indigent patients who continued to be treated there. This arrangement meant that, when it opened, the UC San Diego School of Medicine would be divided between two sites: (1) the main campus in La Jolla would function as its academic arm and would house classrooms, offices, and laboratories, and (2) the County Hospital in Hillcrest would be used as a venue for patient care and clinical training. The Hillcrest Campus's first LRDP was adopted in 1978 in order to direct future growth and development of the site. UC San Diego officially purchased the hospital and its ancillary and support structures from the County in January 1981, and the hospital became UC San Diego Medical Center – Hillcrest. Since then, the Hillcrest Campus has grown to approximately 62 acres, encompassing UC San Diego's first and only Level I Trauma Center and becoming a critical research and clinical teaching site for UC San Diego School of Medicine.

The last LRDP for the Hillcrest Campus was prepared in 1995 with a planning horizon of 2010. The planned growth through the expansion of programs on campus under the 1995 LRDP was a campus population of approximately 4,300 persons in 1995 and an increase to approximately 5,400 persons in 2010. This equated to an approximately 26 percent increase of employees, faculty, and students under the planning horizon. The 1995 LRDP did not plan for any residential units on the campus.

As of 2017, the existing non-residential population on the Hillcrest Campus is 4,450 persons. The existing campus population, which includes 21 residential units, is 35 persons. Growth between the 1995 LRDP and 2017 has been exceedingly slow due to the fragmented and scattered programmatic uses on campus and the limited developable space within the Hillcrest Campus.

4.2.2 Growth-Inducing Impacts of the 2019 Long Range Development Plan

The Hillcrest Campus is located in the Uptown Community in the City. The campus population of graduate students, faculty, and staff who do not live on campus is distributed throughout the County. Potential growth-inducing impacts of the proposed 2019 LRDP are evaluated with respect to the County. The following discussion is based on information provided in the project-specific population and housing study (Harris 2019).

4.2.2.1 Population and Employment Growth

Buildout of the 2019 LRDP is expected to increase non-residential campus population, which includes staff and faculty from an existing employee headcount of 4,450 persons in 2017 to

approximately 5,200 persons in 2035. This total increase of 750 medical, research, and administrative faculty and staff on campus would equate to less than 0.01 percent of the projected 2035 regional population.

The 2019 LRDP proposes to construct up to 1,000 new residential units and demolish the 21 existing residential units for a net increase of 979 new units that would house a total residential population of approximately 1,646 residents. The proposed housing units would be provided for UC San Diego affiliates associated with the La Jolla and Hillcrest Campuses and are anticipated to accommodate a portion of the planned non-residential population growth identified in the 2019 LRDP. As such, the projected non-residential and residential populations are not necessarily additive because the additional students, staff, and faculty may also reside in the proposed new on-campus housing.

As discussed in Section 3.12, Population and Housing, the overall projected San Diego regional population growth from 2012 to 2035 would be 710,269 (SANDAG 2013) and the projected Hillcrest Campus population growth from the 2019 LRDP would be up to 2,396 (750 non-residential campus population + 1,646 residential campus population = 2,396 population increase). This presents a worst-case scenario because, as discussed previously, some of the additional students, staff, and faculty included in the projected non-residential growth may also reside in the proposed new on-campus housing. Therefore, an approximately 2,396-person population increase used for analysis purposes likely reflects some double counting among the non-residential and residential populations. Even a worst-case population increase of approximately 2,396 persons reflects only 0.33 percent of the overall regional population increase expected by 2035.

The Hillcrest Campus is identified as Institutional land use in the Uptown Community Plan (City of San Diego 2016), and no density is assigned to this land use. As previously stated, the 1995 Hillcrest Campus LRDP did not plan for any residential units on the campus. Therefore, the additional residential units proposed under the 2019 LRDP were not previously planned for in the Uptown Community Plan or 1995 LRDP. However, the provision of 979 net new residential units would not induce substantial population growth because the housing would be provided to accommodate UC San Diego affiliates. Based on the Hillcrest Campus Residential Interest Survey conducted by UC San Diego Real Estate in 2018 (UC San Diego 2018), at least 1,792 UC San Diego affiliates are interested in rental units on the Hillcrest Campus. This demonstrates that adequate demand is present to restrict the proposed housing to solely UC San Diego affiliates (i.e., the primary lessee on each unit would be current or future faculty, staff and graduate students of UC San Diego). UC San Diego affiliates already reside in the San Diego region, as they work or study at the La Jolla or Hillcrest Campuses or off-campus UC San Diego facilities. As demonstrated by Table 3.12-9, Hillcrest Campus Residential Interest Survey Respondents by Zip Code, in Section 3.12, many UC San Diego affiliates also already live in the neighborhoods surrounding the Hillcrest Campus. Therefore, the proposed increase in residential units on campus

would not directly induce population growth because the majority of future residents would not be relocating from areas outside of the County; rather, they would be relocating from within the region and in many cases from within the immediate vicinity of the Hillcrest Campus. Additionally, by moving UC San Diego affiliates into the proposed on-campus housing, residential units in the surrounding communities that would otherwise be occupied by the UC San Diego affiliates would be available to the public at large. In the context of the housing shortage being experienced by the state and San Diego region, the provision of new housing on the Hillcrest Campus would be considered growth accommodating, and would represent a regional benefit. Therefore, the 2019 LRDP would not have direct impacts related to growth inducement.

The 2019 LRDP would not extend roads or other infrastructure to areas not currently served with these facilities. The proposed north access driveway and First Avenue extension would serve the existing Hillcrest Campus and improve on-campus circulation. Other road improvements to Arbor Drive and Bachman Place would improve existing roadway conditions and local circulation in developed areas of the Uptown and Mission Valley Communities where deficiencies exist and would not incentivize development. Therefore, the 2019 LRDP would not indirectly induce substantial population growth.

4.2.2.2 Indirect Economic Growth

In addition to the direct growth, additional growth could occur as campus-serving and related businesses and institutions establish or expand in response to the increased demand for goods and services or due to the synergies that result between specialties on campus and surrounding neighborhood character of the community. An example of the synergistic development is the establishment of an updated medical center that would also act as an everyday community health and wellness provider and as a space for community gathering and enterprise; therefore, apart from the direct jobs on the campus, the operation of the campus under the proposed 2019 LRDP would likely result in the creation of new indirect and induced jobs. Indirect jobs are those that are created or sustained when the campus purchases goods and services from businesses in the region, and induced jobs are created or sustained when wage incomes of those employed in direct and indirect jobs are spent on the purchase of goods and services in the region. However, because the 2019 LRDP is largely focused on the replacement and upgrade of existing medical facilities and anticipated non-residential campus population growth is a modest 750 persons, indirect job growth would not expected to be substantial. Any potentially adverse environmental effects resulting from this indirect job growth due to implementation of the 2019 LRDP are discussed in the appropriate issue sections of this 2019 LRDP EIR (see Sections 3.1 through 3.17 of this 2019 LRDP EIR).

4.2.2.3 Provision of Infrastructure

Growth can be triggered if the infrastructure to serve the 2019 LRDP is constructed with excess capacity or if the lack of infrastructure is an obstacle to growth and that obstacle is removed by the

2019 LRDP. The provision of infrastructure under the proposed 2019 LRDP would accommodate the additional population growth primarily with the redevelopment and upgrade of existing facilities on campus. As discussed in Section 3.16, Utilities and Service Systems, implementation of the 2019 LRDP would necessitate an overhaul of the campus's existing utilities and infrastructure systems to devise a new campus-wide structure that would provide redundancy across its systems, replace aging or inadequate facilities, improve infrastructure reliability, and promote a more resilient campus overall. All on-campus expansions and extensions would occur in conjunction with the growth in building space that would be developed to serve increased patients, new residential uses, and new academic and research programs and initiatives on the campus. Several off-site utilities improvements would also be constructed to more adequately serve the Hillcrest Campus under the 2019 LRDP. A new north access driveway would be constructed beginning at Bachman Place and extending south through the undeveloped canyon, terminating at the northerly section of campus at Dickinson Street. This road would primarily serve as additional access to the campus or as an emergency response road. The environmental effects of the growth within the confines of the campus due to the proposed 2019 LRDP are analyzed in the other sections of this 2019 LRDP EIR. Thus, growth outside of the Hillcrest Campus would not be triggered by the provision of infrastructure under the proposed 2019 LRDP.

4.3 Significant and Unavoidable Environmental Impacts

Pursuant to Section 15126.2(b) of the CEQA Guidelines, this section identifies significant impacts that would not be avoided, even with the implementation of feasible mitigation measures. The final determination of significance of impacts and of the feasibility of mitigation measures will be made by the UC Regents as part of their certification action for this 2019 LRDP EIR. Sections 3.1 through 3.17 of this 2019 LRDP EIR provide a comprehensive identification of the proposed 2019 LRDP's potentially significant adverse environmental effects and any necessary mitigation measures, as well as the level of significance both before and after mitigation. A summary of the environmental impacts and mitigation measures is contained in Executive Summary at the beginning of this 2019 LRDP EIR.

Potentially significant and unavoidable environmental impacts associated with implementation of the 2019 LRDP were identified for historical resources (direct and cumulative), exceedance of noise standards during construction (direct), excessive groundborne vibration or noise during construction (direct), and circulation system performance (direct and cumulative). For a detailed description of these potentially significant impacts and reasons that they are unavoidable, refer to Sections 3.4.3.1, Issue 1, Historical Resources; 3.11.3.1, Issue 1, Exceed Noise Standards; 3.11.3.2, Issue 2, Excessive Groundborne Vibration or Noise; and 3.15.3.1, Issue 1, Circulation System Performance, of this 2019 LRDP EIR.

4.4 Significant and Irreversible Environmental Effects

Section 15126.2(c) of the CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the 2019 LRDP. Specifically, Section 15126.2(c) states the following:

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, 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 involves uses in which irreversible damage would result from any potential environmental accidents associated with the project; or
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Development under the proposed 2019 LRDP would result in the continued commitment of the Hillcrest Campus to medical and campus-related uses, thereby precluding any other uses for the lifespan of the campus. UC San Diego's ownership of the campus represents a long-term commitment of the campus to medical and research uses. Restoration of the Hillcrest Campus to pre-developed conditions would not be feasible given the degree of disturbance, the urbanization of the area, and the level of capital investment.

Resources that would be permanently and continually consumed by implementation of the 2019 LRDP include water, electricity, natural gas, and fossil fuels; however, the amount and rate of consumption of these resources would not result in significant environmental impacts or the unnecessary, inefficient, or wasteful use of resources. With implementation of the proposed 2019 LRDP, the Hillcrest Campus would implement various energy conservation and management programs include combining the entire campus under one electric and gas meter service and incorporating renewable energy strategies to support peak saving and overall site electrical demand reductions. A new consolidated CUP would serve as the base of operations with five campus dedicated utility corridors and one public corridor along the realigned segment of Bachman Place extending from the CUP. The new CUP is anticipated to consist of a cogeneration plant, which would include a turbine that generates electricity from

natural gas (or biogas) combustion and heat that is put to productive use. In addition, building energy performance would be closely monitored and based on achieving various efficiency levels as defined by program-specific energy use intensities. These energy use intensities would be developed based on previous goals identified by UC San Diego and further elaborated on based on industry-related benchmarks and campus-specific assumptions. Overall, the energy use intensities approach would allow for flexibility in system selection by future design teams while achieving a 20 to 30 percent improvement over Title 24 business-as-usual energy performance thresholds.

In addition, as part of UC San Diego's commitment to responsible stewardship of its physical resources on the Hillcrest Campus, campus development under the proposed 2019 LRDP would continue to be evaluated for their environmental sustainability in accordance with the UC Sustainable Practices Policy and any future programs that are developed by the UC during the planning period for the proposed 2019 LRDP. A number of strategies would be focused on achieving the goal of reducing the Hillcrest Campus's GHG emissions over the life of the proposed 2019 LRDP through 2035, with an emphasis on sustainable growth and operations. Furthermore, in accordance with the UC Sustainable Practices Policy, the Hillcrest Campus would incorporate design features, technological adaptations, and/or planning principles into future campus projects to conserve resources and minimize waste products and comply with LEED standards for building design and operation. Compliance with all applicable building codes and standard campus conservation features would ensure that all natural resources are conserved to the maximum extent practicable. It is also possible that new technologies or systems would emerge, or would become more cost-effective or user-friendly, to further reduce the campus reliance upon nonrenewable energy resources. Therefore, the potential for the proposed 2019 LRDP to result in significant irretrievable commitment of resources would be less than significant.

The CEQA Guidelines also require a discussion of the potential for irreversible environmental damage caused by an accident associated with a proposed project. While the Hillcrest Campus uses, transports, stores, and disposes of hazardous wastes, as described in Section 3.8, Hazards and Hazardous Materials, the campus complies with all applicable state and federal laws and existing campus programs, practices, and procedures related to hazardous materials, which reduces the likelihood and severity of accidents that would result in irreversible environmental damage. In addition, as discussed in Section 3.3, Biological Resources, implementation of the 2019 LRDP would result in less than significant impacts with mitigation and compliance with applicable state and federal laws related to biological resources; thus, no significant irreversible damage would occur to biological resources due to implementation of the 2019 LRDP. Therefore, the potential for the proposed 2019 LRDP to cause an accident resulting in significant irreversible environmental damage would be less than significant.

4.5 References

City of San Diego. 2008. "Figure CE-6, Generalized Mineral Land Classification." In City of San Diego General Plan – Conservation Element. Accessed February 2, 2018. https://www.sandiego.gov/sites/default/files/legacy//planning/genplan/pdf/2012/ce120100.pdf.

City of San Diego. 2016. Uptown Community Plan. Accessed November 2018. https://www.sandiego.gov/planning/community/profiles/uptown.

DOC (California Department of Conservation). 1997. "California Agricultural Land Evaluation and Site Assessment Model." Accessed August 30, 2018. http://www.conservation.ca.gov/dlrp/Pages/qh_lesa.aspx.

DOC. 2016. "Farmland Mapping and Monitoring Program (FMMP), San Diego County, Important Farmland 2016," Sheet 1 of 2. Accessed August 8, 2018. ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2016/sdg16_w.pdf.

Harris (Harris & Associates). 2019. Population and Housing Study for the 2019 UC San Diego Long Range Development Plan.

SANDAG (San Diego Association of Governments). 2013. "Series 13 Regional Growth Forecast." Data Surfer. Accessed November 5, 2018. http://datasurfer.sandag.org/.

UC San Diego (University of California, San Diego). 2018. Hillcrest Campus Residential Interest Survey. UC San Diego Real Estate.

Chapter 5 Alternatives

CEQA requires that an EIR describe and evaluate a range of reasonable alternatives to the proposed project, or alternatives to the location of the proposed project. The purpose of the alternatives analysis is to explore ways that most of the basic objectives of the proposed project could be attained while reducing or avoiding significant environmental impacts of the project as proposed. This approach is intended to foster informed decision-making and public participation in the environmental process.

This chapter evaluates alternatives to the proposed 2019 LRDP and examines the potential environmental impacts associated with each alternative. The CEQA Guidelines indicate that EIRs are required to evaluate 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" (14 CCR 15126.6[a]). Not every conceivable alternative must be addressed, nor do infeasible alternatives need to be considered. When addressing feasibility, Section 15126.6 of the CEQA Guidelines identifies the factors that may be taken into account when addressing the feasibility of alternatives including site suitability, economic viability, availability of infrastructure, other plans or regulatory limitations, and jurisdictional boundaries. The CEQA Guidelines also state that the discussion of alternatives should focus on "…alternatives capable of avoiding or substantially lessening any significant effects of the project objectives or would be more costly" (14 CCR Section 15126.6[b]). The CEQA Guidelines further direct that "…the significant effects of the alternatives shall be discussed, but in less detail than the significant effects of the project as proposed" (14 CCR 15126.6[d]).

The following sections discuss the project alternatives that were considered pursuant to CEQA. Section 5.1 presents a summary of the proposed 2019 LRDP impacts. Section 5.2 discusses alternatives that were considered but rejected because they failed to meet most of the basic project objectives, were considered infeasible, and/or would not avoid or substantially lessen any significant effects of the 2019 LRDP. Section 5.3 discusses those alternatives that were analyzed in more detail. Based on the CEQA Guidelines, the following project alternatives to avoid or reduce significant project impacts were identified and are discussed in Section 5.3: No Project Alternative (1995 LRDP), No Residential Alternative, No Cogeneration Alternative, No North Access Driveway Alternative, and Reduced Scale Alternative. Finally, Section 5.4 discusses the environmentally superior alternative.

5.1 Summary of 2019 LRDP Impacts

A summary of the environmental impacts resulting from implementation of the 2019 LRDP, as disclosed in Chapters 3 and 4 of this 2019 LRDP EIR, is provided in Table 5-1.

