

2 PROJECT DESCRIPTION

2.1 INTRODUCTION

The University of California, Santa Cruz (UC Santa Cruz or Campus) is one of 10 campuses in the University of California (UC) system. In support of its continued mission to provide a diverse array of leading academic programs and research, UC Santa Cruz has prepared a long range development plan (LRDP or plan) to guide the physical development necessary to achieve the Campus’s mission through 2040. The 2021 LRDP (proposed project) establishes a land use framework for academic, research and administrative space needs, housing, open space, circulation, and other land uses that ultimately facilitate the appropriate siting of capital projects. All UC campuses are required to prepare an LRDP to guide physical campus development. An LRDP is defined by statute (Public Resources Code 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.” The University of California Board of Regents (Regents) adopted the existing UC Santa Cruz LRDP in September 2006 (referred to as the 2005 LRDP), and the 2005 LRDP has served as the guide for campus growth and development since its adoption.

Once approved, the proposed 2021 LRDP would replace the 2005 LRDP and would guide campus development and growth to support the academic mission of UC Santa Cruz through 2040. The 2021 LRDP campus population forecast is 28,000 full-time-equivalent (FTE) students¹ and 5,000 FTE faculty and staff.² To accommodate the projected increase in campus population, the 2021 LRDP provides for 8,500 student housing beds, approximately 550 employee housing units, and approximately 3.1 million assignable square feet (asf) of academic and support building space. The 2021 LRDP land use plan supports potential growth on the UC Santa Cruz main residential campus and the Westside Research Park, located at 2300 Delaware Avenue in the city of Santa Cruz.

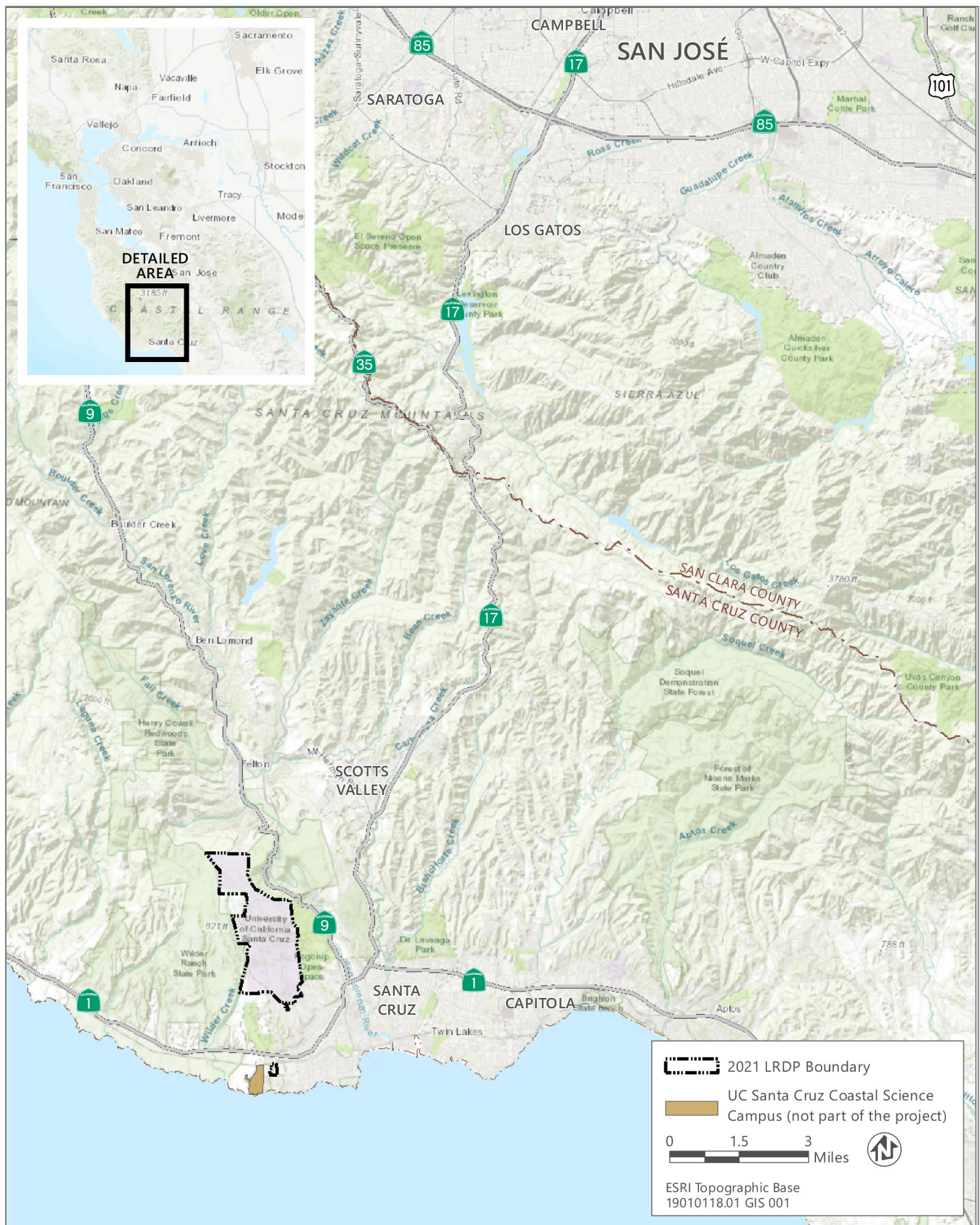
This chapter presents a detailed description of the draft UC Santa Cruz 2021 LRDP, which would serve as the physical development and land use plan for the campus for approximately the next 20 years. For purposes of the California Environmental Quality Act (CEQA), the 2021 LRDP is the proposed project (or project). This chapter describes the project’s location, setting, goals and objectives, and elements.

2.2 PROJECT LOCATION AND SETTING

The 2021 LRDP would guide physical campus growth and development at two of the three UC Santa Cruz campus properties located within the city of Santa Cruz: (1) the UC Santa Cruz main residential campus and (2) the Westside Research Park (Figure 2-1). Together, the main residential campus and Westside Research Park constitute the plan area for the 2021 LRDP, as shown in Figure 2-2, and are described in further detail below. The third UC Santa Cruz property, the Coastal Science Campus, is a 100-acre property on the west side of the city and is governed by a separate Coastal Long Range Development Plan that was adopted by the Regents and certified by the California Coastal Commission in 2008. Because of this, the Coastal Science Campus is not a part of the 2021 LRDP and is not included in the plan area. In addition, the LRDP area does not include the Scotts Valley Center, the Silicon Valley remote satellite campus, nor the UC Monterey Bay Education, Science, and Technology Center (MBEST), which was transferred to UC Santa Cruz by the U.S. Army and is located approximately 26 miles south of the main residential campus.

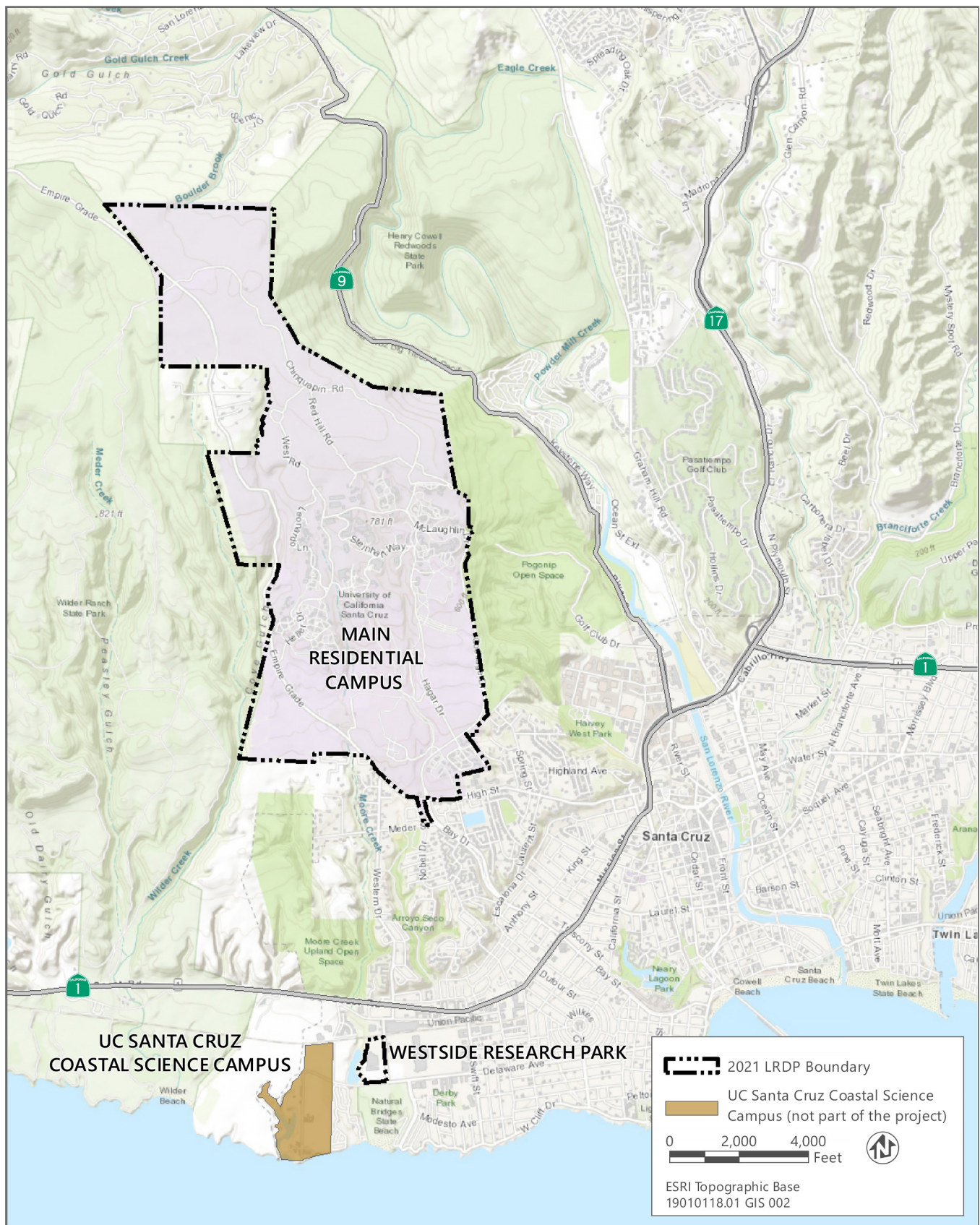
¹ An FTE student is a three-quarter average (Fall, Winter, and Spring quarters) measure of (1) an undergraduate student who enrolls for 45 credit hours per academic year; or (2) a graduate student (master’s level or doctoral student not yet advanced to candidacy) enrolled in 36 hours per year; or (3) a graduate doctoral student who has been advanced to candidacy. The LRDP campus population forecast accounts for students studying at the main residential campus and the Westside Research Park.

² An FTE faculty/staff member is defined as the three-quarter average (Fall, Winter, and Spring quarters) of one on-campus position, continuously filled for the entire period and which may be comprised of a combination of part-time positions or one full-time position.



Source: Data downloaded from Santa Cruz County in 2019

Figure 2-1 Regional Location



Source: Data downloaded from Santa Cruz County in 2019

Figure 2-2 Project Location and Plan Area

2.2.1 Main Residential Campus

The main residential campus (approximately 2,000 acres in size) is located in Santa Cruz County, along the northern coast of the Monterey Bay, approximately 70 miles south of the city/county of San Francisco, 30 miles southwest of the city of San Jose, and 30 miles north of the city of Monterey. Approximately 53 percent of the main residential campus is located within the city of Santa Cruz with the remaining acreage located within unincorporated Santa Cruz County. The surrounding area includes open space/natural areas to the east and west of the campus, with residential uses located to the southeast, south, and southwest, and rural residential uses to the north of the campus boundary. The campus is surrounded by the Wilder Ranch State Park to the west, rural residential land (including the Cave Gulch neighborhood) to the north, Pogonip City Park with residential and some commercial development to the east, and primarily residential development with the Westlake Elementary School and two churches to the south.

The main residential campus generally consists of a series of relatively level marine terraces separated by steep slopes with an overall elevation change of approximately 900 feet from south to north. The central and lower portions of the main residential campus are divided into thirds by two steep north-south-trending drainages (Jordan Gulch to the east and Moore Creek to the west) and their tributaries. These and other drainages (e.g., Cave Gulch and Wilder Creek) have formed ravines (as much as 70 feet deep and 350 feet wide) in certain areas of the campus. The campus landscape is also similarly varied. The main entrance to the campus contains expansive meadows, and the lower campus areas transition from redwood forests within the central campus to chaparral and mixed evergreen forests as the elevation increases.

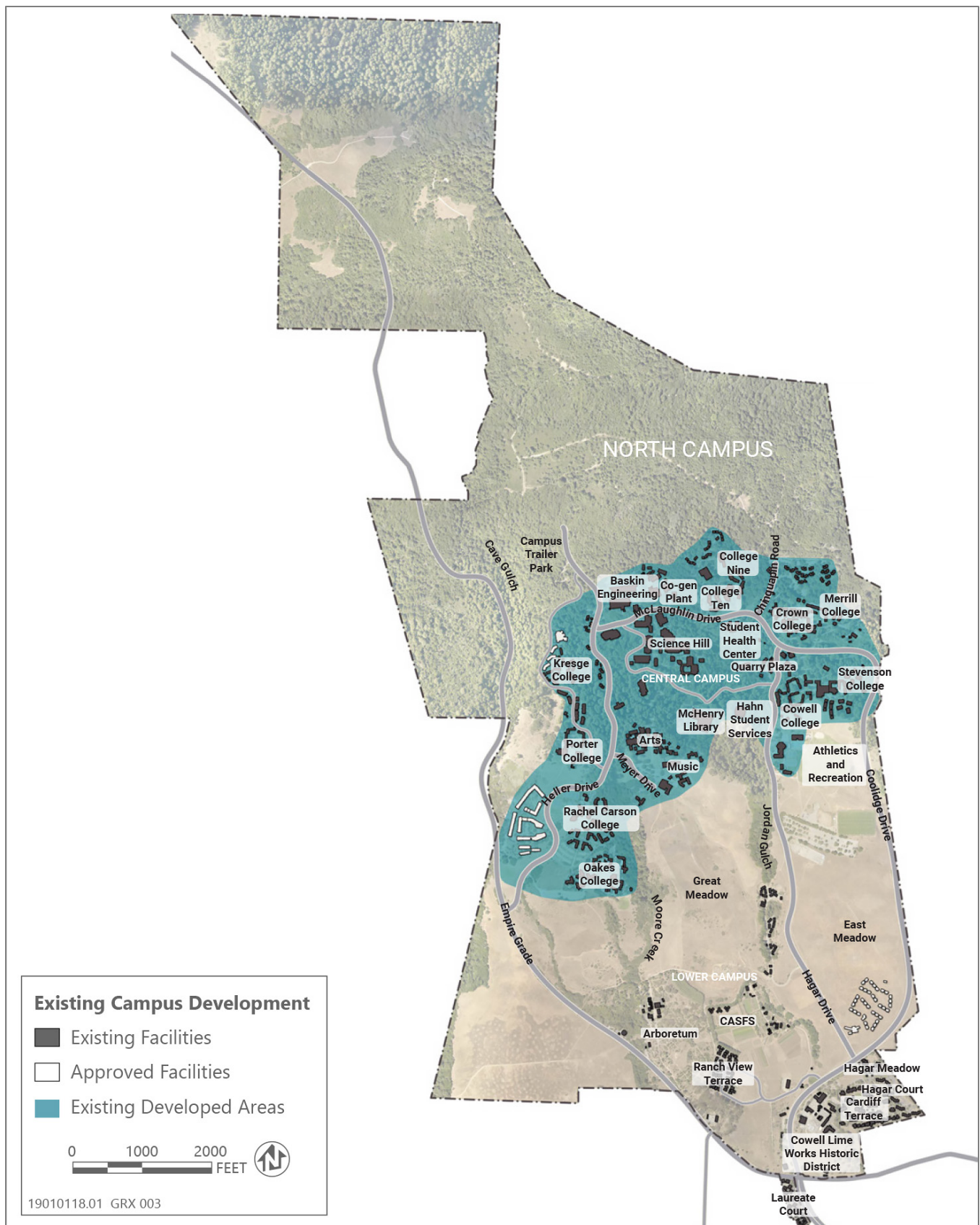
The main residential campus is composed of three primary subareas: the north campus, which extends from the developed central campus subarea to the northern property line; the central campus, which extends roughly from the East and West Remote Parking Lots northward to the Crown and Merrill Colleges on the east and to the North Remote Parking Lot on the west; and the lower campus, which extends from the southern property line and main campus entrance northward to the East Remote Parking Lot on the east (Figure 2-3) and west campus entrance.

The north campus subarea is largely undeveloped at this time except for recreational trails, unpaved service roads, and infrastructure related to water storage. This subarea is characterized by a mix of evergreen forests and some grasslands and includes the sites of long-term outdoor research projects.

Within the central campus subarea, existing development includes a series of clustered buildings nestled in the redwood forests and at the periphery of the meadows, referred to as the campus core. Campus development is generally clustered into several nodes, allowing for the retention of the existing redwood forest and meadows of the campus. The campus core includes the Science and Engineering area ("Science Hill") near the intersection of Heller and McLaughlin Drives, Social Sciences 1 and 2 within Colleges 9 and 10 located along McLaughlin Drive, the Arts area near the intersection of Heller Drive and Meyer Drive, the Quarry Plaza area at the intersection of Hagar Drive and Steinhart Way, the central McHenry Library, and the Hahn Student Services area. Additional facilities located in the campus core are essential campus support facilities, including the campus Central Heating Plant in the northeastern corner of Science Hill, the campus fire station northwest of Crown College, and the Core West Parking Structure off Heller Drive near McLaughlin Drive. Also located in the campus core is the Student Health Center, which is located on McLaughlin Drive across from Colleges Nine and Ten.

The West Field House and West Remote parking lot are located near Oakes College off Heller Drive. On the east side of the central campus subarea is the campus's main cluster of physical education and recreation facilities, including East Field, lower East Field, East Field House, tennis courts, a swimming pool, and other recreation facilities, as well as the East Remote parking lot.

The 10 residential colleges that are an essential part of the undergraduate experience at UC Santa Cruz are also located in the central campus subarea. The residential colleges are arranged in an arc around the campus core. Geographically, the colleges are generally clustered in two locations: the East Colleges located to the east and north of the campus core area (Cowell, Stevenson, Merrill and Crown Colleges, and Colleges Nine and Ten) and the West Colleges, located west of the campus core area (Kresge, Porter, Oakes, and Rachel Carson Colleges). Each college consists of instructional space (classrooms, libraries, conference rooms, and study and lab space), administrative space, residential facilities (residence halls or apartments), academic office, academic support, food and laundry facilities, and indoor and outdoor gathering and recreational areas.



Source: UC Santa Cruz 2020

Figure 2-3 Subareas of Main Residential Campus

Additional housing facilities located in the central campus subarea include the Campus Trailer Park, located at the northern end of Heller Drive and Graduate Student Housing, off Heller Drive near Baskin Engineering Building. The Family Student Housing complex, which is currently planned for redevelopment under the 2005 LRDP, is located west of Heller Drive.

The lower campus subarea is characterized by open meadows and grasslands, the Cowell Lime Works Historic District, and some low-density development. Existing development within the lower campus subarea includes the campus's main entrance at Bay Drive and High Street, which is developed and includes a public information kiosk, and historic structures associated with the Cowell Lime Works Historic District, including the Cook House (Admissions Office), the Barn Theatre, cooperage, the hay barn, and other buildings and structures from the 19th century. In addition, a number of campus support facilities, including the UC Santa Cruz Emergency Operations Center, the Physical Plant, the Fleet Operations/Central Garage, and administrative offices, are located in this area. Some campus support facilities in the lower campus subarea are also located in historic ranch buildings of the Cowell Lime Works District. Four on-campus faculty housing complexes—Hagar Court, Hagar Meadow, Cardiff Terrace, and Laureate Court—are also located in the lower campus subarea. Ranch View Terrace, an additional employee housing complex, is located west of the main entrance area.

Other facilities in the lower campus subarea include those associated with the Arboretum, located off Empire Grade; the Center for Agroecology and Sustainable Food Systems (CASFS), located off Hagar Drive; and the Village. The Arboretum and Botanic Garden is an approximately 75-acre area developed with a series of display gardens that house a variety of native and nonnative plant collections. Other facilities at the Arboretum and Botanic Garden include greenhouses, interpretive kiosks, buildings for storage and visitor services, outdoor areas for storage of landscaping materials, and the California Conservation Gardens. The CASFS is located on approximately 30 acres adjacent to the Arboretum and Botanic Garden. It uses this land to implement its research, education, and outreach programs in sustainable agriculture, organic food, and resource-conserving farming techniques. The Village, home to the Program in Community and Agroecology, is a complex of 17 modular units, located in an old quarry (Lower Quarry) adjacent to Hagar Drive, that provides housing for 153 undergraduate students.