Table 5-1. Summary of 2019 LRDP Impacts

Issue Areas	Proposed 2019 LRDP	
	Without Mitigation	With Mitigation
3.1 Aesthetics		
Scenic Vistas	LS	LS
Degradation of Existing Community Character or Conflict with Zoning or Regulations for Scenic Quality	PS	LS
Light and Glare	LS	LS
3.2 Air Quality		
Consistency with Applicable Air Quality Plan	LS	LS
Cumulative Increase in Criteria Pollutant Emissions	PS	LS
Sensitive Receptors	PS	SU
Odors	LS	LS
3.3 Biological Resources		
Candidate, Sensitive, or Special-Status Plant Species	PS	LS
Candidate, Sensitive, or Special-Status Animal Species	PS	LS
Riparian Habitat and Other Sensitive Natural Communities	PS	LS
Wetlands	PS	LS
3.4 Cultural and Tribal Cultural Resources		
Historical Resources	PS	SU
Archaeological Resources	PS	LS
Human Remains	PS	LS
Tribal Cultural Resources	PS	LS
3.5 Energy		
Wasteful or Inefficient Energy Usage	PS	LS
Conflict with Renewable or Energy Efficiency Plan	LS	LS
3.6 Geology and Soils		
Exposure to Seismic-Related Hazards	LS	LS
Soil Erosion or Topsoil Loss	LS	LS
Geologic Stability	LS	LS
Expansive Soils	LS	LS
Paleontological Resources	PS	LS
3.7 Greenhouse Gas Emissions		
Generate GHG Emissions	LS	LS
Conflict with an Applicable Plan	LS	LS
3.8 Hazards and Hazardous Materials		
Transport, Use, and Disposal of Hazardous Materials	LS	LS
Accidental Releases	PS	LS
Hazards to Nearby Schools	LS	LS
Hazards from Nearby Airports	LS	LS

Table 5-1. Summary of 2019 LRDP Impacts

Issue Areas	Proposed 2019 LRDP	
	Without Mitigation	With Mitigation
Emergency Response or Evacuation Plans	PS	LS
Wildland Fires	LS	LS
3.9 Hydrology and Water Quality		
Water Quality	LS	LS
Site Drainage and Hydrology	LS	LS
Water Quality Control Plan or Sustainable Groundwater Management Plan	LS	LS
3.10 Land Use and Planning		
Conflict with Applicable Land Use Plans, Policies, and Regulations	LS	LS
3.11 Noise		
Exceed Noise Standards	PS	SU (Construction)
Excessive Groundborne Vibration or Noise	PS	SU (Construction)
Aircraft Noise	LS	LS
3.12 Population and Housing		
Induce Substantial Population Growth	LS	LS
Displacement of People or Housing	LS	LS
3.13 Public Services		
Fire Protection Services	LS	LS
Police Protection Services	LS	LS
Public School Services	LS	LS
3.14 Recreation		
Deterioration of Parks and Recreational Facilities	LS	LS
Construction or Expansion of Recreational Facilities	PS	LS
3.15 Transportation		
Circulation System Performance	PS	SU
Induce Substantial Vehicle Miles Traveled	LS	LS
Inadequate Emergency Access	PS	LS
3.16 Utilities and Service Systems		
New Utilities Facilities	PS	LS
Water Supply Availability	LS	LS
Wastewater Treatment Capacity	LS	LS
Compliance with Solid Waste Regulations	LS	LS
3.17 Wildfire		
Emergency Response Plan or Emergency Evacuation Plan	PS	LS
Pollutant Concentrations	LS	LS
Installation or Maintenance of Associated Infrastructure	LS	LS
Flooding or Landslides	LS	LS

Notes: LS = Less than Significant Impact; NI = No Impact; PS = Potentially Significant Impact; SU = Significant and Unavoidable

As shown in Table 5-1, the proposed 2019 LRDP would result in significant and unavoidable impacts after mitigation to the following environmental issues:

- Historical Resources
- Exceedance of Noise Standards (during construction)
- Excessive Groundborne Vibration and Noise (during construction)
- Circulation System Performance

5.2 Project Objectives

As stated in Chapter 2 of this 2019 LRDP EIR, the key project objectives of the proposed 2019 LRDP are as follows:

1. Meet the seismic safety requirements of SB 1953 by replacing the existing hospital building by 2030 while maintaining existing community health care operations including but not limited to:
    a. San Diego's only Regional Burn Center
    b. Level 1 Trauma Center
    c. Certified Comprehensive Stroke Center
    d. Comprehensive Emergency Department
    e. Epilepsy Center
    f. Inflammatory Bowel Disease Center
    g. International Patient Services
    h. Neurological Institute
    i. The region's only dedicated clinic for HIV patients, the Owen Clinic
2. Replace aging and obsolete buildings and redevelop the Hillcrest Campus to create a modern, patient-centered environment that leverages UC San Diego Health's capabilities as an academic medical institution while also providing live-work-learn housing for UC San Diego affiliates, wellness-driven programming, and accessible open spaces
3. Organize the campus development by clearly delineating five new land use districts (Health Care, Residential, Open Space, Mixed-Use, and Canyon), each of which would be defined by a predominant land use and development condition that contribute to a cohesive campus that is aligned with UC San Diego's vision
4. Create a campus that promotes community wellness and health care in both its facilities and its site development
5. Implement a mix of land uses including residential, retail, and office space that support the financial feasibility of the campus's development and operations into the future
6. Provide up to 1,000 residential units for UC San Diego affiliates that respond to an existing and increasing demand for housing on campus and region wide, reduce

commuter traffic to and from the campus, and integrate a range of resident- and neighborhood-oriented amenities

7. Improve the roadway circulation network adjacent to and within the campus while minimizing traffic impacts to adjoining neighborhoods.
8. Improve transportation-related facilities including parking structures, transit stops, and passenger drop-off and pick-up areas in a way that allows for intuitive vehicular, biking, and patient-oriented access and multimodal improvements for wayfinding
9. Enhance the campus open space concept as a resource for campus patients, visitors, and employees, as well as the surrounding community
10. Provide on-site energy infrastructure that is cost effective, redundant, and energy efficient and is in compliance with regulations for acute care hospital and related medical facilities
11. Site the CUP in a location on the campus such that it does not impair construction sequencing, impact existing utilities that serve current facilities that must remain online, or impact the efficient replacement of facilities under the 2019 LRDP
12. Accommodate a robust graduate education program with research labs, instructional areas, and office administrative space

5.2 Alternatives Considered But Rejected

During the planning of the proposed 2019 LRDP, several alternatives were considered that would allow for the redevelopment of the Hillcrest Campus in a different way than proposed and detailed in Chapter 2 of this 2019 LRDP EIR. Some of the alternatives identified were determined to be unreasonable or infeasible. This section describes some of the preliminary concepts that were considered as alternatives to the proposed 2019 LRDP but were rejected form further analysis, and the reason(s) underlying their rejection. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are (1) failure to meet most of the basic project objectives, (2) infeasibility, and/or (3) inability to avoid significant environmental impacts (14 CCR 15126.6[c]).

5.2.1 Retrofit Existing Hospital Only Alternative

The Retrofit Existing Hospital Only Alternative would include retrofitting the existing hospital in order to fulfill the seismic safety requirements of SB 1953 by 2030 and would not include redevelopment of the entire Hillcrest Campus. However, the Hillcrest Campus Hospital Retrofit Feasibility Study determined that the existing hospital cannot be feasibly retrofitted to meet SB 1953 requirements, regardless of cost. To implement a seismic retrofit and/or utility upgrade program to meet safety requirements and to correct failing utilities would require that existing hospital operations partially or wholly close throughout the duration of the construction. Even if a phased retrofit program allowed some portions of the hospital to remain open while other portions

underwent the necessary renovations, active construction within the hospital building could pose health and safety risks to patients wherein a sterile, clean environment is crucial.

Specifically, the hospital provides unique acute-care and specialty services that are either not provided anywhere else in its primary service area or are heavily relied upon by the community. Further, the Hillcrest Campus has seen substantial increases in trauma volume in recent years, a 15.5 percent increase from 2010 to 2016 (County of San Diego 2016). The City's population is also rising; the Uptown and Mission Valley Communities, located adjacent to the campus, are expected to see significant population growth through 2035 (SANDAG 2013). As the hospital's service population continues to increase, so will its volume of trauma patients. Because the Hillcrest Campus treats more trauma patients than any of the other five hospitals that make up San Diego County's Trauma System, a temporary closure of the Hillcrest hospital could be extremely disruptive to the success of this system (County of San Diego 2016).

The uninterrupted operation of essential emergency and medical services is a key objective of the 2019 LRDP and even a temporary closure of these services, which support the surrounding communities and greater region, would have far-reaching adverse effects. Therefore, this alternative was deemed infeasible and thus rejected from further analysis.

5.2.2 Redevelop Hospital Site with Medical/Research Uses Alternative

Under this alternative, the existing hospital building would be demolished and reconstructed to accommodate alternate medical/research uses by 2030; this alternative would not include redevelopment of the entire Hillcrest Campus. Redevelopment of the hospital site would terminate inpatient acute care services, and the Hillcrest Campus would no longer provide a Level 1 Trauma Center for the San Diego region. Under this alternative, the existing acute care hospital staff and acute care patients would be displaced and relocated to other facilities. This alternative was rejected from further analysis because UC San Diego is committed to continuing to provide an acute care hospital on the Hillcrest Campus, which is a key driver of the proposed 2019 LRDP. Consequently, this alternative would not fulfill the majority of the proposed 2019 LRDP project objectives and was rejected from further analysis.

5.2.3 Retain Hospital Building and Change Use Alternative

Under this alternative, the existing hospital building would remain and the hospital could continue to provide acute care services until 2030. In 2030, or before, the acute care portion of the hospital would be converted to another medical-related permissible use, consistent with SB 1953. This alternative would not include redevelopment of the entire Hillcrest Campus. Under this alternative, inpatient acute care services would be terminated by 2030 and the Hillcrest Campus would no longer provide a Level 1 Trauma Center for the San Diego region. However, the non-acute care services provided at the hospital would remain and be expanded. Under this alternative the existing acute care hospital staff and patients would be displaced and relocated to other facilities; however,

additional non-acute care services would remain and be expanded. This alternative was rejected from further analysis because UC San Diego is committed to continuing to provide acute care services on the Hillcrest Campus. In addition, this alternative would not fulfill the majority of the proposed 2019 LRDP project objectives and was rejected from further analysis.

5.2.4 Retain the Historic Building on the Hillcrest Campus Alternative

Under this alternative, the existing one-story residence located at 101 Dickinson Street would not be demolished. Redevelopment of the Hillcrest Campus would occur around the residential structure, and therefore, the Multi-Use Building would be reduced in size to accommodate leaving the residence at 101 Dickinson Street in place. Under this alternative, the reduction in size of the Multi-Use Building would require UC San Diego to reduce its proposed academic program, including fewer research labs, instructional areas, and office administrative space. The existing residence would be located between the reduced Multi-Use Building and CUP and would be incompatible with these land uses. In addition, the grading proposed for the Multi-Use Building and CUP, while leaving the residence in place, would make construction difficult, if not infeasible, in that area. This alternative was rejected from further analysis because it would create land use incompatibility by retaining a small, single-family residential use amid the redeveloped Health Care District, and due to limitations, it would impose on adjacent construction sites (e.g. difficult for surrounding construction operations to efficiently progress adjacent to the smaller and structurally vulnerable residence). Specifically, due to its proximity to the existing Bachman Parking Structure, retaining the residence would make it difficult complete the shoring needed to keep the Bachman Parking Structure operable until its proposed demolition in Phase 2B, as well as make it difficult to construct the underground parking needed for the Multi-Use Building.

Moreover, retaining this structure would mean reducing the building footprint of the Multi-Use Building. This would result in less research labs, instructional areas, and office administrative space, and fail to meet Project Objective 12 to accommodate a robust graduate education program with research labs, instructional areas, and office administrative space. If the reduced uses were to instead be absorbed elsewhere on the campus, due to the limited developable space on the campus, other programs would need to be reduced to provide the entire program proposed for the Multi-Use Building. By reducing health care or residential uses in order to accommodate the research, instructional, and office uses, it would then hinder the ability to meet Project Objectives 1, 2, 6, and 10 depending on which uses would be reduced.

Alternatively, building heights could be increased in order to accommodate the full program proposed for the Multi-Use Building, without reducing other programs. However, increasing the height of the other buildings on campus would likely mean buildings would need to be taller than the existing hospital, likely resulting in increased impacts to aesthetics. A second option to retain the full LRDP program while retaining the historic structure would be to reduce the central open space to provide additional developable space available to house the Multi-Use Building uses that

would otherwise be lost. However, this would mean the central open space would not be provided or would be substantially reduced in size, and Project Objective 9 (less able to provide enhanced open space) and/or Project Objective 3 (open space district would be removed or substantially reduced) would not be met. Therefore, this alternative would not fulfill the majority of the proposed 2019 LRDP project objectives. In addition, this alternative would only reduce the one impact to historical resources, and no other significant impacts would be reduced or eliminated under this alternative.

5.2.5 Central Plant Redevelopment Alternative

Under this alternative, the new CUP would be constructed in the same location as the existing plant and would not be relocated as proposed by the 2019 LRDP. The CUP would still contain the proposed cogeneration facility. This alternative was rejected from further analysis because it would be infeasible to construct the new plant in the same location as the existing plant while maintaining service to the existing hospital. During construction of the new hospital, the existing hospital and CUP must both remain open and operational. Therefore, constructing the new CUP in the same location as the existing CUP would not be feasible until the existing CUP is demolished. Under this alternative, hospital staff and patients would be displaced for a time when the old CUP would be demolished to make way for the new CUP constructed, as the existing hospital could not operate without the existing CUP. This alternative was rejected from further analysis because UC San Diego desires to continue to provide acute care services and other critical services at the Hillcrest Campus without interruption. This alternative would also increase the project construction timeline, making it infeasible to bring the hospital in compliance with SB 1953 and online by year 2030.

5.3 Alternatives Analyzed In Detail

This section presents an evaluation of five alternatives to the proposed 2019 LRDP: (1) the No Project Alternative (1995 LRDP), (2) the No Residential Alternative, (3) the No Cogeneration Alternative, (4) the No North Access Driveway Alternative, and (5) Reduced Scale Alternative. For each alternative, a brief description is presented, followed by a summary impact analysis relative to the impacts of the proposed 2019 LRDP analyzed in Chapter 3 of this 2019 LRDP EIR. An assessment of the degree to which each alternative would meet the 2019 LRDP project objectives is also provided.

The No Project Alternative (1995 LRDP) was included for analysis in this section pursuant to Section 15126.6(e) of the CEQA Guidelines. This alternative would not implement the 2019 LRDP and continue to implement the existing 1995 LRDP as the applicable planning document for the Hillcrest Campus. The No Residential Alternative represents an alternative that restricts on-campus population growth as a way to reduce impacts. The No Cogeneration Alternative represents an alternative that would reduce GHG emissions. The No North Access Driveway Alternative represents an alternative that would reduce potential impacts to biological resources. Finally, the

Reduced Scale Alternative represents an alternative that would reduce potential impacts by reducing the amount of development by 50 percent compared to the proposed 2019 LRDP.

5.3.1 No Project Alternative (1995 LRDP)

CEQA requires the No Project Alternative (1995 LRDP) to be addressed in an EIR. Under the No Project Alternative (1995 LRDP), the proposed 2019 LRDP would not be implemented. The 1995 LRDP would remain as the applicable planning document for the Hillcrest Campus, and therefore, the No Project Alternative (1995 LRDP) assumes that development planned in the 1995 LRDP on the campus would continue to occur. Because the 1995 LRDP did not include a GHG Reduction Strategy, the GHG Reduction Strategy that is incorporated into the proposed 2019 LRDP and all other alternatives considered below is not included in the No Project Alternative.

The 1995 LRDP proposed future acquisition of four additional acres to facilitate campus expansion, including both infill sites and sites beyond the existing campus boundaries. Figure 5-1 provides the planned land uses under the 1995 LRDP. Figure 5-1 shows areas of existing development to remain and areas of potential development/redevelopment on the Hillcrest Campus.

Planned development under the No Project Alternative (1995 LRDP) would not allow the existing hospital to meet SB 1953 requirements by 2030, as the 1995 LRDP did not include or allow for the hospital changes and upgrades necessary for compliance with those requirements. Under this alternative, the UC San Diego Medical Center – Hillcrest acute care services would have to be shut down in or before 2030 due to the requirements of SB 1953. The remainder of the Hillcrest Campus would be able to develop as allowed under the 1995 LRDP.