2.2.2 Westside Research Park

The 18-acre Westside Research Park is located at 2300 Delaware Avenue on the west side of Santa Cruz within the coastal zone.³ The surrounding area includes a mix of industrial, commercial, and housing uses and natural areas. The site is surrounded by the Natural Bridges State Park to the south; vacant land to the east designated industrial in the *City of Santa Cruz General Plan*; a vacant office building to the north; and Antonelli Pond to the west, which is designated as a Natural Area in the *City of Santa Cruz General Plan*. Properties to the west and north are zoned Flood Plain, Park, Public Facility, Low Density Residential and Industrial per the *City of Santa Cruz Zoning Map*. Properties to the west are zoned Park, Single Family Residential, and General Industrial. The UC Santa Cruz Coastal Science Campus is located approximately 800 feet to the west.

The Westside Research Park was developed in 1980 and first occupied by UC Santa Cruz in 2004. It comprises three buildings, which total 126,000 square feet, and 62,000 square feet of mechanical yards. The site also includes parking and other facilities (e.g., outdoor storage space, parcourse, courtyard, paths, and tennis courts). In all, the Westside Research Park site has approximately 800,000 square feet of existing improvements. The Westside Research Park is currently used by UC Santa Cruz for administrative and academic uses.

³ Per Public Resources Code Section 30103(a), the coastal zone consists of the land and water area of the State of California that extends inland approximately 1,000 yards from the mean high tide line of the ocean. Any development within the coastal zone is subject to the California Coastal Act (Public Resources Code Section 30000 et seq.), including permitting requirements.

2.3 ACCESS AND CIRCULATION

2.3.1 Main Residential Campus

The main residential campus has two entrances: a main entrance located at the intersection of High and Bay Streets, and a west entrance located at the intersection of Empire Grade and Heller Drive. The roadway system that serves on-campus facilities is organized in a loop, composed of Coolidge and Hagar Drives, running north-south on the east side of the campus; McLaughlin Drive, running east-west through the campus core area; and Heller Drive, running roughly north-south on the west side of the campus. Parking is provided in more than 76 separate surface lots and one garage (Core West Parking Garage). Approximately 78 percent of parking spaces are for commuters and are concentrated in six large lots and the Core West Parking Garage. The remaining parking lots support a mix of commuter, visitor, and reserve spaces. The East Remote and West Remote parking lots are primarily for student commuters and collect vehicular traffic at the campus periphery near campus shuttle stops on Hagar Drive and Heller Drive, respectively. Staff commuter parking is located primarily within the academic core in the Core West Parking Garage, Arts and Hahn Student Services areas. Other large parking lots at Oakes and North Remote are accessed by Heller Drive and accommodate both students and staff.

In addition to the main public roadways, the campus is traversed by a series of paved and unpaved service roads, pedestrian paths and bridges, designated trails, and ad hoc trails. Several unpaved service roads are located in the north campus subarea, including Chinquapin Road, Fuel Break Road, and Red Hill Road. The Cowell Wilder Regional Trail extends across the north campus subarea via Chinquapin Road, linking the Pogonip City Park to the east with Wilder Ranch State Park to the west. The U-Con Trail, a short segment of the Cowell Wilder Regional Trail, connects the northernmost end of Pogonip City Park and Wilder Ranch State Park to Chinquapin Road.

2.3.2 Westside Research Park

Site access to the Westside Research Park is currently provided via multiple driveways along Natural Bridges Drive and Delaware Avenue. On-site vehicle parking is accommodated by two existing surface parking lots.

2.4 PLANNING CONTEXT

2.4.1 Campus History

In 1961, the historic Cowell Ranch, a site that had a long history of rural industry, including logging, lime manufacture, and cattle ranching, was chosen as the site for UC Santa Cruz. The campus's first LRDP (September 1963) established the general framework for the development of the campus, with construction starting in 1964. The 1963 LRDP responded to the challenges presented by UC Santa Cruz's collegiate structure and the large, geographically diverse site by providing for a moderately dense cluster of academic and research facilities in a central core area encircled by self-contained colleges and schools (the "Academic Core"). As noted in the plan, "the intent is to combine the advantages of a small college with the facilities of a great university.... [T]he opportunity seems great to combine patterns of learning and living, as well as to make use of new methods of instruction, study, and communications" (UC Santa Cruz 1963).

In addition to an ambitious academic vision, a commitment to environmental stewardship has simultaneously guided the planning and development of the campus over the years. This includes protecting the diverse natural resources of the campus by clustering development in designated areas; sensitively siting new buildings to reduce effects on the natural environment, including the redwood forests, scenic viewsheds, and biological habitats, and on the cultural resources present on the campus; and, over time, concentrating academic and administrative functions in a central core area.

As a result of these planning principles and policies, the primary focus of campus development has been concentrated in the central campus subarea, with clusters of development around the periphery and low-density clusters in the lower campus subarea.

2.4.2 LRDP Planning Process

UC Santa Cruz began the planning process for the 2021 LRDP in fall 2017 by conducting a series of meetings and interviews with campus and community stakeholders. The planning process was steered by the LRDP Planning Committee, made up of students, staff, faculty, and community members. Expert workgroups engaged and provided feedback on planning efforts at critical milestones in the areas of Ecology and the Environment, Housing and Student Life, Infrastructure and Sustainability, and Transportation. UC Santa Cruz also engaged regularly with a Community Advisory Group, consisting of city, county, and community representatives, to maintain an ongoing exchange of ideas and information and explore common goals to issues that confront both UC Santa Cruz and the surrounding community.

In spring 2018, public workshops were held on the campus and in the community, focusing on current concerns around the topics of housing, water, transportation, infrastructure, and sustainability. At these workshops, UC Santa Cruz shared current planning efforts and sought feedback to help shape the approach to the 2021 LRDP. In fall 2018, three initial land use scenarios were developed and UC Santa Cruz obtained feedback from the campus community and the broader Santa Cruz community through a public survey and an online visioning activity. UC Santa Cruz refined the 2021 LRDP land use scenarios based on this feedback and held community and campus workshops during the month of October 2019 to receive feedback on two variations of the proposed land use scenario. Breakout stations were included to discuss concerns and exchange ideas about circulation, housing, sustainability, and campus and community amenities. Following the October 2019 community meetings, UC Santa Cruz met with various campus stakeholders and prepared a preferred land use scenario, which incorporated the interests of both on- and off-campus participants. In December 2019, UC Santa Cruz held two off-campus and one on-campus workshops to present the draft preferred land use map. Throughout the entire public outreach process, UC Santa Cruz has made major and minor revisions to the 2021 LRDP land use plan and has issued a series of land use maps with each successive version to provide an overview of the updated planning effort.

2.5 2021 LRDP GOALS AND OBJECTIVES

The overall objective of the 2021 LRDP is to guide the physical planning and development of the plan area in support of the teaching, research, and public service missions of UC Santa Cruz and the broader UC system. Four key considerations have informed the 2021 LRDP goals: supporting the academic mission, guiding campus evolution and integrity, recognizing and connecting to the local and regional context, and establishing a framework of planning resilience and long-term sustainability. UC Santa Cruz has identified the following 2021 LRDP objectives to guide implementation of the 2021 LRDP:

- ▶ Expand campus facilities and infrastructure to allow for projected increases in student enrollment through 2040 based on statewide public educational needs and to support the academic mission, including housing for 100 percent of the additional FTE students (above the 2005 LRDP total of 19,500 FTE students) in both colleges and student housing developments, and commensurate academic and support space.
- ▶ Ensure compact and clustered development of academic, administrative, and support facilities in the academic core and student housing and colleges around the periphery to facilitate shared resources, provide convenient access, and promote pedestrian circulation.
- ▶ Provide for establishment of two new college pairs at the main residential campus to provide academic services and a close-knit intellectual and social environment.

- ▶ Protect, to the extent feasible, existing campus open spaces in the built environment, including areas designated as Natural Space to maintain an interconnectedness between natural resources, wildlife corridors and critical scenic viewsheds, and areas designated as Outdoor Research and Natural Reserve to protect natural features and processes for teaching and learning and to support dedicated outdoor research programs.
- ▶ Provide spaces for events and academic facilities to allow the campus to function as a center for public cultural life in the region through public programs, events, and services.
- ▶ Increase on-campus housing opportunities for faculty and staff at the main residential campus and the Westside Research Park, to allow up to 25 percent of the increase in faculty and staff, based on demand, to be housed on campus.
- ▶ Recognize, to the extent feasible, UC Santa Cruz and regional histories within the campus, including protecting tribal cultural resources and maintaining the integrity of existing historic structures and enhancing the Cowell Lime Works Historic District as a campus gateway.
- ▶ Develop an improved, more efficient roadway network to support transit with peripheral parking and mobility hubs.
- ▶ Promote Transportation Demand Management (TDM) and provide infrastructure to optimize trip- and vehicle-miles-travelled-reduction benefits and efficiency of transit, bike, and pedestrian access to, from, and within the campus to reduce the use of single-occupancy vehicles.
- ▶ Foster long-term physical and social resilience, including a response to climate change through climate resiliency and adaptation strategies and integrating sustainability leadership into campus teaching, learning, research, design, and operations.
- ▶ Respect and reinforce the Physical Planning Principles and Guidelines to maintain the unique character of the UC Santa Cruz campus.

2.6 2021 LRDP COMPONENTS

2.6.1 Basis for Planning

As stated above, the overall objective of the 2021 LRDP is to support the teaching, research, and public service missions of UC Santa Cruz. The plan's growth assumptions are based on overall UC and campus population projections, demonstrated need for additional public university capacity in California, and an understanding of campus needs and goals beyond the enrollment level of 19,500 FTE students planned for under the 2005 LRDP. However, the 2021 LRDP does not commit UC Santa Cruz to any specific enrollment level, campus population, or development. The 2021 LRDP planning effort addresses anticipated growth in on-campus student population from an estimated 18,518 FTE students (three-quarter average) for the 2018–2019 academic year to a potential enrollment of 28,000 FTE students (three-quarter average) by the 2040–2041 academic year. UC Santa Cruz faculty and staff are also anticipated to increase from approximately 2,800 FTE (three-quarter average) to approximately 5,000 FTE (three-quarter average) in the same timeframe. UC Santa Cruz plans to provide on-campus housing for 100 percent of the increase in student enrollment beyond 19,500 FTE students and up to 25 percent of the additional anticipated 2,200 FTE faculty/staff members. The relationship between existing and approved housing, and the total amount of housing that would be provided on campus, is discussed further in Section 2.6.4. To accommodate the increased campus population, the 2021 LRDP proposes the renovation of existing facilities and the construction of an additional 3.1 million asf of academic and support building space.

2.6.2 Description of the Plan

The 2021 LRDP embraces a compact academic core with housing around the periphery. Employee housing would be strategically located to allow access to community resources. An enhanced historic district at the entrance to the main residential campus would provide an improved community interface. Designated reserve areas would be set

aside for ecological, cultural, and educational uses, and natural space would protect wildlife corridors and scenic views. To improve circulation, the 2021 LRDP includes an improved and more efficient roadway network and enhanced alternative transportation strategies throughout the main residential campus. Finally, the 2021 LRDP plans for the Westside Research Park to be developed with mixed-use academic, research, and housing on the west side of Santa Cruz.

2.6.3 Campus Enrollment and Population

The on-campus population at both the main residential campus and the Westside Research Park comprises undergraduate and graduate/professional students, faculty, staff, dependents living in employee or student family housing, non-UC employees working on campus (e.g., consultants, employees of private businesses), visitors, and construction workers. Some of this population resides on campus, while the majority is present only during the daytime. As shown in Table 2-1 and described below, under the 2021 LRDP the total on-campus population, including dependents and non-UC employees, could grow from approximately 22,344 persons (2018–2019 academic year) to an estimated total on-campus population of approximately 35,230 persons in 2040–2041, an increase of 12,830 persons.

Table 2-1 Existing and Potential FTE Campus Enrollment and Population

Population	Existing Condition (2018–2019)	Potential 2021 LRDP Population (2040–2041)	Net New Compared to 2018–2019
Students ¹	18,518 ¹	28,000	9,482
Faculty and staff	2,800 ²	5,000	2,200
Non-UC employees	640	990	350
Other daily populations	386 ³	1,240	798
Total	22,344	35,230	12,830

Notes: FTE = full-time equivalent; LRDP = Long Range Development Plan; UC = University of California.

¹ Fall-Winter-Spring (FWS) three-quarter-average on-campus enrollment FTE of UC Santa Cruz-based student population in the 2018-2019 academic year.

² The 2,800 FWS three-quarter-average on-campus employee FTE represents 3,657 headcount employees.

³ Other daily population is estimated based on 270 homes for faculty and staff located at Phase 1 of Ranch View Terrace, Laureate Court, Cardiff Terrace, Hagar Meadows Townhomes, and Hagar Court, and an average household size of 2.43 persons for the city of Santa Cruz (California Department of Finance 2019).

Source: UC Santa Cruz 2020.

STUDENTS

As shown in Table 2-1, on-campus student population is projected to grow from 18,518 FTE students in 2018-2019 (academic year) to approximately 28,000 FTE students by 2040-2041, an increase of 9,482 students. The 2040-2041 projections for the campus were derived after careful consideration of a number of factors, including the projected systemwide demand for a UC education and a UC Santa Cruz vision that encompasses an expanded breadth and depth of undergraduate and graduate programs and a vibrant research enterprise.

An increase of about 9,482 students over the 2018-2019 baseline equates to an average addition of 431 students each year. About 13 percent of the projected 2040-2041 student population, or about 3,640 students, would be graduate and professional students.

FACULTY AND STAFF

In conjunction with the increases in student enrollment and research activity anticipated under the 2021 LRDP, three quarter average faculty and staff at UC Santa Cruz are anticipated to increase by approximately 2,200 FTE persons by the year 2040-2041, to an estimated total of approximately 5,000 FTE faculty and staff. This projection includes employees at the Westside Research Park but excludes UC Santa Cruz employees at the Coastal Science Campus and remote satellite campuses.

NON-UC EMPLOYEES AND OTHER DAILY POPULATIONS

In addition to students, faculty, and staff, other persons who may be on campus on a given day include non-UC employees and dependents of faculty, staff, and students. Non-UC employees include temporary staff (e.g., construction workers, seasonal employees), workers in food service businesses, consultants, and non-UC employees of research institutes. As shown in Table 2-1, these populations are projected to increase from an existing total of about 640 persons to approximately 990 persons by 2040-2041. Similarly, with the provision of more employee and family student housing on campus, the dependent population living on the campus is projected to increase from approximately 380 persons to approximately 1,250 persons by 2040-2041.

2.6.4 Building Program

Table 2-2 summarizes the existing and projected building space on the campus under full 2021 LRDP implementation conditions. UC Santa Cruz has developed an estimate of the amount of new building space by type that would be required to accommodate the projected growth on the campus under the 2021 LRDP. As the table shows, approximately 5.6 million asf (8.4 million gross square feet [gsf])⁴ of building space would be required, attributable in part to the increase in on-campus housing and facilities to support students on campus. Total building space on the campus would increase from approximately 3.8 million asf (5.8 million gsf) in 2018-2019 to approximately 9.4 million asf (14.1 million gsf) upon full implementation of the 2021 LRDP, anticipated in 2040. As currently envisioned, development under the 2021 LRDP would occur primarily within the central and lower campus subareas, as shown in Figure 2-4.

The following discussion provides further detail regarding the types of functions for the uses that would occur under each of the land use types shown in Table 2-2.

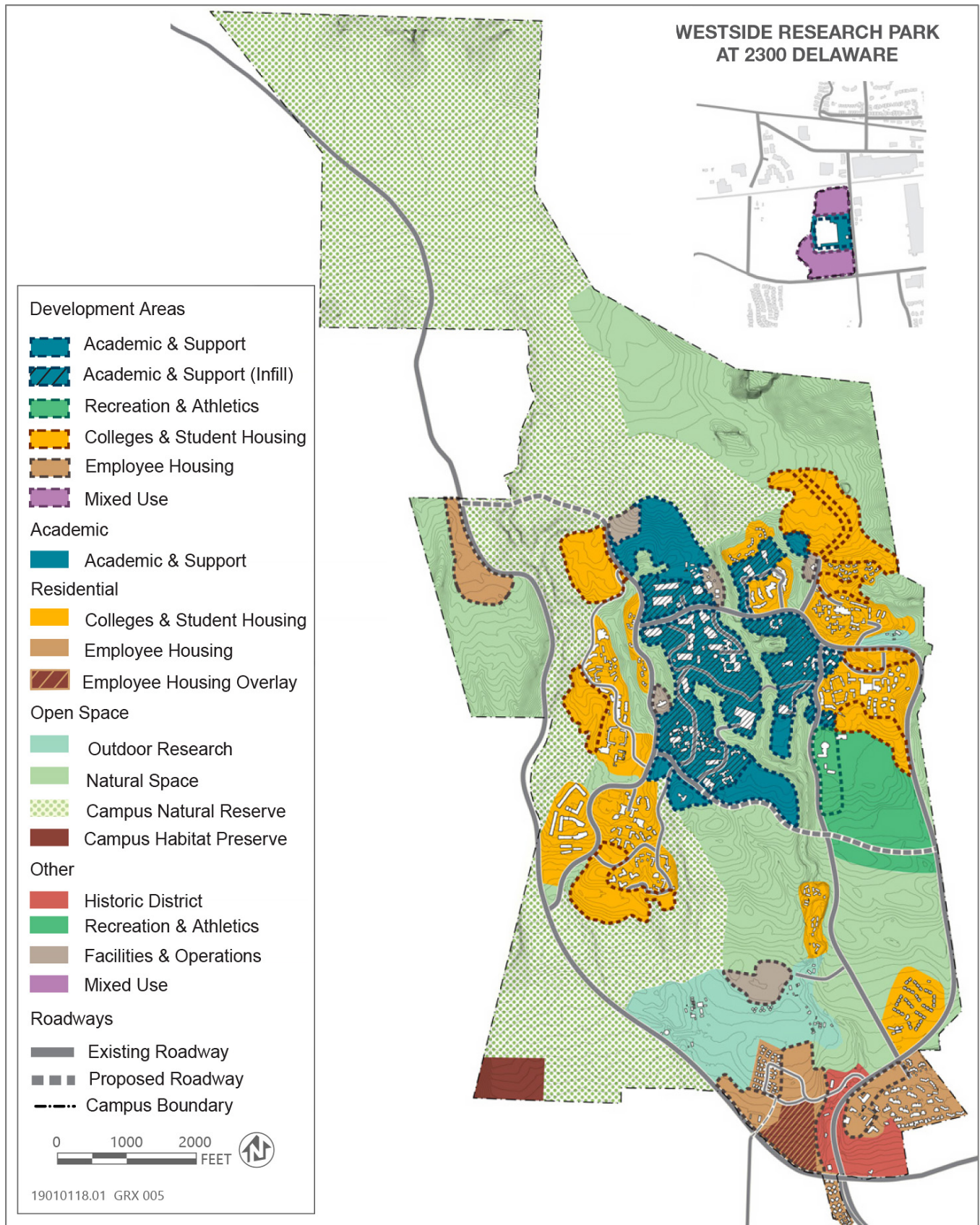
Table 2-2 Projected Increases in Building Space under the 2021 LRDP (asf)

	Existing Condition (2018–2019)	Net New under 2021 LRDP by 2040–2041	Existing + 2021 LRDP (2040–2041)
Academic and Support Space			
Instruction and Research	858,627	1,127,373	1,986,000
Academic and Administrative Support	765,368	1,290,438	2,055,806
Student Support and Public Services	348,628	608,110	956,738
Facilities & Operations	115,805	57,903	173,708
<i>Academic and Support Space ASF Subtotal</i>	<i>2,088,428</i>	<i>3,083,824</i>	<i>5,172,252</i>
Residential Space			
Student Housing	1,346,938	1,885,000	3,231,938
<i>Beds</i>	9,283	8,500	17,783
Faculty & Staff Housing	317,622	660,000	977,622
<i>Units</i>	270	558	828
<i>Residential Space ASF Subtotal</i>	<i>1,664,560</i>	<i>2,545,000</i>	<i>4,209,560</i>
Total	3,752,988	5,628,824	9,381,812

Notes: ASF = assignable square feet; LRDP = Long Range Development Plan.

Source: UC Santa Cruz 2020.