The key differences between the 1995 LRDP and proposed 2019 LRDP are described below:

- The 1995 LRDP called for a maximum increase in the development capacity of the Hillcrest Campus of approximately 660,000 gsf, with a maximum campus development capacity of approximately 1.7 million gsf. As of 2017, the Hillcrest Campus's existing total development capacity is approximately 1.1 million gsf, not including parking. The 2019 LRDP proposes a development increase of approximately 1.6 million gsf over existing conditions, for a maximum campus development capacity of approximately 2.7 million gsf by 2035.
- The 1995 LRDP does not specifically identify residential development goals and does not propose additional residential uses on the Hillcrest Campus. As of 2017, the Hillcrest Campus's existing total residential development includes 21 units totaling approximately 14,000 gsf. The 2019 LRDP proposes 979 net new residential units and approximately 1.2 million gsf of residential/mixed-use development by 2035.
- The 1995 LRDP identified a current (1993) affiliated population of 4,295 and projected a population increase of approximately 1,100 affiliates for the Hillcrest Campus by 2010. The 2019 LRDP identifies an existing (2017) on-campus population of 4,485 and

a projected population increase of up to 2,396 persons by 2035. This includes a projected non-residential population increase of approximately 750 persons and a residential population increase of approximately 1,646 persons.[1]

The two plans also have some similarities as described below:

- The 1995 LRDP called for the provision of a new point of access to the campus to alleviate the burden on Front Street and Arbor Drive, and to improve overall circulation patterns and wayfinding on the campus. A new access driveway off Bachman Place was not specifically mentioned; however, this type of improvement would meet the stated goal of providing a campus access point. However, this improvement was not implemented under the 1995 LRDP and today vehicle access continues to be limited to a single point of entry at the intersection of Front Street and Arbor Drive. The 2019 LRDP proposes to construct a new north access driveway off of Bachman Place just inside the UC San Diego property boundary.
- The 1995 LRDP called for the provision to significantly expand the CUP and improve the utilities infrastructure over time as the Hillcrest Campus evolves. The 2019 LRDP would necessitate an overhaul of the campus's existing utilities and infrastructure system. This unique "reset" scenario would be the Hillcrest Campus's first opportunity in nearly 60 years to devise a new campus-wide structure that would provide redundancy across its systems, improve infrastructure reliability, and promote a more resilient campus overall.

Note that the No Project Alternative (1995 LRDP) would not involve approval of a new LRDP document; in the absence of such an approval, no new mitigation could be placed on the No Project Alternative (1995 LRDP) without additional CEQA review.[2]

5.3.1.1 Impact Analysis (No Project Alternative [1995 LRDP])

Aesthetics. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) has the potential to result in similar but less intensive less than significant impacts related to scenic vistas, conflicts with zoning and regulations governing scenic quality, and light and glare because new development could still continue to occur in accordance with the 1995 LRDP. The No Project Alternative (1995 LRDP) has a planned building envelope of 4 stories in height in the northern mesa area, 11 stories in the central hospital area, and 2–4 stories in the southern mesa area. By contrast, the 2019 LRDP proposes a maximum building height in the Health Care District and Residential District that would not exceed the height of the existing hospital building (200 feet), up to 15 feet in the Open Space District, and up to 60 feet in the Mixed-Use District. Thus,

[1] Because the on-campus housing proposed under the 2019 LRDP would be occupied by UC San Diego affiliates, the projected non-residential and residential populations may overlap, and the combined population of 2,396 persons is likely an overstatement.
[2] Appendix G of the CEQA Guidelines has been revised since the adoption of the 1995 LRDP EIR. Therefore, impact thresholds in the 1995 LRDP EIR differ from this 2019 LRDP EIR.

compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in similar but less intensive less than significant impacts in regard to (1) scenic vistas, (2) conflict with zoning or regulations for scenic quality, and (3) lighting and glare.

Air Quality. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive impacts related to air quality as it would not involve the redevelopment of the entire campus, or any residential development, resulting in less construction-related and operation-related air emissions, and fewer area, stationary, and vehicular sources of operational air emissions than the proposed 2019 LRDP. Compared to the 2019 LRDP, the No Project Alternative (1995 LRDP) would result in similar less than significant impacts in regard to conflict with or obstruction of implementation of the applicable air quality plan. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in reduced impacts associated with a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard. The No Project Alternative (1995 LRDP) does not propose a five-phase construction project to redevelop the Hillcrest Campus and would be unlikely to require Mitigation Measure AIR-2 related to construction emissions from architectural coatings due to simultaneous construction activities. In contrast to the 2019 LRDP, which proposes 1.6 million gsf of net new construction over existing conditions, including up to 1,000 residential units, the No Project Alternative (1995 LRDP) proposes 660,000 gsf of net new construction and no residential units. Therefore, the No Project Alternative (1995 LRDP) would result in reduced impacts and not require mitigation associated with the exposure of sensitive receptors to substantial pollutant concentrations. The significant and unavoidable impact to sensitive receptors during construction would be avoided under this alternative. Similar to the 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less than significant impacts related to odors.

Biological Resources. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive impacts with regard to biological resources. In contrast to the 2019 LRDP, which proposes 1.6 million gsf of net new construction over existing conditions, including up to 1,000 residential units, the No Project Alternative (1995 LRDP) proposes 660,000 gsf of net new construction and no residential units. A large majority of biological permanent and temporary impacts from the 2019 LRDP would be caused by the construction of the new north access driveway. However, as previously stated, the 1995 LRDP called for the provision of an alternative means of emergency access to the campus to alleviate the burden on Front Street and Arbor Drive, and to improve overall circulation patterns and wayfinding on the campus. Therefore, the north access driveway could also potentially be constructed with the 1995 LRDP and the biological impacts associated with that project component would be similar to the 2019 LRDP impacts. The 1995 LRDP identified areas for redevelopment adjacent to natural canyon areas which would have impacts similar to the 2019 LRDP. Thus, compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in similar less than significant

impacts after mitigation related to (1) a substantial adverse effect, either directly or through habitat modifications, on any plant species identified as a candidate, sensitive, or special-status species by the CDFW or USFWS; (2) a substantial adverse effect, either directly or through habitat modifications, on any animal species identified as a candidate, sensitive, or special-status species by the CDFW or USFWS; (3) a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS; and (4) a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means.

Cultural and Tribal Cultural Resources. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in similar but slightly less intensive less than significant impacts with mitigation in regard to cultural and tribal cultural resources because it does not propose complete redevelopment of the entire campus. While the 2019 LRDP proposes the redevelopment of the entire campus, the No Project Alternative (1995 LRDP) identifies specific areas on campus for potential development/redevelopment with many areas identified as existing development to remain. The 2019 LRDP would result in the demolition of one potentially eligible local historical resource located at 101 Dickinson Street; however, the No Project Alternative (1995 LRDP) would also allow demolition of this structure since it is located in an area of potential redevelopment. The 2019 LRDP would result in a potentially significant impact to archaeological resources both on-site and off-site associated with the widening of Bachman Place. Thus, compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in similar significant and unavoidable impacts after mitigation related to historical resources and similar but slightly less intensive less than significant impacts with mitigation related to archaeological resources to on-site resources, human remains, and tribal cultural resources. This alternative would have fewer impacts and would not require mitigation related to off-site archaeological resources.

Energy. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in more intensive impacts with regard to energy. As previously mentioned, the 1995 LRDP called for the provision to significantly expand the CUP and improve the utility infrastructure over time as the campus evolves. Similarly, the 2019 LRDP would necessitate an overhaul of the campus's existing utilities and infrastructure system. However, the 2019 LRDP proposes 1.6 million gsf of net new construction over existing conditions, including up to 1,000 residential units, versus the No Project Alternative (1995 LRDP), which proposes 660,000 gsf of net new construction and no residential units. Therefore, the 2019 LRDP would require a lot more energy overall and a GHG Reduction Strategy has been proposed as part of the 2019 LRDP. Thus, compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in more intensive less than significant impacts in regard to (1) energy resources and (2) a plan for renewable energy or energy efficiency.

Geology and Soils. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive impacts with regard to geology and soils. In contrast to the 2019 LRDP, which proposes 1.6 million gsf of net new construction over existing conditions, including up to 1,000 residential units, the No Project Alternative (1995 LRDP) proposes 660,000 gsf of net new construction and no residential units. Although the 2019 LRDP proposes the redevelopment of the entire campus, the No Project Alternative (1995 LRDP) identifies specific areas on campus for potential development/redevelopment with many areas identified as existing development to remain. The No Project Alternative (1995 LRDP) would have less potential to encounter geology and soils conditions since only a portion of the site is identified for development. Thus, compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in similar but less intensive less than significant impacts in regard to (1) exposure to seismic-related hazards, (2) soil erosion or topsoil loss, (3) geologic stability, and (4) expansive soils. Also, in contrast to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in similar but less intensive less than significant impacts with mitigation in regard to paleontological resources.

GHG Emissions. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in more intensive less intensive impacts with regard to GHG emissions. In contrast to the 2019 LRDP, which proposes 1.6 million gsf of net new construction over existing conditions, including up to 1,000 residential units, the No Project Alternative (1995 LRDP) proposes 660,000 gsf of net new construction and no residential units. The 2019 LRDP proposes 940,000 gsf more new construction than the No Project Alternative (1995 LRDP). Under the No Project Alternative (1995 LRDP) the existing CUP would not be expanded and/or replaced to improve utility infrastructure over time as the campus evolves, which could reduce GHG emissions by incorporating newer technologies. Under the 2019 LRDP, the existing CUP would be replaced by a new CUP that would include a cogeneration unit. The 2019 LRDP would include its GHG Reduction Strategy, which incorporate GHG reduction measures to achieve net zero additional emissions beyond existing conditions, consistent with UC San Diego CAP reduction measures and UC Sustainable Practice Policy provisions designed to reduce GHG emissions, whereas the No Project Alternative (1995 LRDP) does not incorporate such a GHG Reduction Strategy. Thus, in comparison to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in more intensive less than significant impacts with regard to (1) generation of GHG emissions and (2) conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG.

Hazards and Hazardous Materials. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive impacts with regard to hazards and hazardous materials. Under the 2019 LRDP and the No Project Alternative (1995) LRDP, UC San Diego would continue to implement existing health and safety practices and comply with federal, state, and local regulations related to the use, transport, and disposal of hazardous materials.

However, the 2019 LRDP proposes 1.6 million gsf of net new construction over existing conditions, including up to 1,000 residential units, while the No Project Alternative (1995 LRDP) proposes 660,000 gsf of net new construction and no residential units. Since the 2019 LRDP proposes 940,000 gsf more new construction then the No Project Alternative (1995 LRDP), the alternative would result in the need for fewer lane or roadway closures on campus which could interfere with an emergency response and evacuation plan. Thus, compared to the 2019 LRDP, the No Project Alternative (1995 LRDP) would result in similar less than significant impacts in regard to (1) the transport, use, and disposal of hazardous materials; (2) the release of hazardous materials into the environment; (3) hazards to nearby schools; (4) hazards from nearby airports; and (5) wildland fires. Also, the No Project Alternative (1995 LRDP) would result in similar but less intensive less than significant impacts with mitigation with regard to emergency response and evacuation plans.

Hydrology and Water Quality. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in similar but less intensive less than significant impacts with regard to hydrology and water quality. In contrast to the 2019 LRDP, which proposes 1.6 million gsf of net new construction over existing conditions, including up to 1,000 residential units, the No Project Alternative (1995 LRDP) proposes 660,000 gsf of net new construction, which would have the potential increase storm water pollutants, and no residential units. However, the 2019 LRDP would actually reduce total impervious surfaces on the campus by 6 percent, by incorporating natural areas and a central green space into the Hillcrest Campus. Compliance with required regulations would reduce impacts under both scenarios. Thus, in comparison to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in similar less than significant impacts in regard to (1) the violation of any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater water quality, (2) alteration of the existing drainage or hydrology, and (3) conflict with or obstruction of implementation of a water quality control plan or sustainable groundwater management plan.

Land Use and Planning. The No Project Alternative (1995 LRDP) proposes 660,000 gsf of new construction and several similar goals as the 2019 LRDP with regarding to improving access and circulation, as mentioned previously. Thus, in comparison to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in similar less than significant environmental impacts due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Noise. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive impacts with regard to noise. In contrast to the 2019 LRDP, which proposes 1.6 million gsf of net new construction over existing conditions, including up to 1,000 residential units, the No Project Alternative (1995 LRDP) proposes 660,000 gsf of net new construction and no residential units. Although the 2019 LRDP proposes the redevelopment of the entire campus,

the No Project Alternative (1995 LRDP) identifies specific areas on campus for potential development/redevelopment with many areas identified as existing development to remain. Thus, compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in fewer new noise sensitive land uses, decreased noise levels due to roadway noise, and fewer impacts associated with construction noise. This alternative would result in fewer less than significant impacts and less mitigation in regard to the following issues: (1) generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the 2019 LRDP in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies and (2) excessive groundborne vibration or groundborne noise levels. Similar to the 2019 LRDP, this alternative would result in less than significant impacts with respect to exposure to aircraft noise.

Population and Housing. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive impacts with regard to population and housing. The 1995 LRDP identified a current (1993) affiliated population of 4,295 and projected a population increase of approximately 1,100 affiliates for the Hillcrest Campus by 2010. The 2019 LRDP identifies an existing (2017) on-campus population of 4,450 and a projected population increase up to 2,396 persons by 2035. This includes a projected non-residential population increase of approximately 750 persons and a residential population increase of approximately 1,646 persons. Thus, compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive less than significant impacts in regard to (1) inducing of substantial population growth and (2) the displacement of people or housing.

Public Services. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive impacts with regard to public services. As previously mentioned, the No Project Alternative (1995 LRDP) does not propose any residential development, all proposed acquisition sites have been acquired, and the alternative proposes 940,000 gsf less of new construction. Thus, the demand for public services would be less under this alternative. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive less than significant impacts in regard to (1) fire protection services, (2) police protection facilities, and (3) public school facilities.

Recreation. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive impacts with regard to recreation. A smaller population growth would occur under the No Project Alternative (1995 LRDP), thus resulting in similar but less intensive use of existing parks and recreation facilities and creation or expansion of recreational facilities. In comparison to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive less than significant impacts in regard to the deterioration of parks and recreational facilities. Also, the No Project Alternative (1995 LRDP) would result in less intensive less than significant impacts with mitigation in regard to the construction or expansion of recreational facilities.

Transportation. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive impacts with regard to transportation. As previously mentioned, the 1995 LRDP called for the provision of a new point of access to the campus to alleviate the burden on Front Street and Arbor Drive, and to improve overall circulation patterns and wayfinding on the campus. Therefore, the No Project Alternative (1995 LRDP) could propose similar circulation improvements as the 2019 LRDP, such as a new north access driveway, connecting Arbor Drive and Bachman Place, and widening Bachman Place. However, the 2019 LRDP evaluates transportation impacts involving the redevelopment of the entire Hillcrest Campus and adding 1.6 million gsf of net new development, as opposed to the selective redevelopment under the 1995 LRDP resulting in a maximum of 660,000 gsf in net new development.

While the 1995 LRDP EIR, to the extent feasible, mitigates impacts related to circulation system performance to a less than significant level, service levels for roadway segments and intersections have increased since implementation of the 1995 LRDP (SANDAG 2015), and could result in significant and unavoidable impacts. However, this may be unlikely due to the fact that some of the development under the 1995 LRDP has already occurred and is in place. Thus, compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive traffic impacts in regard to circulation system performance. The 2019 LRDP proposes 940,000 gsf more new construction then the No Project Alternative (1995 LRDP), therefore the No Project Alternative (1995 LRDP) would result in the need for fewer lane or roadway closures. As a result, in contrast to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive less than significant impacts in regard to inadequate emergency access. The No Project Alternative (1995 LRDP) would also result in less intensive less than significant impacts in regard to inducing substantial vehicle miles traveled (VMT).

Utilities and Service Systems. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive impacts with regard to utilities and service systems. In contrast to the 2019 LRDP, which proposes 1.6 million gsf of net new construction over existing conditions, including up to 1,000 residential units, the No Project Alternative (1995 LRDP) proposes 660,000 gsf of net new construction and no residential units. Although the 2019 LRDP proposes the redevelopment of the entire campus, the No Project Alternative (1995 LRDP) identifies specific areas on campus for potential development/redevelopment with many areas identified as existing development to remain. The 2019 LRDP would require construction of new, relocated, and expanded potable and recycled water, wastewater, storm water drainage, electric power, natural gas, and telecommunications infrastructure. Under the 2019 LRDP, some facilities are proposed to be constructed through the canyon and the undergrounding of other utility features which would potentially result in significant environmental impacts. Since the No Project Alternative (1995) proposes 940,000 gsf less new construction then the 2019 LRDP, the alternative would not require this new/expanded infrastructure at the same capacity. Thus, in contrast to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive less

than significant impacts with mitigation in regard to new utilities facilities. Also, in contrast to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive less than significant impacts in regard to (1) water supply availability, (2) wastewater treatment capacity, and (3) compliance with solid waste regulations.

Wildfire. Compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in similar impacts with regard to wildfire. Several 2019 LRDP project design features such as the widening of Bachman Place and the construction of a new north access driveway would have a secondary benefit as providing a new fire break in the event of wildfire in the northern canyon areas of the campus. These project features could also be constructed under the No Project Alternative (1995 LRDP). Also, the 2019 LRDP and the No Project Alternative (1995 LRDP) would both follow the City's brush management regulations. However, the 2019 LRDP proposes 940,000 gsf more new construction than the No Project Alternative (1995 LRDP) which would expose less development to potential wildfire risk. In addition, the No Project Alternative (1995 LRDP) would result in the need for less lane or roadway closures on campus which would interfere with an emergency response plan or emergency evacuation plan. Thus, compared to the proposed 2019 LRDP, the No Project Alternative (1995 LRDP) would result in less intensive less than significant impacts with mitigation in regard to an emergency response plan or emergency evacuation plan. Also, due to the reduced development proposed under the No Project Alternative (1995 LRDP), this alternative would result in less intensive less than significant wildfire impacts in regard to (1) pollutant concentrations, (2) the installation or maintenance of associated infrastructure, and (3) flooding or landslides.

5.3.1.2 Ability to Accomplish Project Objectives (No Project Alternative [1995 LRDP])

The No Project Alternative (1995 LRDP) would accomplish some of the 2019 LRDP project objectives (Project Objectives 4, 7, and 8), but not all of the project objectives. The No Project Alternative (1995 LRDP) would not fulfill the objectives that relate to housing, seismic safety requirements, enhancing open space, UC San Diego's vision, and energy efficiency (Project Objectives 1, 2, 3, 5, 6, 9, 10, and 12). Because the No Project Alternative (1995 LRDP) would not meet the seismic safety requirements of SB 1953 by replacing the existing hospital building by 2030 (Project Objective 1), all acute care services on the Hillcrest Campus would shut down in 2030. Objective 11 would not apply to the No Project Alternative. Furthermore, because the 1995 LRDP no longer reflects the current planning goals of the Hillcrest Campus, it would not provide the best framework for the development of the Hillcrest Campus within the context of a community, city, and state that have substantially changed in the past 24 years. In light of the foreseen changes in the demographic, educational, and health care landscape of California, it would also not achieve the best response to facilitate the UC's service to the state. As a result, the

No Project Alternative (1995 LRDP) would reduce health care and educational opportunities in the San Diego region and California, including the only burn center.

5.3.2 No Residential Alternative

This alternative would be the same as the proposed 2019 LRDP with the exception that it would not include the residential component. Currently, the Hillcrest Campus provides 21 residential units totaling 14,000 gsf. The 2019 LRDP proposes to construct up to 1,000 new residential units and demolish the 21 existing residential units for a net increase of 979 new units totaling approximately 1.2 million gsf of new residential development. This alternative would not include the construction of up to 1,000 new residential units and would include the demolition of the existing 21 on-site residential units, resulting in no residential units on the campus. The demolition of the existing residential units is necessary for the implementation of the transportation corridor improvements, including the extension of First Avenue, to serve the new hospital and Health Care District. Therefore, the No Residential Alternative would reduce total campus development by 1.2 million gsf. This alternative would still construct the 1.6 million gsf of health care program space. Without the residential component, the population increase on the campus under the No Residential Alternative would be limited to approximately 750 persons instead of up to 2,396 under the 2019 LRDP. The GHG Reduction Strategy developed for the 2019 LRDP would also be implemented under this alternative.

5.3.2.1 Impact Analysis (No Residential Alternative)

Aesthetics. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in similar but less intensive less than significant impacts related to aesthetics. Under the proposed 2019 LRDP, residential buildings would be as tall as the existing hospital (up to 200 feet) and replace one to three story high buildings. Therefore, from residences west of the campus, the proposed residential buildings would result in a noticeable, although not significant, change in the building height and mass in the western part of the campus although they would be located in the midground view. Changes in building height and mass would not occur to this extent under the No Residential Alternative as the Replacement Hospital would be similar in height to the existing hospital. Thus, compared to the proposed 2019 LRDP, the No Residential Alternative would result in similar but less intensive less than significant impacts in regard to (1) scenic vistas and (2) lighting and glare, and less than significant impact with mitigation in regards to degrading existing community character or conflict with zoning and regulations governing scenic quality.

Air Quality. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in a similar less than significant impact related to conflict with or obstruction of implementation of the applicable air quality plan because it would construct approximately 1.2 million gsf less development. Without the residential component, the population increase on the campus would be limited to 750 persons, instead of 2,396 under the 2019 LRDP. This would amount to a reduction

in air pollutant emissions associated with residential construction, operations and vehicle trips. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in a similar less than significant impact related to a conflict with or obstructing implementation of the applicable air quality plan. Because it proposes less development than the 2019 LRDP, the No Residential Alternative would not conflict with the RAQS or the SIP. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in a similar (but with less mitigation) less than significant construction impact after mitigation related to the net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard since the alternative would construct 1.2 million gsf less development. Compared to the proposed 2019 LRDP, the No Residential Alternative would reduce on-campus development, which would reduce the potential for the 2019 LRDP to expose sensitive receptors to substantial pollutant concentrations during construction; however, Mitigation Measure AIR-3 may still be required, and a significant and unavoidable impact may still occur under this alternative. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in a similar less than significant impact related to other emissions (such as those leading to odors) adversely affecting a substantial number of people since odor impacts are not typically associated with residential uses.

Biological Resources. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in similar but less intensive impacts related to biological resources because the residential component would include permanent and temporary impacts to sensitive habitat. The construction of the residential component would have the potential to impact nesting birds, Diegan coastal sage scrub, southern willow scrub (disturbed), eucalyptus woodland, and non-vegetated channel. Non-residential development under both scenarios also has the potential to impact these resources. The No Residential Alternative would construct 1.2 million gsf less development and, therefore, require less mitigation related to biological resources. However, similar to the 2019 LRDP, mitigation would still be required due to similar biological impacts from development of the rest of the campus. Thus, in comparison to the proposed 2019 LRDP, the No Residential Alternative would result in a similar less intensive less than significant impacts with mitigation in regard to (1) candidate, sensitive, or special-status plant species; (2) candidate, sensitive, or special-status animal species; (3) riparian habitat and other sensitive natural communities; and (4) wetlands.

Cultural and Tribal Cultural Resources. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in similar but less intensive impacts related to cultural and tribal cultural resources because it would construct approximately 1.2 million gsf less development. However, mitigation would still be required due to similar cultural resources impacts from development of the rest of the campus. Mitigation Measures CUL-2A and CUL-2B would be implemented to reduce potentially significant impacts on the Hillcrest Campus to unknown archaeological resources, human remains, and tribal cultural resources during project construction to a less than significant level. Similar to the 2019 LRDP, the No Residential Alternative would require

Mitigation Measure CUL-1, which would reduce impacts to the locally eligible historical resource located at 101 Dickinson, although not to below a level of significance. Thus, the No Residential Alternative would result in similar significant and unavoidable impacts to historical resources. Also, in comparison to the proposed 2019 LRDP, the No Residential Alternative would result in similar less than significant impacts after mitigation in regard to (1) archaeological resources, (2) human remains, and (3) tribal cultural resources.

Energy. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in less intensive impacts related to energy because it would involve the redevelopment of the Hillcrest Campus, with the exception of the 1.2 million gsf residential component. The GHG Reduction Strategy developed for the 2019 LRDP would also be implemented under this alternative. Thus, compared to the 2019 LRDP, the No Residential Alternative would result in similar but less intensive less than significant impacts related to (1) the wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation and (2) conflict with or obstruction of a state or local plan for renewable energy or energy efficiency.

Geology and Soils. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in less intensive impacts related to geology and soils because it would construct approximately 1.2 million gsf less development. However, mitigation would still be required due to similar geological impacts from development of the rest of the campus. Thus, the No Residential Alternative would result in less intensive less than significant impacts in regard to (1) exposure to seismic-related hazards, (2) soil erosion or topsoil loss, (3) geologic stability, and (4) expansive soils. Also, in comparison to the proposed 2019 LRDP, the No Residential Alternative would result in less intensive less than significant impacts with mitigation in regard to paleontological resources since project grading and excavation would impact underlying formations with a moderate to high potential to contain paleontological resources, requiring mitigation.

GHG Emissions. The GHG Reduction Strategy developed for the 2019 LRDP would also be implemented under this alternative. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in less intensive impacts related to GHG emissions because it would involve the redevelopment of the Hillcrest Campus, with the exception of the 1.2 million gsf residential component. Without the residential component, the population increase on the campus would be limited to 750 persons, instead of 2,396 under the 2019 LRDP. This would amount to a reduction in GHG emissions associated with residential construction, operations and vehicle trips. Thus, compared to the 2019 LRDP, the No Residential Alternative would result in less intensive less than significant impacts related to (1) generation of GHG emissions that would have a significant impact on the environment and (2) conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

Hazards and Hazardous Materials. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in less intensive impacts related to hazards and hazardous materials because it would involve the redevelopment of the Hillcrest Campus, with the exception of the 1.2 million gsf residential component. The 2019 LRDP residential component would involve the use of potentially hazardous materials typical of residential uses, including cleaning fluids, detergents, solvents, adhesives, sealers, paints, fuels/lubricants and fertilizers and/or pesticides for landscaping. The additional uses may result in an increase in hazardous chemical waste generation and disposal. Additionally, new residential uses would be constructed along the western boundary of the campus under the proposed 2019 LRDP adjacent to these natural canyon areas, which could expose its occupants to hazards from wildfires. Thus, compared to the 2019 LRDP, the No Residential Alternative would result in similar but less intensive less than significant impacts related to (1) a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; (2) release of hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; and (3) result of an aircraft safety hazard or excessive noise for people residing or working in the project area. Similar to the 2019 LRDP, existing aging buildings would need to be sampled and tested for the presence of hazardous materials through the implementation of Mitigation Measure HAZ-2A. Additionally, the potential to encounter contaminated groundwater and soil during construction activities would exist and require the implementation of Mitigation Measures HAZ 2B–2D. Also, in the event that the construction of a project requires a lane or roadway closure on campus, implementation of Mitigation Measure HAZ-5 would be required. Therefore, in comparison to the 2019 LRDP, the No Residential Alternative would result in similar less than significant impacts with mitigation to emergency release of hazardous materials into the environment and response and evacuation plans.

Hydrology and Water Quality. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in similar but less intensive impacts related to hydrology and water quality because it would involve the redevelopment of the Hillcrest Campus, with the exception of the 1.2 million gsf residential component. As a result, the No Residential Alternative would require less cut and fill and pollutants associated with overall construction activities that could result in water quality impacts. Thus, compared to the 2019 LRDP, the No Residential Alternative would result in less intensive less than significant impacts related to (1) water quality, (2) alteration of existing site draining or hydrology, and (3) conflict with or obstruction of implementation of a water quality control plan or sustainable groundwater management plan.

Land Use and Planning. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in similar impacts related to land use and planning because it would involve the redevelopment of the Hillcrest Campus, with the exception of the 1.2 million gsf residential component. The No Residential Alternative would call for increases in residential development, the provision of housing close to employment centers, and compact development, which the No

Residential Alternative would not provide. Thus, compared to the 2019 LRDP, the No Residential Alternative would result in similar less than significant impacts related to conflict with applicable land use plans, policies, and regulations.

Noise. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in less intensive impacts related to noise because it would not involve the 1.2 million gsf residential component of the 2019 LRDP. Without the residential component, the population increase on the campus would be limited to 750 persons, instead of 2,396 under the 2019 LRDP. This would amount to a reduction in noise levels associated with residential construction, operations and vehicle trips. However, Mitigation Measures NOI-1A, NOI-1B, NOI-1C, NOI-1D, NOI-2A, and NOI-2B would still be required to minimize construction and operational impacts associated with the remainder of the proposed campus development. Thus, in comparison to the 2019 LRDP, the No Residential Alternative would result in similar but less intensive less than significant impacts with mitigation in regard to (1) exceedance of noise standards and (2) excessive groundborne vibration or noise. Also, in comparison to the 2019 LRDP, the No Residential Alternative would result in similar but less intensive less than significant impacts in regard to aircraft noise. Similar to the 2019 LRDP, the No Residential Alternative would incorporate construction equipment noise mitigation to reduce impacts associated with excessive groundborne vibration or noise; however, the impact would still remain temporarily significant and unavoidable.

Population and Housing. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in less intensive less than significant impacts related to population and housing because it would involve the redevelopment of the Hillcrest Campus, with the exception of the 1.2 million gsf residential component. Without the residential component, the population increase on the campus would be limited to 750 persons, instead of 2,396 under the 2019 LRDP. The No Residential Alternative would include the demolition of the 21 existing residential units on campus and would not replace those units. Thus, compared to the 2019 LRDP, the No Residential Alternative would result in similar but less intensive less than significant impacts in regard to inducing of substantial population growth. The No Residential Alternative would include the demolition of the 21 existing residential units on campus and would not replace those units. Therefore, in contrast to the 2019 LRDP, the No Residential Alternative would result in similar but more intensive less than significant impacts in regard to the displacement of people or housing.

Public Services. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in less intensive impacts related to public services because it would involve the redevelopment of the Hillcrest Campus, with the exception of the 1.2 million gsf residential component. Without the residential component, the population increase on the campus would be limited to 750 persons, instead of 2,396 under the 2019 LRDP. The reduced population growth would reduce the demand for public services under this alternative. Thus, compared to the 2019 LRDP, the No Residential Alternative would result in similar but less intensive less than significant

impacts in regard to (1) fire protection facilities, (2) police protection facilities, and (3) public school facilities.

Recreation. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in less intensive impacts related to recreation because it would involve the redevelopment of the Hillcrest Campus, with the exception of the 1.2 million gsf residential component. Without the residential component, the population increase on the campus would be limited to 750 persons, instead of 2,396 under the 2019 LRDP. Thus, the demand for recreational facilities would decrease under this alternative. However, as mentioned in Section 3.14, affiliates who study or work on campus but live off campus may use the public recreational facilities in the neighborhoods surrounding the campus. Thus, compared to the 2019 LRDP, the No Residential Alternative would result in less intensive less than significant impacts in regard to the deterioration of parks and recreational facilities. The No Residential Alternative would include the construction of the approximately 40,000 gsf Wellbeing Center and the development of the proposed publicly accessible open space and accompanying facilities. Since the No Residential Alternative would still involve recreational development, applicable construction mitigation measures from Sections 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.11, and 3.15 of this 2019 LRDP EIR would reduce impacts related to construction of new on-campus recreational facilities. Therefore, in comparison to the 2019 LRDP, the No Residential Alternative would result in similar but less intensive less than significant impacts with mitigation in regard to the construction or expansion of recreational facilities.

Transportation. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in less intensive impacts related to transportation because it would involve the redevelopment of the Hillcrest Campus, with the exception of the 1.2 million gsf residential component. Under the 2019 LRDP, the proposed residential uses would produce approximately 4,000 daily auto trips (roundtrips) out of the total 13,074 daily auto trips. The reduction in residential land uses would reduce the operational vehicle trips under this alternative to 9,074 and, therefore, could reduce the need for some mitigation measures identified for the 2019 LRDP. Thus, compared to the 2019 LRDP, the No Residential Alternative would result in similar but less intensive significant and unavoidable impacts in regard to circulation system performance. Also, in comparison to the 2019 LRDP, the No Residential Alternative would result in more intensive less than significant impacts in regard to inducing of substantial VMT since VMT would be increased at a regional level under this alternative due to elimination of the on-site residential units. Similar to the 2019 LRDP, in the event that the construction of a project requires a lane or roadway closure on campus, implementation of Mitigation Measure HAZ-5 would be required. Therefore, regarding inadequate emergency access, in comparison to the 2019 LRDP, the No Residential Alternative would result in similar but less intensive less than significant impacts after mitigation.