⁴ "Assignable square feet" (asf) refers to the sum of all building space that is programmable for a particular occupant(s) or use(s) (e.g., classrooms, labs, offices, study facilities, health care, residential), whereas "gross square feet" (gsf) reflects the sum of all building space within a building, including hallways, unusable space within basements or attics, and permanent partitions.



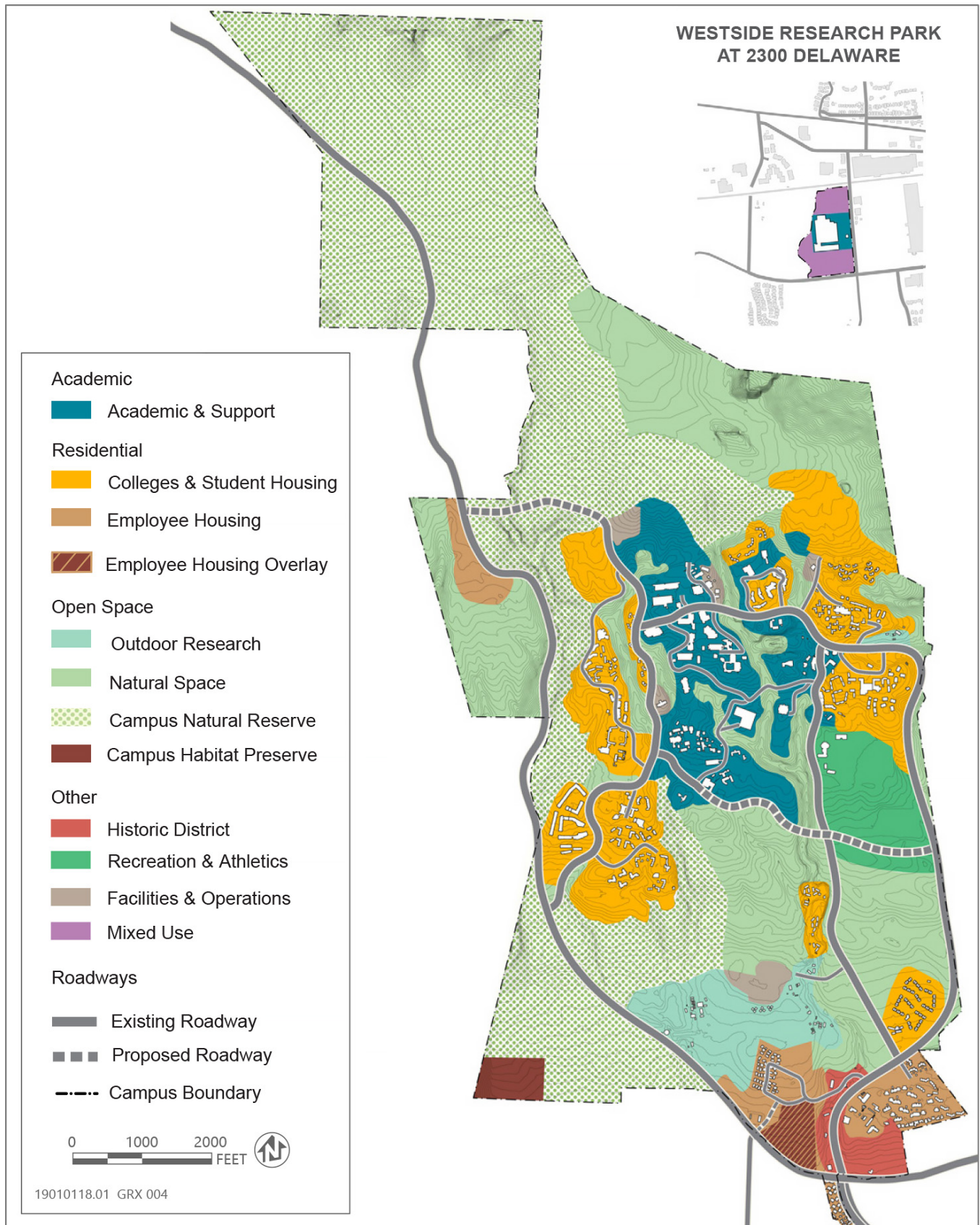
Source: UC Santa Cruz 2020

Figure 2-4 Envisioned Development Areas on the Main Residential Campus and Westside Research Park

2.6.5 Proposed Land Use Designations

The 2021 LRDP proposes a mix of land use categories to accommodate academic, residential, open space, and facilities and operational uses. Under the 2021 LRDP, these types of land use categories are retained and have been further refined through the 2021 LRDP planning process to reflect current campus needs and functions. The 2021 LRDP identifies the following land use categories to support anticipated campus growth (Figure 2-5):

- ▶ Academic & Support Space Land Use Designation (approximately 170 acres) Instruction and Research—classrooms, teaching labs, and research labs. With a focus on research growth in the new plan, UC Santa Cruz expects these areas to grow substantially to support the academic mission within the central portion of the main residential campus, adjacent to and to complement existing academic and support space development.
 - Academic and Administrative Support—various spaces that support the work of teaching, learning, and research. These include, but are not limited to, student commons spaces, including libraries and collaboration learning spaces and study commons, research space and office spaces for ladder faculty, lecturers and teaching assistants, and academic support staff.
 - Student Support and Public Services—health and wellness, student support and gathering spaces, community amenities spaces, and athletics and recreation.
- ▶ Residential Space Land Use Designations (approximately 359 acres)
 - Student Housing—residential and support spaces in both the colleges and the noncollege-affiliated developments. As discussed above, the 2021 LRDP proposes to provide beds for 100 percent of new enrollment, or approximately 8,500 students, beyond 19,500. Approximately 9,300 students lived on campus in Student Housing designated areas in 2018–2019, with more than 5,565 students living in residence halls, and more than 3,178 students living in apartments.
 - Employee Housing—residential spaces for campus employees.
- ▶ Open Space Land Use Designations (approximately 1,402 acres)
 - Outdoor Research—active landscapes for teaching, research, and community education, including the following existing research programs: Center for Agroecology and Sustainable Food Systems farm, the Arboretum and Botanic Garden, and the Chadwick Garden.
 - Campus Natural Reserve—land designated to protect natural features and processes for the purposes of teaching and research.
 - Natural Space—land protected as open space to maintain special campus landscapes for scenic value, special vegetation, and wildlife continuity.
 - Campus Habitat Preserve—habitat preserve that was established pursuant to a 2005 Implementing Agreement between the U.S. Fish and Wildlife Service (USFWS) and the Regents. The preserve is referred to as Inclusionary Parcels A and D. These parcels are designated for the management of the Ohlone tiger beetle and California red-legged frog.
- ▶ Other (approximately 127 acres)
 - Historic District—land and structures intended to express the unique historic and cultural context for academic & support facilities, community-facing programs, and visitor resources.
 - Athletics & Recreation—indoor and outdoor athletic fields and facilities.
 - Facilities & Operations—office and shop space for staff who support the continued operation of the campus.
 - Mixed Use—employee housing, academic, and support space.



Source: UC Santa Cruz 2020

Figure 2-5 2021 LRDP Proposed Land Use Designations

Table 2-3 shows the difference in acreages per land use designation between the 2005 LRDP, as amended, and those in the proposed 2021 LRDP for the main residential campus. Under the proposed 2021 LRDP, the Campus Resource Lands land use designation in the 2005 LRDP has been eliminated from the proposed 2021 LRDP and has been primarily incorporated into the Natural Space and Campus Natural Reserve designations. Similar to the 2005 LRDP, the Campus Habitat Preserve designation is included in the proposed 2021 LRDP. However, a 12.5-acre parcel (Inclusionary Parcel D Preserve or Inclusion Area D) has an employee housing overlay, which would require an amendment to the existing Habitat Conservation Plan (HCP) for Ranch View Terrace if the parcel were to be developed in the future while also maintaining the conservation objectives of the HCP (e.g., no net loss of habitat and potential relocation to more appropriate habitat). Refer to Section 3.5, "Biological Resources," for further clarification. The Outdoor Research designation, previously designated as Site Research and Support in the 2005 LRDP, includes additional areas that had been designated as Protected Landscape in the 2005 LRDP. However, the land with this designation would continue to be used for research.

Table 2-3 Land Use Designations Acreage Summary for the Main Residential Campus

Land Use Designations	Acreage Under the 2005 LRDP, as Amended ¹	2021 LRDP Acreage	Net Change
Academic Land Use Designation			
Academic & Support (Academic Core in the 2005 LRDP)	132	163	31
Residential Land Use Designations			
Colleges and Student Housing	245	277	32
Employee Housing	75	82 ³	7
Open Space Land Use Designations			
Outdoor Research (Site Research and Support in the 2005 LRDP)	152	74	-78
Campus Natural Reserve	410	789	379
Natural Space (Protected Landscape in the 2005 LRDP)	503	513	10
Campus Resource Lands	318	—	-318
Campus Habitat Preserve ²	26	26	0
Other			
Historic District ⁴ (Included as an overlay in the 2005 LRDP)	—	28	28
Athletics & Recreation (Physical Education and Recreation in the 2005 LRDP)	86	67	-19
Facilities & Operations	89	21	-68
Total acreage⁵	2,036	2,040	4

¹ Two minor amendments were made to the 2005 Land Use Map. In 2016, Phase 1 of the Recycling Yard Project amended the 2005 LRDP by converting 1.6 acres of land from Protected Landscape to Campus Support and 2.1 acres of land from Site Research and Support to Campus Support for a total of 3.7 acres converted to Campus Support. In 2019, approximately 17 acres of land were redesignated from Campus Resource Land to Colleges and Student Housing in an LRDP amendment for the Student Housing West Project, which was previously approved by the Regents in 2019 and may be reapproved in 2021.

² Campus Habitat Preserve is composed of two mitigation parcels: Inclusionary Parcel D Preserve, which is 12.5 acres, and Inclusionary Parcel A Preserve, which is 13 acres. Both Inclusionary Parcel A Preserve and Inclusionary Parcel D Preserve were preserved under the Habitat Conservation Plan (HCP) prepared in support of the Incidental Take Permit (ITP) for the Ranch View Terrace project. Inclusionary Parcel A Preserve is preserved in perpetuity, and Inclusionary Parcel D Preserve is preserved through the ITP term of 60 years. Inclusionary Parcel D Preserve has an Employee Housing overlay under the 2021 LRDP, which would require a modification to the HCP if it were to be developed in the future.

³ The 12.5-acre Employee Housing Overlay on the Inclusionary Parcel D Preserve is not included as part of the overall acreage calculation shown, but the EIR evaluates the potential impacts of using this parcel for Employee Housing should UC Santa Cruz proceed with modifications to the HCP in the future.