Utilities. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in less intensive impacts related to utilities because it would involve the redevelopment of the

Hillcrest Campus, with the exception of the 1.2 million gsf residential component. Without the residential component, the population increase on the campus would be limited to 750 persons, instead of 2,396 under the 2019 LRDP. The reduction in on-campus population and total development square footage would reduce demand for utilities, including water, wastewater, storm drainage, electric power, natural gas and telecommunications infrastructure, under this alternative. Although, the demand for new utilities would be reduced, potentially significant impacts would be associated with the construction on new utilities infrastructure. The No Residential Alternative would still involve construction of the remainder of the campus development and, therefore, mitigation measures identified in Sections 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.11, and 3.15 of this 2019 LRDP EIR would be implemented to reduce impacts, similar to the 2019 LRDP. Thus, compared to the 2019 LRDP, the No Residential Alternative would result in similar but less intensive less than significant impacts with mitigation in regard to new utilities facilities. Also, in comparison to the 2019 LRDP, the No Residential Alternative would result in similar but less intensive less than significant impacts in regard to (1) water supply availability, (2) wastewater treatment capacity, and (3) compliance with solid waste regulations.

Wildfire. Compared to the proposed 2019 LRDP, the No Residential Alternative would result in similar impacts related to wildfire because it would involve the redevelopment of the Hillcrest Campus, with the exception of the 1.2 million gsf residential component, and would still propose development in a very high fire severity area. Thus, compared to the 2019 LRDP, the No Residential Alternative would result in similar less than significant impacts with mitigation in regard to substantial impairment of an adopted emergency response plan or emergency evacuation plan. Also, in comparison to the 2019 LRDP, the No Residential Alternative would result in similar less than significant impacts in regard to (1) pollutant concentrations, (2) the installation or maintenance of associated infrastructure, and (3) flooding or landslides.

5.3.2.2 Ability to Accomplish Project Objectives (No Residential Alternative)

The No Residential Alternative would accomplish Project Objectives 1, 4, 7, 8, 9, 10, 11, and 12. The No Residential Alternative would not fulfill the objectives that relate to the residential component of the 2019 LRDP (Project Objectives 2, 3, 5, and 6). Project Objective 2 would not be fulfilled because the Hillcrest Campus would not provide live-work-learn housing for UC San Diego affiliates under this alternative. Project Objective 3 would not be fulfilled by the No Residential Alternative because one of the proposed districts is residential. The No Residential Alternative would not fulfill Project Objective 5 as the residential component of the 2019 LRDP would provide a revenue-generating land use that would partially support the financial feasibility of the proposed campus redevelopment by largely funding the initial infrastructure requirements (e.g., road and utility system improvements). Without the proposed housing density, the cost of the infrastructure required to support the new hospital, Outpatient Pavilion, and medical offices cannot be absorbed by the 2019 LRDP, and the remaining components of the 2019 LRDP would

be financially infeasible. Project Objective 6 would not be fulfilled since the No Residential Alternative would not construct up to 1,000 residential units for UC San Diego affiliates. As the No Residential Alternative would not meet Project Objective 3, 5, and 6, less development would occur, a smaller population increase would occur, and therefore, less intensive impacts related to all CEQA Appendix G issues would occur.

5.3.3 No Cogeneration Alternative

This alternative would be the same as the proposed 2019 LRDP with the exception that the CUP would not utilize cogeneration (also known as combined heat and power, using natural gas). Under this alternative, the Hillcrest Campus would incorporate traditional boilers with the use of renewable energy. The No Cogeneration Alternative would otherwise be the same as under the 2019 LRDP, including the incorporation of the GHG Reduction Strategy.

Note, for the impact analysis below, the same mitigation measures identified for the proposed 2019 LRDP would apply to the No Cogeneration Alternative.

5.3.3.1 Impact Analysis (No Cogeneration Alternative)

Aesthetics. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar impacts related to aesthetics as the same development would occur, with the exception of utilizing traditional boilers over cogeneration as the primary electricity source on campus. Thus, compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar less than significant impacts in regard to (1) scenic vistas and (2) lighting and glare and less than significant impact with mitigation in regards to degrading existing community character or conflict with zoning and regulations governing scenic quality.

Air Quality. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar impacts related to air quality as the same development would occur, with the exception of utilizing traditional boilers over cogeneration at the CUP as the primary electricity source on campus. Using traditional boilers, this alternative would reduce operational air quality emissions compared to the 2019 LRDP. Thus, the No Cogeneration Alternative would result in less intensive less than significant impacts in regard to (1) conflict with or obstruction of implementation of the applicable air quality plan and (4) odors from fewer operational emissions. Similar to the 2019 LRDP, the No Cogeneration Alternative would require Mitigation Measures AIR-2 through AIR-3 to reduce construction and operational air quality impacts. Thus, in comparison to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar less than significant impacts with mitigation in regard to a cumulative increase in criteria pollutant emissions and similar significant and unavoidable impacts during construction in regard to exposure of sensitive receptors.

Biological Resources. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar impacts related to biological resources as the same development would

occur, with the exception of utilizing traditional boilers over cogeneration at the CUP as the primary electricity source on campus. This alternative would not change the proposed development footprint identified for the 2019 LRDP, which would result in potential impacts to biological resources. Therefore, the No Cogeneration Alternative would result in similar less than significant impacts after mitigation in regard to (1) candidate, sensitive, or special-status plant species; (2) candidate, sensitive, or special-status animal species; (3) riparian habitat and other sensitive natural communities; and (4) wetlands.

Cultural and Tribal Cultural Resources. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar impacts related to cultural and tribal cultural resources as the same development would occur, with the exception of utilizing traditional boilers over cogeneration at the CUP as the primary electricity source on campus. This alternative would not change the proposed development footprint identified for the 2019 LRDP, which would result in potential impacts to cultural and tribal cultural resources. Thus, the No Cogeneration Alternative would result in similar less than significant impacts after mitigation in regard to (1) historical resources, (2) archaeological resources, (3) human remains, and (4) tribal cultural resources.

Energy. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in reduced impacts related to use of energy sources that generate GHG emissions. The GHG Reduction Strategy estimated energy-related GHG emissions of both the No Cogeneration Alternative and the 2019 LRDP (identified in the GHG Reduction Strategy as the "Cogeneration Alternative"). At buildout of the No Cogeneration Alternative, GHG emissions from the use of traditional boilers, combined with renewable energy sources purchased through the UC Regents Direct Access Program, would yield emissions of 4,690 MT CO_2e. In contrast, operation of the cogeneration facility is calculated to result in emissions of 22,576 MT CO_2e under the 2019 LRDP because more energy would be produced on campus, rather than purchased through the carbon-free UC Regents Direct Access Program. The 2019 LRDP would have greater operational energy GHG emissions at buildout then the No Cogeneration Alternative. On-campus natural gas consumption would be higher under the 2019 LRDP because the cogeneration facility would use natural gas on-site to produce electricity, and because cogeneration is less efficient in producing heat compared to traditional boilers. However, energy demand from operation of campus facilities other than the CUP would be the same under this alternative compared to the 2019 LRDP. Additionally, because the No Cogeneration Alternative would not have the ability to produce electricity from cogeneration as proposed under the 2019 LRDP and would rely on purchased electricity, this alternative would provide reduced redundancy in campus power in the event of an emergency that affects the SDG&E power grid. The GHG Reduction Strategy developed for the 2019 LRDP would also be implemented under this alternative. As such, the GHG Reduction Strategy measures intended to reduce campus building energy demand would be the same as the 2019 LRDP under this alternative. Therefore, the No Cogeneration Alternative would result in similar less than significant impacts to the 2019 LRDP in regard to the wasteful, inefficient, or

unnecessary consumption of energy resources during project construction or operation. However, because the No Cogeneration Alternative would use more renewable energy, it would result is less intensive less than significant impacts related to conflict with or obstruction of a state or local plan for renewable energy or energy efficiency.

Geology and Soils. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar impacts related to geology and soils as the same development would occur, with the exception of utilizing traditional boilers over cogeneration at the CUP as the primary electricity source on campus. This alternative would not change the proposed development footprint identified for the 2019 LRDP, which would avoid impacts to geology and soils through compliance with the CBC and other applicable regulations. Thus, the No Cogeneration Alternative would result in similar less than significant impacts in regard to (1) exposure to seismic-related hazards, (2) soil erosion or topsoil loss, (3) geologic stability, and (4) expansive soils. Also, in comparison to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar less than significant impacts with mitigation in regard to paleontological resources, since project grading and excavation would impact underlying formations with a moderate to high potential to contain paleontological resources, requiring mitigation.

GHG Emissions. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in lesser impacts related to GHG emissions. With implementation of the GHG Reduction Strategy, at full buildout under No Cogeneration Alternative, total GHG emissions related to the campus are anticipated to be 25,030 MT CO_2e with the inclusion of the GHG reduction measures. In comparison, under the proposed 2019 LRDP with cogeneration, and implementation of the GHG Reduction Strategy, total emissions related to the campus are anticipated to be 38,597 MT CO2e with the inclusion of the GHG reduction measures. Calculated GHG emissions under the 2019 LRDP with cogeneration are higher than the calculated emissions under the No Cogeneration Alternative; however, both are below the GHG reduction target of 47,486 MT CO_2e. The higher emissions under the 2019 LRDP compared to the No Cogeneration Alternative can be attributed to the fact that the cogeneration unit is less efficient in producing heat compared to traditional boilers and less energy would be purchased from the carbon-free UC Regents Direct Access Program. The 2019 LRDP also involves combustion of natural gas, whereas under the No Cogeneration Alternative the traditional boilers would use renewable electricity from the UC Regents Direct Access Program. Thus, in comparison to the proposed 2019 LRDP, the No Cogeneration Alternative would result in less intensive less than significant impacts in regard to (1) generation of GHG emissions that would have a significant impact on the environment and (2) conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

Hazards and Hazardous Materials. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar impacts related to hazards and hazardous materials as the same

development would occur, with the exception of utilizing traditional boilers over cogeneration at the CUP as the primary electricity source on campus. This alternative would not change the proposed development footprint identified for the 2019 LRDP, or the types of hazardous materials that would be transported, used, and disposed of on campus. Thus, compared to the 2019 LRDP, the No Cogeneration Alternative would result in similar less than significant impacts related to (1) a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; (2) release of hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; and (3) result in an aircraft safety hazard or excessive noise for people residing or working in the project area. Similar to the 2019 LRDP, existing aging buildings would need to be sampled and tested for the presence of hazardous materials through the implementation of Mitigation Measure HAZ-2A. Also, the potential to encounter contaminated groundwater and soil during construction activities would exist and require the implementation of Mitigation Measures HAZ 2B–2D. In addition, in the event that the construction of a project requires a lane or roadway closure on campus, implementation of Mitigation Measure HAZ-5 would be required. Therefore, in comparison to the 2019 LRDP, the No Cogeneration Alternative would result in similar less than significant impacts with mitigation to emergency release of hazardous materials into the environment and response and evacuation plans.

Hydrology and Water Quality. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar impacts related to hydrology and water quality as the same development would occur, with the exception of utilizing traditional boilers over cogeneration at the CUP as the primary electricity source on campus. This alternative would not change the proposed development footprint identified for the 2019 LRDP, or the proposed hydrology of the site and types of water quality pollutants that may be generated. Thus, similar to the proposed 2019 LRDP, the No Cogeneration Alternative would result in less than significant impacts in regard to (1) water quality, (2) site drainage and hydrology, and (3) conflict with or obstruction of implementation of a water quality control plan or sustainable groundwater management plan.

Land Use and Planning. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar impacts related to land use and planning as the same development would occur, with the exception of utilizing traditional boilers over cogeneration at the CUP as the primary electricity source on campus. This alternative would not change the proposed development footprint identified for the 2019 LRDP, or the types or intensity of land uses proposed for the campus. Thus, compared to the 2019 LRDP, the No Cogeneration Alternative would result in similar less than significant impacts related to conflicts with applicable land use plans, policies, and regulations.

Noise. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in less intensive impacts related to noise because traditional boilers emit less noise than cogeneration

facilities and would amount to a reduction in noise levels associated with operations. However similar to the 2019 LRDP, the No Cogeneration Alternative would have the potential to result in significant excessive noise levels from construction, operation of HVAC equipment, and exposure of sensitive interior uses to stationary noise sources, which would result in a significant impact, and Mitigation Measures NOI-1A, NOI-1B, NOI-1C, NOI-1D, NOI-2A, and NOI-2B would still be required to minimize construction and operational impacts associated with the proposed campus development. Construction impacts would remain significant and unavoidable for both the 2019 LRDP and the No Cogeneration Alternative. Similar to the 2019 LRDP, the No Cogeneration Alternative would incorporate construction equipment noise mitigation to reduce impacts associated with excessive groundborne vibration or noise; however, the impact would still remain temporarily significant and unavoidable. Also, the No Cogeneration Alternative would result in similar less than significant impacts in regard to aircraft noise.

Population and Housing. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar impacts related to population and housing as the same development would occur, with the exception of utilizing traditional boilers over cogeneration at the CUP as the primary electricity source on campus. This alternative would not change the types or intensity of land uses proposed for the campus or the projected campus population under buildout of the 2019 LRDP. Thus, compared to the 2019 LRDP, the No Cogeneration Alternative would result in similar less than significant impacts related to (1) inducing of substantial population growth and (2) the displacement of people or housing.

Public Services. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar impacts related to public services as the same development would occur, with the exception of utilizing traditional boilers over cogeneration at the CUP as the primary electricity source on campus. This alternative would not change the types or intensity of land uses proposed for the campus or the projected campus population under buildout of the 2019 LRDP. Thus, the same demand for public services identified for the 2019 LRDP would occur under this alternative. The No Cogeneration Alternative would result in similar less than significant impacts in regard to (1) fire protection facilities, (2) police protection facilities, and (3) public school facilities.

Recreation. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar impacts related to recreation as the same development would occur, with the exception of utilizing traditional boilers over cogeneration at the CUP as the primary electricity source on campus. This alternative would not change the types or intensity of land uses proposed for the campus or the projected campus population under buildout of the 2019 LRDP. Thus, the same demand for recreational facilities identified for the 2019 LRDP would occur under this alternative. Thus, compared to the 2019 LRDP, the No Cogeneration Alternative would result in similar less than significant impacts in regard to the deterioration of parks and recreational facilities. Similar to the 2019 LRDP, the No Cogeneration Alternative would require applicable construction

mitigation measures from Sections 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.11, and 3.15 of this 2019 LRDP EIR, which would reduce impacts related to construction of new on-campus recreational facilities. Therefore, in comparison to the 2019 LRDP, the No Cogeneration Alternative would result in similar less than significant impacts with mitigation in regard to the construction or expansion of recreational facilities.

Transportation. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar impacts related to transportation as the same development would occur, with the exception of utilizing traditional boilers over cogeneration at the CUP as the primary electricity source on campus. This alternative would not change the types or intensity of land uses proposed for the campus under buildout of the 2019 LRDP. Thus, the same volume of traffic generation identified for the 2019 LRDP would occur under this alternative. Thus, compared to the 2019 LRDP, the No Cogeneration Alternative would result in similar significant and unavoidable impacts in regard to circulation system performance. Also, the No Cogeneration Alternative would result in similar less than significant impacts in regard to inducing substantial vehicle miles traveled. Similar to the 2019 LRDP, in the event that the construction of a project requires a lane or roadway closure on campus, implementation of Mitigation Measure HAZ-5 would be required. Therefore, in comparison to the 2019 LRDP, the No Cogeneration Alternative would result in similar less than significant impacts after mitigation in regard to inadequate emergency access.

Utilities. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar impacts related to utilities as the same development would occur, with the exception of utilizing traditional boilers over cogeneration at the CUP as the primary electricity source on campus. This alternative would not change the types or intensity of land uses proposed for the campus or the projected campus population under buildout of the 2019 LRDP. Thus, the same demand for utilities infrastructure and treatment identified for the 2019 LRDP would occur under this alternative. Thus, compared to the 2019 LRDP, the No Cogeneration Alternative would result in similar less than significant impacts with mitigation in regard to (1) new utilities facilities, (2) water supply availability, (3) wastewater treatment capacity, and (4) compliance with solid waste regulations.

Wildfire. Compared to the proposed 2019 LRDP, the No Cogeneration Alternative would result in similar impacts related to wildfire as the same development would occur, with the exception of utilizing traditional boilers over cogeneration at the CUP as the primary electricity source on campus. This alternative would not change the proposed development footprint identified for the 2019 LRDP, or the types or intensity of land uses proposed for the campus. Thus, the same wildfire risk identified for the 2019 LRDP would occur under this alternative. Thus, compared to the 2019 LRDP, the No Cogeneration Alternative would result in similar less than significant impacts with mitigation in regard to substantially impairing an adopted emergency response plan or emergency evacuation plan since temporary roadway closures under this alternative would have the potential to impact emergency response and evacuation plans, requiring mitigation. Also, in comparison to

the 2019 LRDP, the No Cogeneration Alternative would result in similar less than significant impacts in regard to (1) pollutant concentrations, (2) the installation or maintenance of associated infrastructure, and (3) flooding or landslides.

Ability to Accomplish Project Objectives (No Cogeneration Alternative)

The No Cogeneration Alternative would accomplish most of the 2019 LRDP objectives because it would consist of the same project with the exception that its electrical system would use traditional boilers instead of cogeneration. However, it would not meet Project Objective 10 because the No Cogeneration Alternative would not provide an energy solution that is cost effective, redundant, and energy efficient to support the acute care hospital and related medical facilities. Cogeneration provides more redundancy than the traditional boiler method because the campus could continue to produce energy over a longer period in the event of an emergency that affects the SDG&E grid. The CUP under the 2019 LRDP would provide a critical power source in the case of an emergency or disaster situation, whereas the No Cogeneration Alternative would rely solely on emergency generators if power from SDG&E were lost. The proposed cogeneration plant under the 2019 LRDP would provide increased energy redundancy for the campus in support of its community and regionally supporting acute care services. In addition, the produced electricity by a cogeneration unit could save energy costs associated with electricity purchase because less energy would need to be purchased from the UC Regents Direct Access Program. Therefore, the No Cogeneration Alternative would meet all but one of the 2019 LRDP objectives and result in less intensive less than significant impacts related to air quality, GHG emissions, and energy.

5.3.4 No North Access Driveway Alternative

This alternative would be the same as the proposed 2019 LRDP with the exception that it would not construct the north access driveway. Under the proposed 2019 LRDP, the new north access driveway would be constructed starting at the northern part of Bachman Place just inside the UC San Diego property boundary. The new road would follow the slope to the northern edge of the mesa, providing an alternate vehicle, pedestrian and bicycle route to access the campus. Converting this existing dirt and gravel access road in the canyon bottom into a functional two-way road with vehicle, pedestrian, and bicycle amenities would help ease the traffic burden on existing neighborhood streets and offer a new access point to underground parking for the Residential District and service access to the future hospital/Health Care District. This alternative would not construct the new road and was identified to reduce impacts associated with the new road. The No North Access Driveway Alternative would reduce impacts to biological resources, cultural resources, and tribal cultural resources compared to the 2019 LRDP.

5.3.4.1 Impact Analysis (No North Access Driveway Alternative)

Aesthetics. Compared to the proposed 2019 LRDP, the No Access Driveway Alternative would result in similar impacts related to aesthetics, as the same development would occur, with the

exception of the north access driveway. Under the 2019 LRDP, a proposed retaining wall would be constructed as part of the proposed north access driveway and be located on the western side of Bachman Place, north of the proposed north access driveway. The proposed retaining wall reaches approximately 42 feet at its peak height. The top of this wall could be visible to motorists traveling northward on Bachman Place but would be more prevalent to motorists traveling south up the hill on Bachman Place. The retaining wall could also impact the natural vegetation component of the viewshed through the introduction of this structure. Without the north access driveway component, this retaining wall would not impact the viewshed along Bachman Place. Thus, compared to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in similar but less intensive less than significant impacts in regard to (1) scenic vistas and (2) lighting and glare and less than significant with mitigation regarding degradation of existing community character or conflict with zoning and regulations governing scenic quality

Air Quality. Compared to the proposed 2019 LRDP, the No Access Driveway Alternative would result in similar impacts related to air quality as the same development would occur, with the exception of the north access driveway. Reduced construction emissions may occur compared to the 2019 LRDP because the north access driveway would not be constructed; however, similar operational emissions would be expected to occur. Thus, the No North Access Driveway Alternative would result in similar less than significant impacts in regard to conflict with or obstruction of implementation of the applicable air quality plan. Also, in comparison to the proposed 2019 LRDP, the No North Access Driveway would result in similar less than significant impacts with mitigation in regard to (1) resulting in a cumulative increase in criteria pollutant emissions and (2) odors. This alternative would also result in similar significant and unavoidable impacts during construction in regard to exposure of sensitive receptors.

Biological Resources. Compared to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in less intensive impacts related to biological resources as the same development would occur, with the exception of the north access driveway. Under the 2019 LRDP, construction of the north access driveway would include permanent and temporary impacts to sensitive Diegan coastal sage scrub, southern willow scrub disturbed, sensitive non-native grassland, non-sensitive eucalyptus woodland, sensitive Diegan coastal sage scrub, sensitive southern willow scrub (disturbed), and sensitive non-native grassland. Although the No North Access Driveway Alternative would reduce biological resources impacts, mitigation would still be required due to similar biological resources impacts from development of the rest of the campus. Thus, in comparison to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in a similar less intensive less than significant impacts with mitigation in regard to (1) candidate, sensitive, or special-status plant species; (2) candidate, sensitive or special-status animal species; (3) riparian habitat and other sensitive natural communities; and (4) wetlands.

Cultural and Tribal Cultural Resources. Compared to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in less intensive impacts related to cultural and tribal cultural resources as the same development would occur, with the exception of the north access driveway. However, mitigation would still be required due to similar cultural resources impacts from development of the rest of the campus. Mitigation Measures CUL-2A and CUL-2B would be implemented to reduce potentially significant impacts on the Hillcrest Campus to unknown archaeological resources, human remains, and tribal cultural resources during project construction to a less than significant level. Similar to the 2019 LRDP, the No North Access Driveway Alternative would require Mitigation Measure CUL-1, which would reduce impact to the locally eligible historical resource located at 101 Dickinson, although not to below a level of significance. Thus, the No North Access Driveway Alternative would result in similar significant and unavoidable impacts to historical resources. Also, in comparison to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in a similar but less intensive less than significant impacts after mitigation in regard to (1) archaeological resources, (2) human remains, and (3) tribal cultural resources.

Energy. Compared to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in similar impacts related to energy as the same development would occur, with the exception of the north access driveway. The energy demand for this alternative would be the same as for the 2019 LRDP. Thus, in comparison to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in similar less than significant impacts in regard to (1) the wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation and (2) conflict with or obstruction of a state or local plan for renewable energy or energy efficiency.

Geology and Soils. Compared to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in less intensive impacts related to geology and soils as the same development would occur, with the exception of the north access driveway. This alternative would reduce the proposed development footprint identified for the 2019 LRDP, and would avoid impacts to geology and soils through compliance with the CBC and other applicable regulations. Thus, the No North Access Driveway Alternative would result in a less intensive less than significant impacts in regard to (1) exposure to seismic-related hazards, (2) soil erosion or topsoil loss, (3) geologic stability, and (4) expansive soils. Also, in comparison to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in less intensive less than significant impacts with mitigation in regard to paleontological resources, since project grading and excavation would impact underlying formations with a moderate to high potential to contain paleontological resources, requiring mitigation.

GHG Emissions. Compared to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in reduced impacts related to GHG emissions as the same development

would occur, with the exception of the north access driveway. The elimination of the north access driveway would reduce GHG emissions from construction of this project component; however, similar operational GHG emissions would be expected to occur. Thus, compared to the 2019 LRDP, the No North Access Driveway Alternative would result in less intensive less than significant impacts related to (1) generation of GHG emissions that would have a significant impact on the environment and (2) conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

Hazards and Hazardous Materials. Compared to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in similar impacts related to hazards and hazardous materials as the same development would occur, with the exception of the north access driveway. This alternative would not change the types of hazardous materials that would be transported, used, and disposed of on campus. Note that the No North Access Driveway Alternative would potentially result in a new firebreak to slow the spread of wildfire on campus, so impacts to wildfire under this alternative could be greater. Thus, the No North Access Driveway Alternative would result in similar less than significant impacts with regard to (1) the transport, use, and disposal of hazardous materials; (2) hazards to nearby schools; and (3) hazards from nearby airports.

Similar to the 2019 LRDP, existing aging buildings would need to be sampled and tested for the presence of hazardous materials through the implementation of Mitigation Measure HAZ-2A. Also, the potential to encounter contaminated groundwater and soil during construction activities would exist and require the implementation of Mitigation Measures HAZ 2B–2D. Therefore, in comparison to the 2019 LRDP, the No North Access Driveway Alternative would result in similar less than significant impacts with mitigation to emergency release of hazardous materials into the environment. Construction of the north access driveway would provide additional access to the campus. It would also serve as another emergency access route from the north, thereby strengthening the emergency response routes to the Hillcrest Campus. Therefore, in comparison to the 2019 LRDP, the No North Access Driveway Alternative would result in greater less than significant impacts with mitigation in regard to emergency response and evacuation plans. It would also have the potential to result in temporary road closures during construction, so Mitigation Measure HAZ-5 would be required under this alternative.

Hydrology and Water Quality. Compared to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in similar impacts related to hydrology and water quality as the same development would occur, with the exception of the north access driveway. This alternative would reduce the proposed development footprint identified for the 2019 LRDP; however, the proposed modification to site hydrology and generation of water quality pollutants would be similar since the amount of development proposed on the mesa would be the same. Similar to the 2019 LRDP, this alternative would comply with applicable regulations pertaining to hydrology and water quality. Thus, the No North Access Driveway Alternative would result in similar less

than significant impacts in regard to (1) water quality, (2) site drainage and hydrology, and (3) conflict with or obstruction of implementation of a water quality control plan or sustainable groundwater management plan.

Land Use and Planning. Compared to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in similar impacts related to land use and planning as the same development would occur, with the exception of the north access driveway. This alternative would reduce the proposed development footprint identified for the 2019 LRDP, but the types and intensity of land uses proposed for the campus would be the same. Thus, compared to the 2019 LRDP, the No North Access Driveway Alternative would result in similar less than significant impacts related to conflict with applicable land use plans, policies, and regulations.

Noise. Compared to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in similar impacts related to noise as the same development would occur, with the exception of the north access driveway. This alternative would reduce the proposed development footprint identified for the 2019 LRDP, but the types and intensity of land uses proposed for the campus would be the same. Therefore, the noise and vibration generated by the 2019 LRDP would be similar under this alternative. Mitigation Measures NOI-1A, NOI-1B, NOI-1C, NOI-1D, NOI-2A, and NOI-2B would still be required to minimize construction and operational impacts from the construction of the remainder of the campus development. In comparison to the 2019 LRDP, the No North Access Driveway Alternative would result in similar less than significant impacts with mitigation in regard to (1) exceeding of noise standards and (2) excessive groundborne vibration or noise. Also, in comparison to the 2019 LRDP, the No North Access Driveway Alternative would result in similar but less intensive less than significant impacts in regard to aircraft noise.

Population and Housing. Compared to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in similar impacts related to population and housing as the same development would occur, with the exception of the north access driveway. The types and intensity of land uses proposed for the campus would be the same under this alternative; therefore, the proposed population increase identified for the 2019 LRDP would be the same under this alternative. Thus, the No North Access Driveway Alternative would result in similar less than significant impacts related to (1) inducing of substantial population growth and (2) the displacement of people or housing.

Public Services. Compared to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in similar impacts related to public services as the same development would occur, with the exception of the north access driveway. The types and intensity of land uses proposed for the campus would be the same under this alternative; therefore, the proposed population increase and associated demand for public services identified for the 2019 LRDP would be the same under this alternative. Thus, the No North Access Driveway Alternative would result

in similar less than significant impacts in regard to (1) fire protection facilities, (2) police protection facilities, and (3) public school facilities.

Recreation. Compared to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in similar impacts related to recreation as the same development would occur, with the exception of the north access driveway. The types and intensity of land uses proposed for the campus would be the same under this alternative; therefore, the proposed population increase and associated demand for recreation facilities identified for the 2019 LRDP would be the same under this alternative. Thus, the No North Access Driveway would result in similar less than significant impacts in regard to the deterioration of parks and recreational facilities. Also, the No North Access Driveway would result in similar less than significant impacts with mitigation in regard to the construction or expansion of recreational facilities.

Transportation. Compared to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in similar impacts related to transportation as the same development would occur, with the exception of the north access driveway. However, the circulation to the Hillcrest Campus would change slightly. The No North Access Alternative would add additional traffic to Bachman Place between Arbor Drive and the proposed north access driveway, bringing the street segment closer to the three-lane roadway threshold. However, the three-lane capacity proposed by adding a third lane to Bachman Place would still result in acceptable operations under this alternative. Additional traffic would also travel through the intersections of First Street and Front Street on Arbor Drive. Enhanced lane geometry may be needed at the First Avenue/Arbor Drive intersection under this alternative, which could be accommodated as part of the improvements to this intersection. Therefore, this alternative would not reduce impacts compared to the 2019 LRDP, and there would not be additional significant impacts to the roadway network. Still, construction of the north access driveway would provide additional access to the campus for residents and hospital service vehicles, slightly reducing the number of vehicles accessing the proposed residences and hospital from the other access points. It would also serve as another emergency access route from the north, thereby strengthening the emergency response routes to the Hillcrest Campus. Thus, in contrast to the 2019 LRDP, the No North Access Driveway Alternative would result in more intensive less than significant impacts with mitigation in regard to inadequate emergency access. However, this alternative would still have the potential to result in temporary road closures during construction, so Mitigation Measure HAZ-5 would be required under this alternative. The No North Access Driveway Alternative would result in similar, less than significant impacts with regard to inducing substantial vehicle miles traveled.

Utilities. Compared to the proposed 2019 LRDP, the No North Access Driveway Alternative would result in similar impacts related to utilities as the same development would occur, with the exception of the north access driveway. The types and intensity of land uses proposed for the campus would be the same under this alternative; therefore, the proposed population increase and associated

demand for utilities infrastructure and services identified for the 2019 LRDP would be the same under this alternative. Thus, the No North Access Driveway Alternative would result in similar less than significant impacts with mitigation in regard to (1) new utilities facilities, (2) water supply availability, (3) wastewater treatment capacity, and (4) compliance with solid waste regulations.

Wildfire. Compared to the proposed 2019 LRDP, the No North Access Driveway Alternative could result in similar impacts related to wildfire as the same development would occur, with the exception of the north access driveway. Construction of the north access driveway would provide additional access to the campus. It would also serve as another emergency access route from the north, thereby strengthening the emergency response routes to the Hillcrest Campus. In addition, the driveway would act as a firebreak in preventing the uncontrolled spread of potential wildfires through the canyon landscape. This alternative would have the potential to result in temporary road closures during construction, and Mitigation Measure HAZ-5 would be required. Thus, compared to the 2019 LRDP, the No North Access Driveway Alternative would result in more intensive less than significant impacts with mitigation in regard to an emergency response plan or emergency evacuation plan. Also, in comparison to the 2019 LRDP, the No North Access Driveway Alternative would result in similar less than significant impacts with regard to (1) pollutant concentrations, (2) the installation or maintenance of associated infrastructure, and (3) flooding or landslides.

5.3.4.2 Ability to Accomplish Project Objectives (No North Access Driveway Alternative)

The No North Access Driveway Alternative would accomplish some of the proposed 2019 LRDP objectives (Project Objectives 1, 2, 3, 4, 5, 6, 9, 10, 11, and 12) because it would meet the seismic safety standard requirements of SB 1953, create five new districts, promote wellness, provide residential units, implement land uses that provide financial feasibility, and enhance the campus open space context as a resource for campus patients, visitors, and employees, as well as the surrounding community. The No North Access Driveway Alternative would not fulfill Project Objectives 7 and 8 aimed to improve the circulation network, improve transportation related facilities, and enhancing campus open spaces. Construction of the north access driveway would provide additional access to the campus for residents and hospital service vehicles. Without the new access driveway, residents and hospital service vehicles would not be able to gain access directly from Bachman Place, resulting in the addition of traffic to Bachman Place between Arbor Drive and the intersections of First Street and Front Street on Arbor Drive. Therefore, this alternative would not minimize traffic impacts to adjoining neighborhoods. In addition, without the north access driveway, the 2019 LRDP would not be able to provide an efficient vehicular patient-oriented access as medical-related and residential traffic would both use the First Avenue entrance to the campus.

5.3.5 Reduced Scale Alternative

The Reduced Scale Alternative would contain the same proposed uses as the 2019 LRDP but would reduce the scale of each use by 50 percent. This alternative would still require the demolition of the existing uses at the Hillcrest Campus and would include the construction of the new north access driveway. The Reduced Scale Alternative would redevelop the Hillcrest Campus through the creation of the same five new districts. The uses within these districts would remain the same as summarized in Table 2-3 but would be reduced in size by 50 percent. The Health Care District would provide 720,000 gsf and 150 hospital beds, the Residential District would include 535,000 gsf and 475 dwelling units, the Mixed-Use District would include 106,500 gsf and 25 dwelling units, and the Open Space District would include 2,000 gsf. The Canyon District would be expanded to include the remaining preserved open space areas within the project footprint not being developed under this alternative. Under the Reduced Scale Alternative, the Hillcrest Campus development envelope would remain the same size, while the building footprints would be reduced providing more developed open space throughout the campus. In addition, the building heights would be similar to those proposed in the 2019 LRDP. Due to the reduction in proposed residential units, the number of residential buildings would be decreased from four to two buildings. The Reduced Scale Alternative would avoid the significant and unavoidable impacts to historical resources and transportation identified for the 2019 LRDP.