⁴ The Historic District was an overlay district on the Campus Support Land Use designation in the 2005 LRDP.

⁵ Acreages are approximate, include rounding, and are based on 2005 LRDP, Draft 2021 LRDP, County parcel information, and GIS data.

Source: UC Santa Cruz 2020.

The Westside Research Park (as shown in Table 2-4) was designated Academic Core in the 2005 LRDP and continues to be designated as Academic & Support with an additional designation of Mixed Use to provide for the continuation of existing uses and the development of future mixed use housing because of its proximity to other mixed-use housing and commercial uses on the west side of Santa Cruz.

Table 2-4 Land Use Designations Acreage Summary for the Westside Research Park

Land Use Designations	Acreage under the 2005 LRDP	2021 LRDP Acreage	Net Change
Academic & Support (Academic Core in the 2005 LRDP)	18	7	-11
Mixed Use	—	11	11
Total Acreage¹	18	18	0

¹ Acreages are approximate, include rounding, and are based on 2005 LRDP, Draft 2021 LRDP, County parcel information, and GIS data.

Source: UC Santa Cruz 2020.

The following section provides a detailed explanation of each land use designation in the 2021 LRDP.

ACADEMIC LAND USE DESIGNATIONS

The proposed 2021 LRDP includes a primary academic land use designation: Academic & Support.

Academic & Support

The principal use includes teaching, research, faculty and administrative offices, classrooms, libraries, student support and amenities such as food services, the bookstore, and conference and special event spaces.

Allowable support uses may include utility and facilities maintenance space, storage, delivery zones, and a limited amount of parking.

Approximately 163 acres on the main residential campus are designated Academic & Support land use and approximately 8 acres on the Westside Research Park under the 2021 LRDP (approximately 20 more acres than identified in the 2005 LRDP). The Academic & Support land use designation is the primary land use associated with the academic mission, as well as the administrative and student support space necessary to fulfill it. Along with housing, it accommodates the vast majority of the overall campus development area (i.e., area that is not open space).

The Academic & Support land use is predominantly clustered in the academic core, with some academic and support building space included in the colleges and the Westside Research Park. In addition to new areas for the development of this land use, the land use designation provides for the use of existing infill sites, as well as potential renovation of existing buildings under the 2021 LRDP.

The proposed expansion of the area designated Academic & Support reflects provisions for additional capacity to accommodate future teaching, learning, and research needs and to reduce building space shortages for instruction and research throughout the campus.

New buildings would generally be similar on average to those in the current academic core, generally ranging in height between four and six stories. In the southern extension of the academic core, buildings would range from two to four stories in height and would be sited to minimize their visibility from the top of the adjoining meadows. To the north, within forested areas, buildings may be as tall as six or more floors, as dictated by their programs. This greater density of development would allow more academic destinations to be conveniently located and maximize land use efficiency, as well as accessibility for faculty, staff, and students.

RESIDENTIAL LAND USE DESIGNATIONS

The 2021 LRDP includes two primary residential land use designations: (1) Colleges & Student Housing and (2) Employee Housing. Together, these land uses represent campus housing in the broadest sense. Each of these designations includes housing and additional elements, such as residential parking land related housing amenities. As noted above and explained in further detail below, the Mixed Use designation may include mixed-use residential at Westside Research Park. Table 2-5 identified the existing and projected level of on-campus residents under the 2021 LRDP.

Table 2-5 On-Campus Residents within the LRDP Area

	Existing Condition (EIR Baseline 2018-2019)	Net New under 2021 LRDP by 2040-2041	Existing + 2021 LRDP (2040-2041)
Students	9,283	8,500	17,783
Employees	270	558	828
Non-UC Employees (dependents and non-UC employees) ¹	386	798	1,184
Total On-Campus Residents	9,939	9,856	19,795

¹Other daily population is estimated based on 270 homes for faculty and staff located at Phase 1 of Ranch View Terrace, Laureate Court, Cardiff Terrace, Hagar Meadows Townhomes, and Hagar Court, and an average household size of 2.43 persons for the city of Santa Cruz (California Department of Finance 2019).

Source: UC Santa Cruz 2020.

Colleges & Student Housing

The principal uses include student housing, food services, student services, academic and academic support, childcare, and athletics and recreation spaces.

Allowable supporting uses include limited campus support and parking.

The Colleges & Student Housing land use designation totals 277 acres (approximately 32 more acres than identified in the 2005 LRDP). As shown in Table 2-2, the 2021 LRDP plans land uses to house up to an additional 8,500 students, above 19,500, in residence halls and apartments. Colleges and student housing would continue to be provided around the perimeter of the academic core to facilitate convenient access to instruction and research facilities and student support spaces throughout the day.

Two distinct student housing types would be provided on campus: housing in new colleges intended primarily for first year students, and housing not formally affiliated with the colleges and intended for continuing, upper division or graduate students. The principal uses associated with Colleges & Student Housing land use designation include housing, food services, student services, academic support, family student housing, childcare, and athletics and recreation spaces. Supporting uses include limited campus support (e.g., on-site utility improvements) and parking.

The campus would continue to grow by colleges, which are organized as active living-learning environments and include academic space as well as residential amenities such as dining halls, food service, community rooms, social and study spaces, and administrative support. Colleges at UC Santa Cruz are paired to share common resources, and that pattern of growth would continue with two new pairs of colleges proposed in the 2021 LRDP, one in the northeast corner and one in the northwest corner, for a proposed total of 14 colleges. The college environment combines a supportive social structure, essential to academic success and personal growth, with an enhanced intellectual life to create a vibrant living – learning community for students.

Where colleges primarily support first year housing needs, non-college-affiliated housing is also offered for continuing students, graduate students, and transfer students, who desire more independent housing types and additional privacy. Student housing would continue to include amenities such as food service, recreational facilities, study, and social lounges, among others.

Both colleges and non-college-affiliated student housing would continue to be located around the periphery of the academic core. As the campus includes various landscape typologies, the density of housing development would be informed by its location. Where housing is located in or near the evergreen and redwood forests toward the north,

buildings would likely be denser, at 4 to 8 stories, in order to minimize their footprint and physical extent. Where located in predominantly meadow areas, housing would be lower in density and height to maintain scenic viewsheds and configured to minimize visual impacts.

Employee Housing

The principal use include housing for staff and faculty.

Supporting uses include childcare, recreation and other community amenities, public services, limited campus support facilities (e.g., on-site utility improvements), and parking.

Approximately 82 acres are designated Employee Housing land use in the 2021 LRDP (approximately 7 more acres than identified in the 2005 LRDP). Employee housing designation would provide on-campus housing for up to 25 percent of new employees, based on demand, in a variety of housing types (primarily townhomes and apartment-style buildings.)

The land use is included in several distinct areas on the south and west side of the campus, primarily clustered around the main campus entrance in order to allow families and spouses convenient access off campus, and to utilize more centrally located areas near the academic core for student housing.

The plan proposes expanding two areas of existing employee housing, including south of Coolidge, maintaining the character of the surrounding Historic District, and adjacent to Ranch View Terrace. A new area across Empire Grade, and tucked into the woods, is also included. Additional employee housing, allowable under the Mixed-Use land use designation, could potentially be located at the Westside Research Park.

Employee Housing Overlay Site

Approximately 12.5 acres of the Employee Housing land use designation is shown within the southern portion of the main residential campus as an overlay on Inclusionary Parcel D Preserve. As noted above, the area was previously set aside in an HCP as a habitat preserve for the Ohlone tiger beetle and the California red-legged frog. UC Santa Cruz is interested in exploring the feasibility of developing this parcel, while seeking to enhance the conservation strategy of the HCP at a different location. UC Santa Cruz anticipates engaging in broader habitat conservation planning in cooperation with USFWS and the California Department of Fish and Wildlife to ensure the long-term viability of sensitive species and habitat on the campus.

OPEN SPACE LAND USE DESIGNATIONS

The 2021 LRDP includes four open space land use designations: Outdoor Research, Natural Space, Campus Natural Reserve, and Campus Habitat Preserve.

Outdoor Research

The principal uses would include landscape-based instruction and research with accompanying buildings for educational programs and visitor resources.

Allowable supporting uses could include utility infrastructure, minor access roads and a limited amount of parking.

Approximately 74 acres are designated Outdoor Research in the proposed 2021 LRDP, which is a decrease of about 78 acres of land designated Site Research and Support in the 2005 LRDP. This designation includes active landscapes for teaching, learning, research, and community education. It supports the following existing research programs: CASFS farm; the Arboretum and Botanic Garden; and the Chadwick Garden. The principal programs associated with this land use include Social Sciences, Physical and Biological Sciences, and Public Services programs.

The acreage of land designated Outdoor Research to support the Chadwick Garden has remained the same as in the 2005 LRDP. The acreage of land designated to support the CASFS program, or Farm, is also the same as in the 2005 LRDP; the area known as the Village where the Program in Community and Agroecology is located, is now included in the Colleges and Student Housing land use designation. At the Arboretum, approximately 20 acres stretched in a north-south direction along the Moore Creek ravine were removed from the previous Site Research and Support land use designation and now are designated Natural Space and Campus Natural Reserve.

The Chadwick Garden is located at the east end of McLaughlin Drive. The Arboretum and the Farm are located in the lower campus subarea. The Arboretum is accessed from Empire Drive and the Farm can be entered from multiple locations, including Village Road or Ranch View Road, or by foot on Farm Road.

Natural Space

The principal use of the Natural Space designation is to maintain the landscape in its natural state, including the Great Meadow and existing ravines and drainages throughout the campus.

Supporting uses could include carefully sited paths, roads, infrastructure, and unobtrusive research uses which do not impinge on overall character.

Approximately 513 acres are designated Natural Space in the proposed 2021 LRDP, an increase of about 10 acres compared to the 2005 LRDP (where it was designated Protected Landscape). The purpose of the Natural Space designation is to maintain special campus landscapes for their scenic value and maintain special vegetation and wildlife continuity zones that are intrinsic to the campus's identity. Natural Space will continue to be managed by Grounds. In specified areas of Natural Space used for long term research projects, including sections of the Great Meadow, the area will be managed in consultation with the UCSC Campus Natural Reserve.

Campus Natural Reserve

The principal use is to preserve landscapes in their natural state, where construction is prohibited except as required for maintenance of the area as a teaching, learning and research reserve.