5.3.5.1 Impact Analysis (Reduced Scale Alternative)

Aesthetics. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in similar but less intensive less than significant impacts related to aesthetics. Under the Reduced Scale Alternative, the building footprints would be reduced but the height of the buildings would remain the same. Due to the reduction in proposed residential units, the number of residential buildings would be decreased from four to two buildings. However, the two proposed buildings would still be as tall as the existing hospital structure. Therefore, from residences west of the campus, the reduction in proposed residential buildings would result in a perceptible, but not significant, change in the building mass in the western part of the campus and be located in the midground view compared to the 2019 LRDP. Thus, compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in similar but less intensive less than significant impacts in regard to (1) scenic vistas and (2) lighting and glare and similar but less intensive less than significant impacts with mitigation in regards to degradation of existing community character or conflict with zoning and regulations governing scenic quality,

Air Quality. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in a similar less than significant impact related to conflict with or obstruction of implementation of the applicable air quality plan because it would construct approximately 1.36 million gsf less development. With the 50 percent reduction in land uses, there would be a population decrease compared to existing conditions. This reduction in population size at the Hillcrest Campus would

amount to a reduction in air pollutant emissions associated with building construction, operations and vehicle trips. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in a similar less than significant impact related to a conflict with or obstruction of implementation of the applicable air quality plan. Because it proposes less development than the 2019 LRDP, the Reduced Scale Alternative would not conflict with the RAQS or the SIP. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in a similar (but with less mitigation) less than significant construction impacts related to the net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard since the alternative would construct 1.36 million gsf less development. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would reduce on-campus development, which would reduce the potential for the 2019 LRDP to expose sensitive receptors to substantial pollutant concentrations during construction; however, Mitigation Measure AIR-3 may still be required, and a significant and unavoidable impact may still occur under this alternative. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in a similar less than significant impact related to other emissions (such as those leading to odors) adversely affecting a substantial number of people since odor impacts are not typically associated with residential uses.

Biological Resources. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in similar but less intensive impacts related to biological resources because the project building footprints would be reduced. However, this alternative would still have the potential to impact nesting birds, Diegan coastal sage scrub, southern willow scrub (disturbed), eucalyptus woodland, and non-vegetated channel due to the construction of the North Access Driveway construction. The Reduced Scale Alternative would construct 1.36 million gsf less development and, therefore, require less mitigation related to biological resources. However, similar to the 2019 LRDP, mitigation would still be required due to similar biological impacts from development of the rest of the campus. Thus, in comparison to the proposed 2019 LRDP, the Reduced Scale Alternative would result in a similar less intensive less than significant impacts in regard to (1) candidate, sensitive, or special-status plant species; (2) candidate, sensitive or special-status animal species; (3) riparian habitat and other sensitive natural communities; and (4) wetlands.

Cultural and Tribal Cultural Resources. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in similar but less intensive impacts related to cultural and tribal cultural resources because it would involve the redevelopment of the Hillcrest Campus at a reduced scale, reducing development by 1.36 million gsf. However, mitigation would still be required due to similar cultural resources impacts from the reduced development of the campus. Mitigation Measures CUL-2A and CUL-2B would be implemented to reduce potentially significant impacts on the Hillcrest Campus to unknown archaeological resources, human remains, and tribal cultural resources during project construction to a less than significant level. The Reduced Scale Alternative would reduce the size of the Multi-Use Building by 50 percent, which would allow the locally eligible historical

resource located at 101 Dickinson to remain in place and would not result in a significant and unavoidable historical resources impact. Also, in comparison to the proposed 2019 LRDP, the Reduced Scale would result in similar less than significant impacts after mitigation in regard to (1) archaeological resources, (2) human remains, and (3) tribal cultural resources.

Energy. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in less intensive impacts related to energy because it would involve the redevelopment of the Hillcrest Campus at a reduced scale, reducing development by 1.36 million gsf. This alternative would also include the construction of a cogeneration plan and would implement the GHG Reduction Strategy developed for the 2019 LRDP. Thus, compared to the 2019 LRDP, the Reduced Scale Alternative would result in similar but less intensive less than significant impacts related to (1) the wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation and (2) conflict with or obstruction of a state or local plan for renewable energy or energy efficiency.

Geology and Soils. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in less intensive impacts related to geology and soils because it would construct approximately 1.36 million gsf less development. However, mitigation would still be required due to similar geological impacts from development of the rest of the campus. Thus, the Reduced Scale Alternative would result in less intensive less than significant impacts in regard to (1) exposure to seismic-related hazards, (2) soil erosion or topsoil loss, (3) geologic stability, and (4) expansive soils. Also, in comparison to the proposed 2019 LRDP, the Reduced Scale Alternative would result in less intensive less than significant impacts in regard to paleontological resources since project grading and excavation would impact underlying formations with a moderate to high potential to contain paleontological resources, requiring mitigation.

GHG Emissions. The GHG Reduction Strategy developed for the 2019 LRDP would also be implemented under this alternative. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in less intensive impacts related to GHG emissions because it would involve the redevelopment of the Hillcrest Campus at a reduced scale, reducing development by 1.36 million gsf. With the 50 percent reduction in land uses, there would be a population decrease compared to the existing population. This would amount to a reduction in GHG emissions associated with construction, operations, and vehicle trips. Thus, compared to the 2019 LRDP, the Reduced Scale Alternative would also result in emission below the 2017 existing baseline conditions but would result in less intensive less than significant impacts related to (1) generation of GHG emissions that would have a significant impact on the environment and (2) conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

Hazards and Hazardous Materials. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in less intensive impacts related to hazards and hazardous materials because it would involve the redevelopment of the Hillcrest Campus at a reduced scale, reducing

development by 1.36 million gsf. The reduction in uses may result in a decrease in hazardous chemical waste generation and disposal. Thus, compared to the 2019 LRDP, the Reduced Scale Alternative would result in similar but less intensive less than significant impacts related to (1) a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials and (2) release of hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school. However, he Reduced Scale Alternative would still have to demolish all the existing structures on the Hillcrest Campus, with the exception of the residence at 101 Dickinson Street and would require Mitigation Measure HAZ-2A prior to this demolition. Additionally, the potential to encounter contaminated groundwater and soil during construction activities would exist and require the implementation of Mitigation Measures HAZ-2B through HAZ-2D. Similar to the 2019 LRDP, The Reduced Scale Alternative would have less than significant impact related to aircraft safety hazard or excessive noise for people residing or working in the project area. In the event that the construction of a project requires a lane or roadway closure on campus, implementation of Mitigation Measure HAZ-5 would be required. Therefore, in comparison to the 2019 LRDP, the Reduced Scale Alternative would result in similar less than significant impacts to emergency response and evacuation plans.

Hydrology and Water Quality. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in similar but less intensive impacts related to hydrology and water quality because it would involve the redevelopment of the Hillcrest Campus at a reduced scale, reducing development by 1.36 million gsf. As a result, the Reduced Scale Alternative would require less cut and fill and pollutants associated with overall construction activities that could result in water quality impacts. Thus, compared to the 2019 LRDP, the Reduced Scale Alternative would result in less intensive less than significant impacts related to (1) water quality, (2) alteration of existing site draining or hydrology, and (3) conflict with or obstruction of implementation of a water quality control plan or sustainable groundwater management plan.

Land Use and Planning. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in similar impacts related to land use and planning because it would not change the types of land uses proposed for the campus. Thus, compared to the 2019 LRDP, the Reduced Scale Alternative would result in similar less than significant impacts related to conflicts with applicable land use plans, policies, and regulations.

Noise. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in less intensive impacts related to noise because it would construct approximately of 1.36 million gsf less of development. With the 50 percent reduction in land uses, there would be a population decrease compared to the existing population. This would amount to a reduction in noise levels associated with construction, operations and vehicle trips. However, Mitigation Measures NOI-1A, NOI-1B, NOI-1C, NOI-1D, NOI-2A, and NOI-2B would still be required to minimize

construction and operational impacts associated with the remainder of the proposed campus development. Construction impacts would remain significant for both the 2019 LRDP and the Reduced Scale Alternative. Thus, in comparison to the 2019 LRDP, the Reduced Scale Alternative would result in similar but less intensive less than significant impacts in regard to (1) exceeding of noise standards and (2) excessive groundborne vibration or noise for operation and similar unmitigable, significant, and temporary impacts for construction. Also, in comparison to the 2019 LRDP, the Reduced Scale Alternative would result in similar but less intensive less than significant impacts in regard to aircraft noise.

Population and Housing. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in less than intensive impacts related to population and housing because it would construct approximately of 1.36 million gsf less development. With the 50 percent reduction in land uses, there would be a population decrease compared to the existing population. Thus, compared to the 2019 LRDP, the Reduced Scale Alternative would result in similar but less intensive less than significant impacts in regard to inducing substantial population growth. The Reduced Scale Alternative would include the demolition of the 21 existing residential units on campus and would replace those units with 500 new residential units. The demolition of the existing units is necessary to accommodate the proposed transportation corridor improvements, which include the extension of First Avenue, to serve the new hospital and Hospital District. Therefore, compared to the 2019 LRDP, the Reduced Scale Alternative would result in similar less than significant impacts in regard to the displacement of people or housing.

Public Services. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in less intensive impacts related to public services because it would construct approximately of 1.36 million gsf less development. With the 50 percent reduction in land uses, there would be a population decrease compared to the existing population. The reduced population growth would reduce the demand for public services under this alternative. Thus, compared to the 2019 LRDP, the Reduced Scale Alternative would result in similar but less intensive less than significant impacts in regard to (1) fire protection facilities, (2) police protection facilities, and (3) public school facilities.

Recreation. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in less intensive impacts related to recreation because it would construct approximately of 1.36 million gsf less of development. With the 50 percent reduction in land uses, there would be a population decrease compared to the existing population. Thus, the demand for recreational facilities would decrease under this alternative. However, as mentioned in Section 3.14, affiliates who study or work on campus but live off campus may use the public recreational facilities in the neighborhoods surrounding the campus. Thus, compared to the 2019 LRDP, the Reduced Scale Alternative would result in similar but less than significant impacts in regard to the deterioration of parks and recreational facilities. The Reduced Scale Alternative would include the construction of a smaller

scale Wellbeing Center, associated publicly accessible open space, and accompanying facilities. Overall, the Hillcrest Campus would have more developed open space on the mesa compared to the proposed 2019 LRDP. Since the Reduced Scale Alternative would still involve recreational development on a smaller scale, applicable construction mitigation measures from Sections 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.11, and 3.15 of this 2019 LRDP EIR would reduce impacts related to construction of new on-campus recreational facilities. Therefore, in comparison to the 2019 LRDP, the Reduced Scale Alternative would result in similar but less intensive less than significant impacts in regard to the construction or expansion of recreational facilities.

Transportation. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in less intensive impacts related to transportation because it would construct approximately of 1.36 million gsf less development which would result in a decrease in traffic generation. The Reduced Scale Alternative would result in 5,700 fewer ADT compared to the existing land uses and would not add any new trips to the surrounding roadways. Since no new trips would be generated, none of the transportation network impacts identified for the 2019 LRDP would occur under this alternative. Thus, this alternative would avoid all of the significant and unavoidable impacts identified for the 2019 LRDP. Similarly, in comparison to the 2019 LRDP, the Reduced Scale Alternative would not result in a more intensive less than significant impact in regard to inducing of substantial VMT since VMT would be increase at a regional level under this alternative due to the reduction in the on-site residential units. Similar to the 2019 LRDP, in the event that the construction of a project requires a lane or roadway closure on campus, implementation of Mitigation Measure HAZ-5 would be required. Therefore, in comparison to the 2019 LRDP, the Reduced Scale Alternative would result in similar but less intensive less than significant impacts after mitigation in regard to inadequate emergency access.

Utilities. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in less intensive impacts related to utilities because it would construct approximately of 1.36 million gsf less of development. With the 50 percent reduction in land uses, there would be a population decrease compared to the existing population. The reduction in on-campus population and total development square footage would reduce demand for utilities, including water, wastewater, storm drainage, electric power, natural gas and telecommunications infrastructure, under this alternative. Although, the demand for new utilities would be reduced, potentially significant impacts would be associated with the construction on new utilities infrastructure under this alternative similar to the proposed 2019 LRDP. Mitigation measures identified in Sections 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.11, and 3.15 of this 2019 LRDP EIR would be implemented to reduce impacts, similar to the 2019 LRDP. Thus, compared to the 2019 LRDP, the Reduced Scale Alternative would result in similar but less intensive less than significant impacts in regard to new utilities facilities. Also, in comparison to the 2019 LRDP, the Reduced Scale Alternative would result in similar but less intensive less than significant impacts in regard to (1) water supply availability, (2) wastewater treatment capacity, and (3) compliance with solid waste regulations.

Wildfire. Compared to the proposed 2019 LRDP, the Reduced Scale Alternative would result in similar impacts related to wildfire because it would construct approximately 1.36 million gsf of development within a very high fire severity area. Thus, compared to the 2019 LRDP, the Reduced Scale Alternative would result in similar less than significant with mitigation impacts in regard to substantially impairing an adopted emergency response plan or emergency evacuation plan. Also, in comparison to the 2019 LRDP, the Reduced Scale Alternative would result in similar less than significant impacts in regard to (1) pollutant concentrations, (2) the installation or maintenance of associated infrastructure, and (3) flooding or landslides.

5.3.5.2 Ability to Accomplish Project Objectives (Reduced Scale Alternative)

The Reduced Scale Alternative would fully meet Project Objectives 3, 4, 7, 8, 9, 10, and 11 because it would create five new districts, promote wellness, enhance campus open space, improve the circulation network, improve transportation related facilities, provide an energy solution, and site the CUP in a location that allows for the coordination of project construction activities. However, this alternative would not meet Project Objectives 1, 2, 5, 6, and 12. While the Reduced Scale Alternative would replace obsolete buildings and construct new buildings that would meet the seismic safety requirements of SB 1953 (Project Objectives 1 and 2), due to the limited size of the proposed buildings and reduction in proposes health care uses, UC San Diego would not have sufficient space be able to provide the needed services to the community. By reducing facilities, this alternative would also reduce revenues and curb the mix of land uses, which would not maximize the financial feasibility of the campus development (Project Objective 5). The minimum number of beds that the Hillcrest hospital would need to still provide all its major hospital services is 250 beds. By only providing 150 beds, this alternative would not allow for the replacement of existing operations to provide the same level of service for the Regional Burn Center, Level 1 Trauma Center, Certified Comprehensive Stroke Center, Comprehensive Emergency Department, Epilepsy Center, Inflammatory Bowel Disease Center, International Patient Services, Neurological Institute, and the HIV Owen Clinic. Some of these services would be suspended at the Hillcrest Campus so that others would be able to remain. The Reduced Scale Alternative would limit the ability of the Hillcrest Campus to provide a state-of-the-art, innovative, and community-integrated academic medical center that integrates industry-leading research and high-quality patient care services that are currently available to the community. The Reduced Scale Alternative would not meet Project Objective 6, as it would only provide 500 residential units on the mesa as opposed to maximizing the residential potential of the project area. Finally, the Reduced Scale Alternative would also limit the ability of the Hillcrest Campus to accommodate a robust graduate education program with research labs, instructional areas, and office administrative space on the Hillcrest Campus and would therefore not meet Project Objective 12.

5.4 Environmentally Superior Alternative

An EIR is required to identify the environmentally superior alternative, the alternative having the potential for the fewest environmental impacts, from among the range of reasonable alternative that are evaluated. Table 5-2 provides a summary comparison of the alternatives with the proposed 2019 LRDP with the purpose of highlighting whether each alternative would result in a similar, greater, or lesser impact, that the proposed 2019 LRDP with regard to potentially significant impacts. In addition, Table 5-3 provides a summary comparison of the alternatives with the proposed 2019 LRDP with the purpose of determining whether each alternative would meet the objectives of the proposed 2019 LRDP.