Supporting uses include the limited construction of carefully sited roads, access paths, bridges, below-grade utility access and unobtrusive research equipment.

Approximately 789 acres is designated Campus Natural Reserve in the proposed 2021 LRDP, an increase of approximately 379 acres from the 2005 LRDP. The intent of this land use designation is to protect natural features and processes for the purposes of teaching, learning, and research, as integral to the academic mission. The boundary of the Campus Natural Reserve captures critical habitat and sensitive vegetation, specific sites engaged in long-term research, wildlife continuity zones, and sensitive archaeological resources.

The land area designated Campus Natural Reserve increased by approximately 379 acres, largely as a result of the designation of previously identified Campus Resource Land as Campus Natural Reserve in the 2021 LRDP. In addition, the compact boundaries of land designated Colleges & Student Housing and Academic & Support has translated into more land being protected as Campus Natural Reserve.

The Campus Natural Reserve would continue to be managed in consultation with the Campus Natural Reserve Committee. One area of the Campus Natural Reserve, the Lower Moore Creek area adjacent to the Arboretum, will be jointly managed by the UCSC Campus Natural Reserve and the Arboretum and includes a California regional native plant garden. The Campus Natural Reserve is located primarily in the North Campus and on the west side of the campus.

Campus Habitat Preserve

Two areas on the campus, which total approximately 26 acres, are designated as Campus Habitat Preserve in the 2021 LRDP. The larger of these two areas, a 13-acre parcel on the southwestern corner of the campus adjacent to Wilder Creek, is designated as a preserve to retain high-quality grassland and forest habitat on the campus for the California red-legged frog and the Ohlone tiger beetle. This preserve was established pursuant to a 2005 Implementing Agreement between USFWS and the Regents for the Ranch View Terrace development on campus and is referred to as Inclusionary Parcel A Preserve. The second area, a 12.5-acre parcel, is located on the southern portion of the campus near the main entrance. It is referred to as Inclusionary Parcel D Preserve. The southern portion of the parcel is designated as a management site for the Ohlone tiger beetle habitat with the remainder of the site managed for California red-legged frog. Campus Habitat Reserve lands are protected lands that will remain undeveloped except as permitted by the terms of the Implementing Agreement and associated HCP. Please also see the discussion above of a proposed employee housing overlay on Inclusionary Parcel D Preserve under the 2021 LRDP.

OTHER LAND USE DESIGNATIONS

The 2021 LRDP includes four land use designations in the category titled Other: Historic District, Athletics & Recreation, Facilities & Operations, and Mixed Use. Each of these designations is described below.

Historic District

Principal uses within the Historic District would include academic and support, and public services, including campus and community amenities.

Supporting uses include facilities and operation, as well as limited parking.

The Historic District designation pertains to approximately 28 acres within the lower campus subarea that are associated with the Cowell Lime Works Historic District. As described in further detail in Section 3.4, "Archaeological, Historical, and Tribal Cultural Resources," the Cowell Lime Works Historic District is listed on the National Register of Historic Places and encompasses cultural resources related to the original 19th century Cowell Ranch limestone industry. This area is currently used for primarily campus support activities (e.g., admissions office). Under the proposed 2021 LRDP, the land area associated with this land use would remain the same as the boundaries of the historic district but would have its own land use designation instead of being an overlay, as it was in the 2005 LRDP. The intent of the Historic District designation is to establish an intentional gateway to the campus to express the unique historic and cultural context of UC Santa Cruz.

Athletics & Recreation

Principal uses associated with this land use designation include playing fields and outdoor courts, indoor recreational facilities, event spaces and health and wellness facilities.

Supporting uses include parking and transit/ mobility hub facilities, and limited public services, including food service, and academic and student support uses.

Approximately 67 acres are designated Athletics & Recreation in the proposed 2021 LRDP, a decrease of about 19 acres compared to the 2005 LRDP. This decrease is due to the removal of a secondary Athletics and Recreation area on the west side of the campus which was identified in the 2005 LRDP and is not included in the proposed 2021 LRDP.

Existing recreational and athletic facilities on campus are concentrated in one area of relatively flat land in the eastern portion of the campus, and support recreational programs, intercollegiate athletics, and health and wellness activities for the UC Santa Cruz and local community. The fields and facilities are also used for special events, such as graduation, concerts, and fairs. The Athletics & Recreation land use designation serves an important aspect of public life for both the campus and local community.

The area designated Athletics & Recreation also includes a potential site for an event center that could accommodate both athletics as well as cultural events. The Athletics & Recreation land use designation may also include utility infrastructure systems such as stormwater facilities, field illumination, bicycle infrastructure, and pedestrian amenities in support of the overarching land use. Buildings supporting indoor recreation would be sensitively sited and developed at a low density and profile to maintain the sense of open space and scenic viewsheds.

Recognizing the need for distributed recreational facilities to support increased housing throughout the campus, recreation and athletics facilities have also been included as a supporting use in the Colleges & Student Housing land use designation. These may include small field houses offering courts and exercise rooms, and may also include small playing fields and open areas suitable for informal use.

Facilities & Operations

The principal uses include facilities-related support offices, mechanical equipment, storage, corporation yards, and parking for faculty and staff.

Approximately 21 acres are designated Facilities & Operations land use under the proposed 2021 LRDP, a decrease of 68 acres compared to the 2005 LRDP. This land is intended to serve the operational needs of the campus. Limited Facilities and Operations functions are also included as an allowable supporting use in housing designations for flexibility.

The proposed land use plan identifies several areas for Facilities & Operations support. Four of these areas expand existing Facilities & Operations facilities, including an area near the Cogeneration plant, an area near the campus fire station, an area adjacent to the Environmental Health and Safety facility off of Heller Drive at the west, and an area around the Recycling Yard in the Lower Meadow. The plan also introduces a new area located at the northwest corner of the central campus subarea with access via Heller Drive, which would allow for campus operations-oriented functions to be relocated from the lower campus subarea to allow improvements to the main residential campus entry for community-facing programs, public services and employee housing.

Mixed Use

The principal uses under this designation include academic and support, student housing, employee housing, public services, and limited campus support.

Supporting uses include food services, mobility/transit service space, and parking.

Approximately 11 acres are placed under the Mixed Use land use designation in the 2021 LRDP. This land use designation applies to land at the Westside Research Park. The intent of the Mixed Use land use designation is to recognize the evolving nature of the surrounding area, and to allow the development of other program opportunities beyond academic and support to create a diverse, vibrant, and active site.

The site and adjoining street and curb space may also help to support an expanded mobility hub with shuttle stop and connections to the railroad bikeway and the main residential campus.

2.6.6 Circulation, Parking, and Transportation Infrastructure

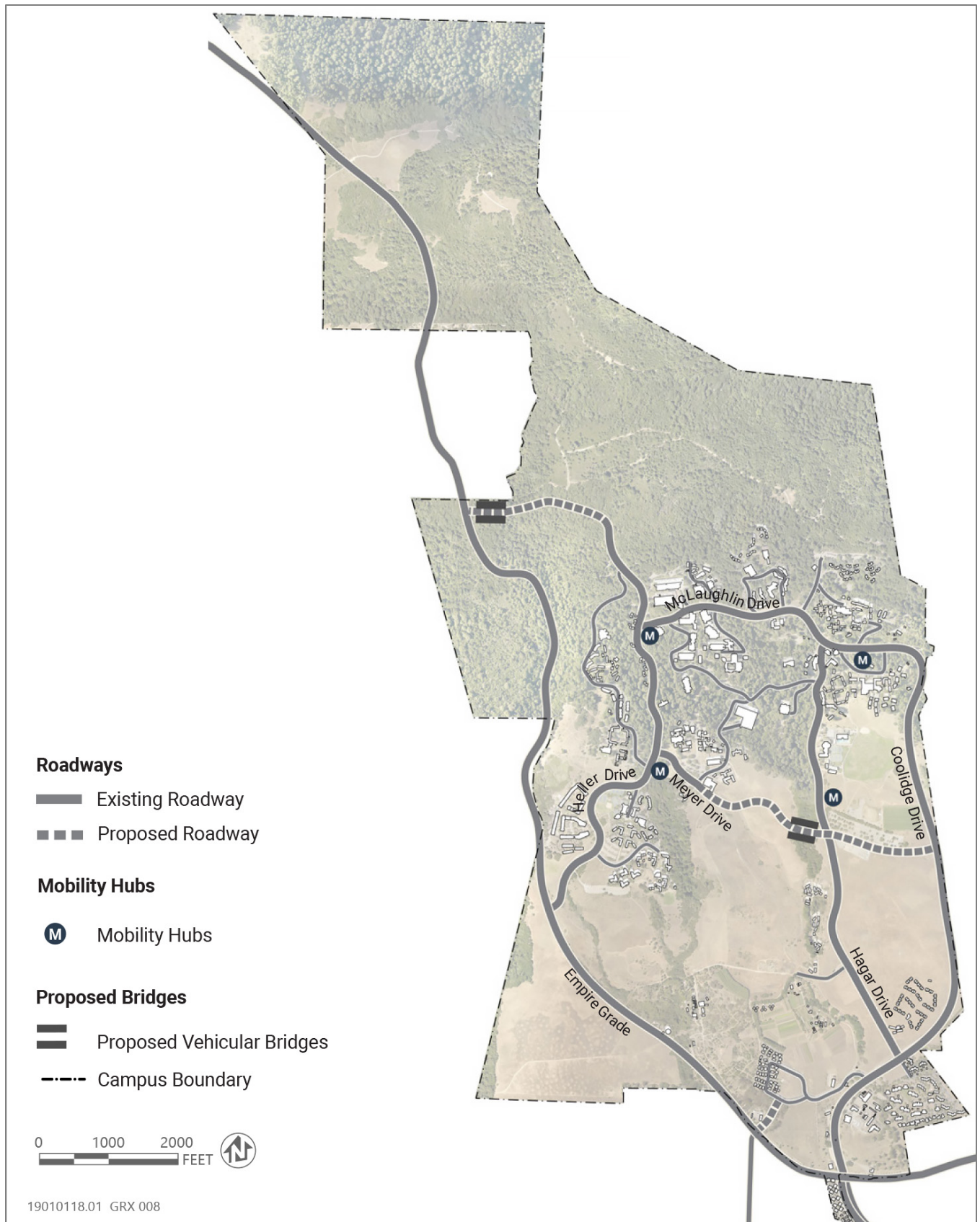
The 2021 LRDP includes an integrated transportation strategy, which envisions integrating alternative modes of transportation (transit, pedestrian and biking) with peripheral parking to promote a walkable campus core with an interconnected pedestrian corridor spine linking colleges and housing to academic and student support destinations. Integral to this concept is the proposed Meyer Drive extension, which would create an inner campus roadway loop for more efficient transit, and the development of mobility hubs at the periphery of the campus core for a more seamless transfer from one mode to another.