Table 5-2. Comparison of Potentially Significant Impacts for Alternatives to the 2019 LRDP

Issue Areas	Proposed 2019 LRDP		Alternatives				
	Without Mitigation	With Mitigation	No Project (1995 LRDP)	No Residential	No Cogeneration	No North Access Driveway	Reduced Scale Alternative
3.1 Aesthetics							
Scenic Vistas	LS	LS	<	<	=	<	<
Degradation of Existing Community Character Conflict with Zoning or Regulations for Scenic Quality	PS	LS	<	<	<	<	<
Light and Glare	LS	LS	<	<	=	<	=
3.2 Air Quality							
Consistency with Applicable Air Quality Plan	LS	LS	=	=	<	=	=
Cumulative Increase in Criteria Pollutant Emissions	PS	LS	<	<	=	=	<
Sensitive Receptors	PS	SU	<	<	=	=	<
Odors	LS	LS	<	=	<	=	=
3.3 Biological Resources							
Candidate, Sensitive, or Special-Status Plant Species	PS	LS	=	<	=	<	<
Candidate, Sensitive, or Special-Status Animal Species	PS	LS	=	<	=	<	<
Riparian Habitat and Other Sensitive Natural Communities	PS	LS	=	<	=	<	<
Wetlands	PS	LS	=	<	=	<	<

Table 5-2. Comparison of Potentially Significant Impacts for Alternatives to the 2019 LRDP

Issue Areas	Proposed 2019 LRDP		Alternatives				
	Without Mitigation	With Mitigation	No Project (1995 LRDP)	No Residential	No Cogeneration	No North Access Driveway	Reduced Scale Alternative
3.4 Cultural and Tribal Cultural Resources							
Historical Resources	PS	SU	=	=	=	=	<
Archaeological Resources	PS	LS	<	=	=	<	=
Human Remains	PS	LS	<	=	=	<	=
Tribal Cultural Resources	PS	LS	<	=	=	<	=
3.5 Energy							
Wasteful or Inefficient Energy Usage	PS	LS	<	<	<	<	<
Conflict with Renewable or Energy Efficiency Plan	LS	LS	<	<	<	<	<
3.6 Geology and Soils							
Exposure to Seismic-Related Hazards	LS	LS	<	=	=	=	=
Soil Erosion or Topsoil Loss	LS	LS	<	=	=	=	=
Geologic Stability	LS	LS	<	=	=	=	=
Expansive Soils	LS	LS	<	=	=	=	=
Paleontological Resources	PS	LS	<	=	=	=	=
3.7 Greenhouse Gas Emissions							
Generate GHG emissions	LS	LS	<	<	<	<	<
Conflict with an applicable plan	LS	LS	<	<	<	<	<
3.8 Hazards and Hazardous Materials							
Transport, Use and Disposal of Hazardous Materials	LS	LS	=	=	=	=	<
Accidental Releases	PS	LS	=	=	=	=	<
Hazards to Nearby Schools	LS	LS	=	=	=	=	<
Hazards from Nearby Airports	LS	LS	=	=	=	=	=
Emergency Response or Evacuation Plans	PS	LS	<	=	=	>	=
Wildland Fires	LS	LS	=	=	=	>	=

Table 5-2. Comparison of Potentially Significant Impacts for Alternatives to the 2019 LRDP

Issue Areas	Proposed 2019 LRDP		Alternatives				
	Without Mitigation	With Mitigation	No Project (1995 LRDP)	No Residential	No Cogeneration	No North Access Driveway	Reduced Scale Alternative
3.9 Hydrology and Water Quality							
Water Quality	LS	LS	=	=	=	=	<
Site Drainage and Hydrology	LS	LS	=	=	=	=	<
Water Quality Control Plan or Sustainable Groundwater Management Plan	LS	LS	=	=	=	=	<
3.10 Land Use and Planning							
Conflict with Applicable Land Use Plans, Policies, and Regulations	LS	LS	=	=	=	=	=
3.11 Noise							
Exceed Noise Standards	PS	SU (Construction)	<	<	= (Construction) < (Operation)	=	<
Excessive Groundborne Vibration or Noise	PS	SU (Construction)	<	<	=	=	<
Aircraft Noise	LS	LS	=	<	=	=	=
3.12 Population and Housing							
Induce Substantial Population Growth	LS	LS	<	<	=	=	=
Displacement of People or Housing	LS	LS	<	>	=	=	=
3.13 Public Services							
Fire Protection Facilities	LS	LS	<	<	=	=	<
Police Protection Facilities	LS	LS	<	<	=	=	<
Public School Facilities	LS	LS	<	<	=	=	<
3.14 Recreation							
Deterioration of Parks and Recreational Facilities	LS	LS	<	<	=	=	=
Construction or Expansion of Recreational Facilities	PS	LS	<	<	=	=	=
3.15 Transportation							
Circulation System Performance	PS	SU	<	<	=	=	<

Table 5-2. Comparison of Potentially Significant Impacts for Alternatives to the 2019 LRDP

Issue Areas	Proposed 2019 LRDP		Alternatives				
	Without Mitigation	With Mitigation	No Project (1995 LRDP)	No Residential	No Cogeneration	No North Access Driveway	Reduced Scale Alternative
Induce Substantial Vehicle Miles Traveled	LS	LS	<	<	=	=	<
Inadequate Emergency Access	PS	LS	<	<	=	>	=
3.16 Utilities and Service Systems							
New Utilities Facilities	PS	LS	<	<	=	=	<
Water Supply Availability	LS	LS	<	<	=	=	<
Wastewater Treatment Capacity	LS	LS	<	<	=	=	=
Compliance with Solid Waste Regulations	LS	LS	<	<	=	=	=
3.17 Wildfire							
Emergency Response Plan or Emergency Evacuation Plan	PS	LS	<	=	=	>	=
Pollutant Concentrations	LS	LS	<	=	=	=	=
Installation or Maintenance of Associated Infrastructure	LS	LS	<	=	=	=	=
Flooding or Landslides	LS	LS	<	=	=	=	=

Notes: LS = Less than Significant Impact; NI = No Impact; PS = Potentially Significant Impact; SU = Significant and Unavoidable

= Impacts would be similar to those of the proposed 2019 LRDP

> Impacts would be greater than those of the proposed 2019 LRDP

< Impacts would be less than those of the proposed 2019 LRDP

Table 5-3. Ability of Project Alternative to Meet Proposed 2019 LRDP Objectives

LRDP Project Objectives	Ability of Alternatives to Meet the LRDP Project Objectives				
	No Project (1995 LRDP)	No Residential	No Cogeneration	No North Access Driveway	Reduced Scale
1. Meet the seismic safety requirements of SB 1953 by replacing the existing hospital building by 2030 while maintaining existing community health care operations including but not limited to: a) San Diego's only Regional Burn Center b) Level 1 Trauma Center c) Certified Comprehensive Stroke Center d) Comprehensive Emergency Department e) Epilepsy Center f) Inflammatory Bowel Disease Center g) International Patient Services h) Neurological Institute i) The region's only dedicated clinic for HIV patients, the Owen Clinic	No	Yes	Yes	Yes	No
2. Replace aging and obsolete buildings and redevelop the Hillcrest Campus to create a modern patient-centered environment that leverages UC San Diego Health's capabilities as an academic medical institution while also providing live-work-learn housing for UC San Diego affiliates, wellness-driven programming and accessible open spaces	No	No	Yes	Yes	No
3. Organize the campus development by clearly delineating five new land use districts (Health Care, Residential, Open Space, Mixed-Use, and Canyon), each of which would be defined by a predominant land use and development condition that contribute to a cohesive campus that is aligned with UC San Diego's vision	No	No	Yes	Yes	Yes
4. Create a campus that promotes community wellness and health care in both its facilities and its site development	Yes	Yes	Yes	Yes	Yes
5. Implement a mix of land uses including residential, retail, and office space that support the financial feasibility of the campus's development and operations into the future	No	No	Yes	Yes	No
6. Provide up to 1,000 residential units for UC San Diego affiliates that respond to an existing and increasing demand for housing on campus and region wide,	No	No	Yes	Yes	No

Table 5-3. Ability of Project Alternative to Meet Proposed 2019 LRDP Objectives

LRDP Project Objectives	Ability of Alternatives to Meet the LRDP Project Objectives				
	No Project (1995 LRDP)	No Residential	No Cogeneration	No North Access Driveway	Reduced Scale
reduce commuter traffic to and from the campus, and integrate a range of resident- and neighborhood-oriented amenities					
7. Improve the roadway circulation network adjacent to and within the campus while minimizing traffic impacts to adjoining neighborhoods	Yes	Yes	Yes	No	Yes
8. Improve transportation-related facilities including parking structures, transit stops, and passenger drop-off and pick-up areas in a way that allows for intuitive vehicular, biking, and patient-oriented access and multimodal improvements for wayfinding	Yes	Yes	Yes	No	Yes
9. Enhance the campus open space concept as a resource for campus patients, visitors, and employees, as well as the surrounding community	No	Yes	Yes	Yes	Yes
10. Provide on-site energy infrastructure that is cost effective, redundant, energy efficient, and in compliance with regulations for acute care hospital and related medical facilities	No	Yes	No	Yes	Yes
11. Site the CUP in a location on the campus such that it does not impair construction sequencing, impact existing utilities that serve current facilities that must remain online, or impact the efficient replacement of facilities under the 2019 LRDP	Not Applicable	Yes	Yes	Yes	Yes
12. Accommodate a robust graduate education program with research labs, instructional areas, and office administrative space	No	Yes	Yes	Yes	No

As shown in Table 5-2, the level of environmental impacts associated with the No Project Alternative (1995 LRDP) is overall less than the proposed 2019 LRDP. This alternative would not result in any greater impacts than the proposed 2019 LRDP (just similar or reduced impacts). Therefore, the No Project Alternative (1995 LRDP) would be considered the environmentally superior alternative, although it would only meet three of the proposed 2019 LRDP objectives, as discussed previously in Section 5.3.1. According to Section 15126.6 of the CEQA Guidelines, if the No Project Alternative (1995 LRDP) is selected as the environmentally superior alternative, then the EIR shall also identify an environmentally superior alternative among the other alternatives. A comparison of the remaining alternatives is provided below.

Comparing the remaining four alternatives with the proposed 2019 LRDP, the No Residential Alternative would result in reduced impacts associated with aesthetics, air quality, biological resources, energy, hazards and hazardous materials, operational noise, public services, and recreation. The No Residential Alternative would have potentially greater impacts with regard to the displacement of people or housing since it would demolish the existing 21 residential units on campus and not replace them. The No Residential Alternative would fulfill 8 of the 12 project objectives.

The No Cogeneration Alternative would further reduce the less than significant impacts associated with air quality, energy, and GHG emissions identified for the 2019 LRDP and meet most of the 2019 LRDP project objectives. However, the No Cogeneration Alternative is overall similar to the 2019 LRDP and would therefore require similar mitigation and result in significant and unavoidable impacts associated with cultural resources, construction air quality, construction noise, and transportation.

The No North Access Driveway Alternative would result in reduced impacts associated with aesthetics, air quality, biological resources, energy, and GHG emissions. However, the No North Access Driveway Alternative would result in potentially greater impacts to hazards and hazardous materials (emergency response or evacuation plans and wildland fires), transportation (inadequate emergency access), and wildfire (emergency response plan or emergency evacuation plan) because it would not provide a new access route to the campus or an additional firebreak to prevent the uncontrolled spread of potential wildfires through the canyon landscape. The No North Access Driveway Alternative would fulfill 10 of the 12 project objectives.

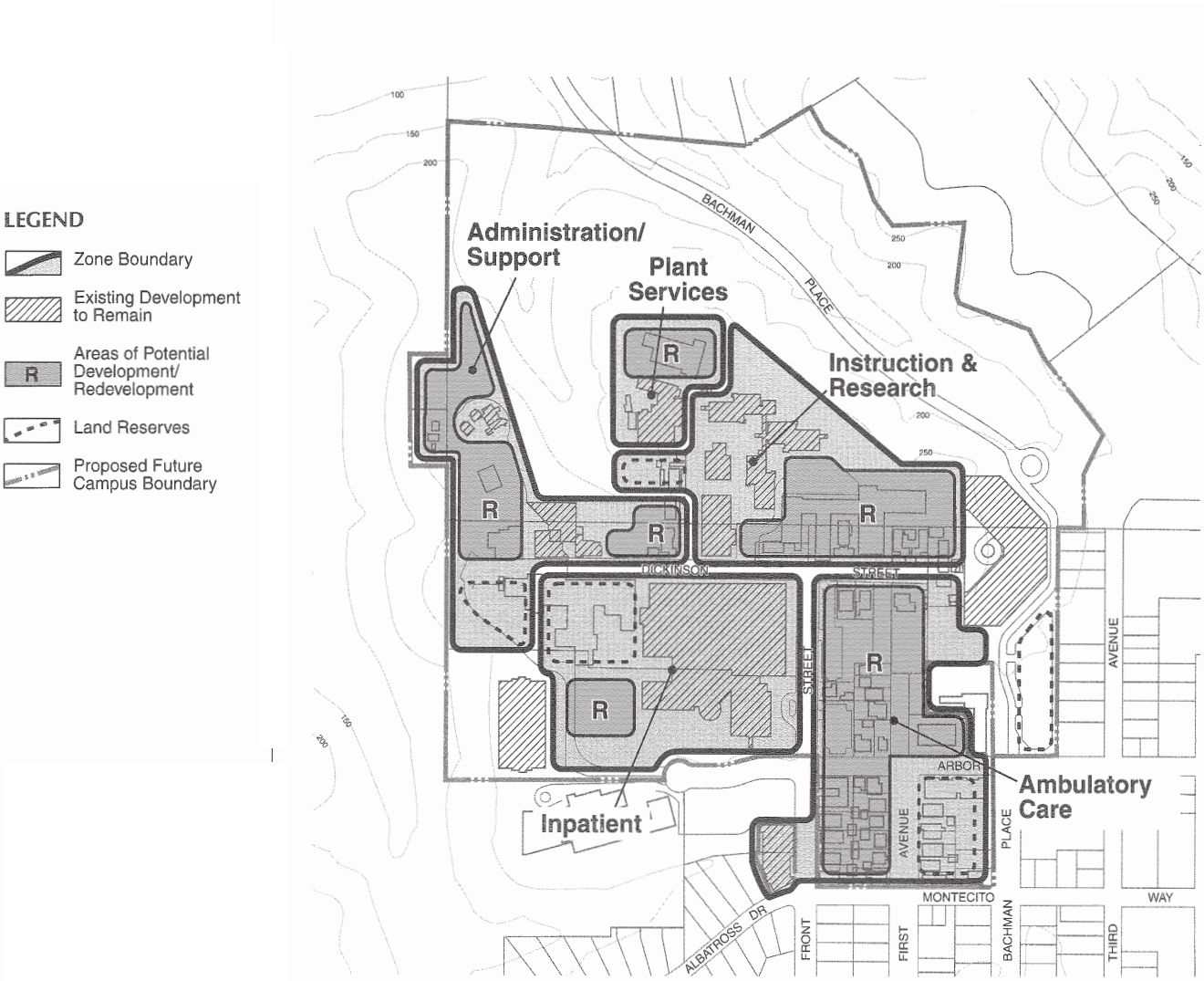
The Reduced Scale Alternative overall has less environmental impacts than the other remaining alternatives, but more environmental impacts than the No Project Alternative (1995 LRDP). Specifically, the Reduced Scale Alternative would avoid the significant and unavoidable impacts associated with historical resources and transportation identified for the 2019 LRDP. It would also result in reduced impacts associated with aesthetics, air quality, biological resources, energy, GHG emissions, hazards and hazardous materials, operational noise, public services, recreation, and utilities. However, the Reduced Scale Alternative would not fulfill five key project objectives, including the ability for the hospital to continue to provide the same essential health care services as it currently provides. By only providing 150 beds, this alternative would not allow for the replacement of existing operations to provide the same level of service for the Regional Burn Center, Level 1 Trauma Center, Certified Comprehensive Stroke Center, Comprehensive Emergency Department, Epilepsy Center, Inflammatory Bowel Disease Center, International Services, Neurological Institute, and the HIV Owen Clinic. Some of these services would be suspended at the Hillcrest Campus so that others would be able to remain. Therefore, of the alternatives analyzed, the Reduced Scale Alternative would result in the greatest reduction in environmental impacts compared to the 2019 LRDP and would be considered the environmentally superior alternative.

5.5 References

County of San Diego. 2016. San Diego County Trauma System Report.

SANDAG (San Diego Association of Governments). 2013. "Series 13 Regional Growth Forecast." Data Surfer. Accessed November 2018. http://datasurfer.sandag.org/.

SANDAG. 2015 Regional Transportation Plan. 2011. Accessed 1/20/2019. https://www.sandag.org/index.asp?projectid=349&fuseaction=projects.detail.



Source: University of California, San Diego Medical Center- Hillcrest LRDP 1995

Figure 5-1
No Project Alternative (1995 LRDP)
Development Zones

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6.1 EIR Preparers

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