The planned circulation, parking, and transportation infrastructure improvements as envisioned in the 2021 LRDP's integrated transportation strategy are intended to enhance alternative transportation opportunities and increase connectivity within the campus and to the city. These improvements are described in further detail below.

ROADWAYS

As shown in Figure 2-6 and similar to the 2005 LRDP, three new roadways would be added to the transportation network on the main residential campus in order to provide better cross-campus transit service, create safer bicycle and pedestrian environments, and fill gaps in the existing roadway system. All new roadways are envisioned as multimodal "complete streets," where bicycle and pedestrian amenities are included, to reflect integrated transportation principles and guidelines.

- ▶ **East-West Extension of Meyer Drive from Heller Drive to Coolidge Drive.** Meyer Drive would be extended from the Arts Area across the top of the Great Meadow and over Jordan Gulch via a new bridge structure to connect with Hagar Avenue at a new intersection near the entrance to the East Remote parking lot. The roadway extension alignment would generally continue from this intersection along the southern edge of the East Remote parking lot and terminate at Coolidge Drive. This extension would facilitate cross-campus bus travel and could also provide a new east-west walking and bicycling connection. The Meyer Drive extension would increase overall campus mobility and facilitate improved transit routing. The Meyer Drive extension would also allow for private vehicle access to be restricted on McLaughlin Drive during certain time periods such as class changes to facilitate better and safer walking, bicycling and transit access. Automobile access would be limited on a portion of the extension between the Arts Area to Hagar Drive to prioritize transit, bicycle, and pedestrian circulation. Careful consideration would be given to the final alignment of the roadway, and how it would integrate with the Webster Way Bike Path through the Great Meadow.



Source: UC Santa Cruz 2020

Figure 2-6 Campus Roadway Network Under the 2021 LRDP

- ▶ **Northern Entrance.** A new roadway connection would be provided from the northern terminus of Heller Avenue (North Remote parking area) across Cave Gulch via a bridge structure to Empire Grade. This new roadway would provide a third access and egress point to the main residential campus, which may help facilitate north campus subarea development and emergency access.
- ▶ **Western Drive Extension.** Western Drive would be extended across High Street at a new signalized intersection to provide access to the Ranch View Terrace employee housing and other proposed housing sites.

In addition to planned new roads, the LRDP envisions a pedestrian priority area in the academic core supported by vehicular access restrictions, including a key east-west campus corridor along Steinhart Way.

- ▶ **Vehicular Access Restrictions.** Personal automobile access may be restricted and on limited portions of upper Hagar Drive, Meyer Drive Extension, McLaughlin Drive, and internal roadways to prioritize transit, bicycle and pedestrian access and reduce vehicle/pedestrian conflicts. Vehicle access on these segments of the roadways would be limited to transit and service vehicles only.
- ▶ **Steinhart Way Corridor.** In order to promote the campus core as a pedestrian priority area, Steinhart Way is proposed to be converted from a service road to a pedestrian and bicycle priority corridor with automobile access for private automobile traffic limited to the far east and west segments accessing local parking facilities. Service and accessibility vehicles may be limited or required to travel at low speeds to minimize conflicts with pedestrians and bicycles in this new east-west corridor. Service vehicles would use alternate routes wherever possible to avoid conflicts with pedestrians and bicycles.

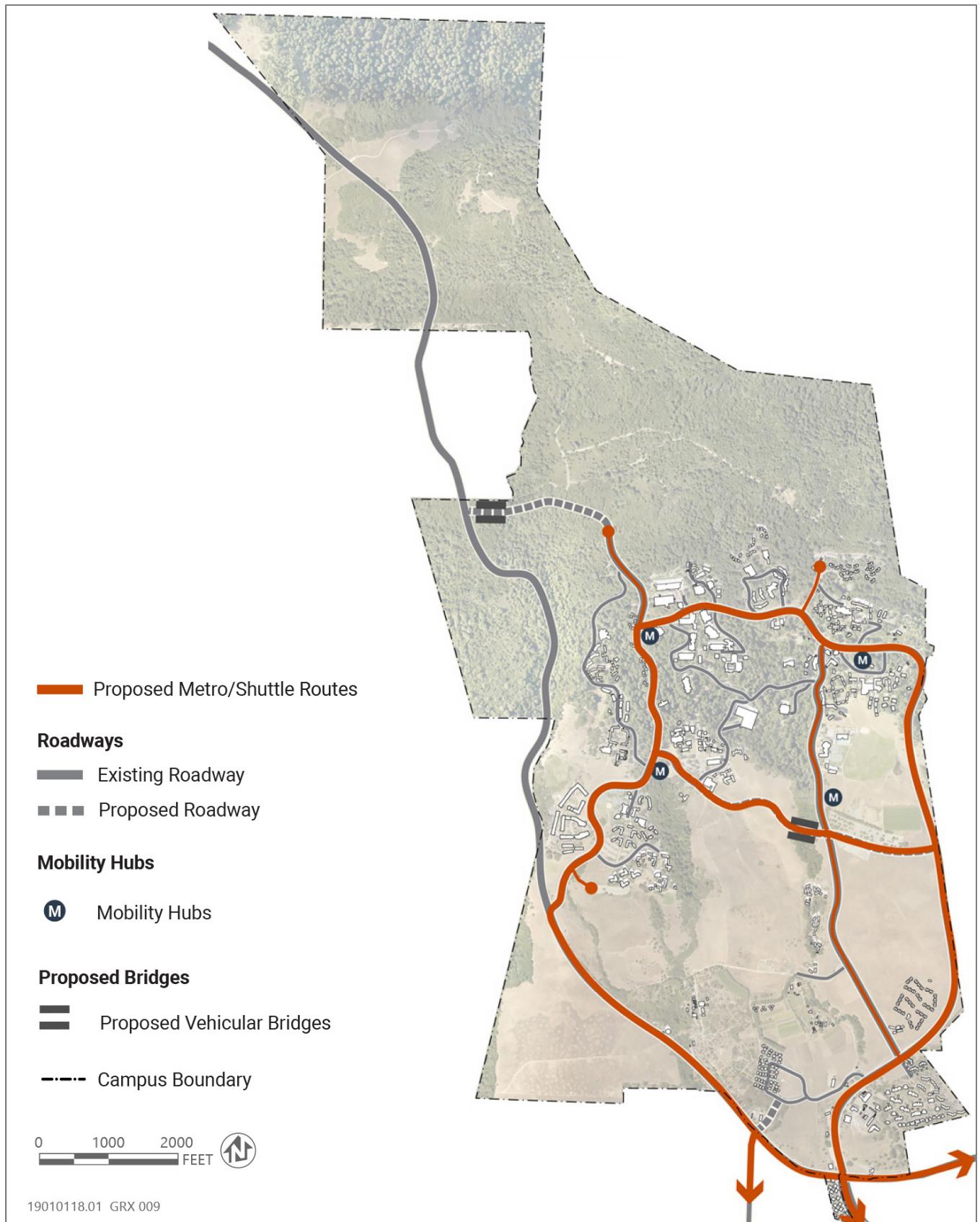
PARKING AND MOBILITY HUBS

As shown in Figure 2-6, commuter parking would be consolidated at the periphery of the academic core and a variety of mobility hubs would be established in strategic locations of the main residential campus. Mobility hubs would be organized according to their primary function as follows:

- ▶ **Primary Mobility Hubs.** Primary mobility hubs would be oriented toward commuters to and from the main residential campus and would focus on providing seamless transfers between park-and-ride type of travel modes to allow commuters to access their end destination quickly and efficiently. These hubs would be located at the four corners of the academic core. The Core West parking garage and new mobility hub near Stevenson College would primarily serve faculty/staff commuters, while the mobility hubs located at Heller Drive/Meyer Drive and the East Remote parking lot would primarily serve student commuters. Parking facilities at the primary mobility hubs may be provided in parking structures where appropriate and feasible.
- ▶ **Residential-Focused Mobility Hubs.** Residential mobility hubs would be smaller in size and focus more on providing access from on-campus housing areas to academic uses, recreational uses, and other major activity centers. In general, residential mobility hubs would provide access to frequent transit service to other campus destinations, as well as centralized bike parking, electric bikes, and clearly signed active transportation corridors. There would be limited surface parking for vehicles.
- ▶ **Gateway Hub.** The Gateway Hub would provide alternative transportation options for mode transfers and pedestrians, such as bikeshare and campus shuttles at the main entrance near High Street to access the campus core. The entry hub would include small-scale visitor parking lot(s), walking paths, bicycle routes, and enhanced transit stops.

TRANSIT AND SHUTTLE SYSTEM

As shown in Figure 2-7, the campus transit system under the 2021 LRDP would continue to emphasize regional the transit services provided by Santa Cruz Metropolitan Transit District to and from the main residential campus and Westside Research Park, and an internal campus shuttle system that serves the entire campus, is focused on loops serving the academic core, with transit hubs located at various transfer points and activity centers on campus, including Mobility Hubs.



Source: UC Santa Cruz 2020

Figure 2-7 Campus Transit Network Under the 2021 LRDP

The 2021 LRDP envisions a more efficient transit and campus shuttle system through enhancements to data collection, technology, service, and infrastructure. Campus shuttle routes would operate on modified loops to provide more frequent service to the academic core with the Meyer Drive extension. As part of the 2021 LRDP, UC Santa Cruz would work with METRO and other regional partners to explore express, or limited-stop-type regional service options from population centers directly to campus. Under the 2021 LRDP, disability van service would continue to play a vital role as an intra-campus mobility option. Electrification of shuttles and the campus fleet would assist UC Santa Cruz in reducing campus greenhouse gas emissions and achieving sustainability goals.

Existing bus stops on campus could be expanded to accommodate a higher number of increased capacity buses. Improvements to other non-motorized modes of travel would also assist in increasing transit efficiencies by providing practical and functional alternatives, such as improving pedestrian and bicycle connectivity, to free up bus and shuttle capacity.

PEDESTRIAN AND BICYCLE NETWORK

Under the 2021 LRDP and as shown in Figures 2-8 and 2-9, respectively, UC Santa Cruz would improve existing pedestrian corridors and bicycle trails, as well as provide additional opportunities and connections within the main residential campus.

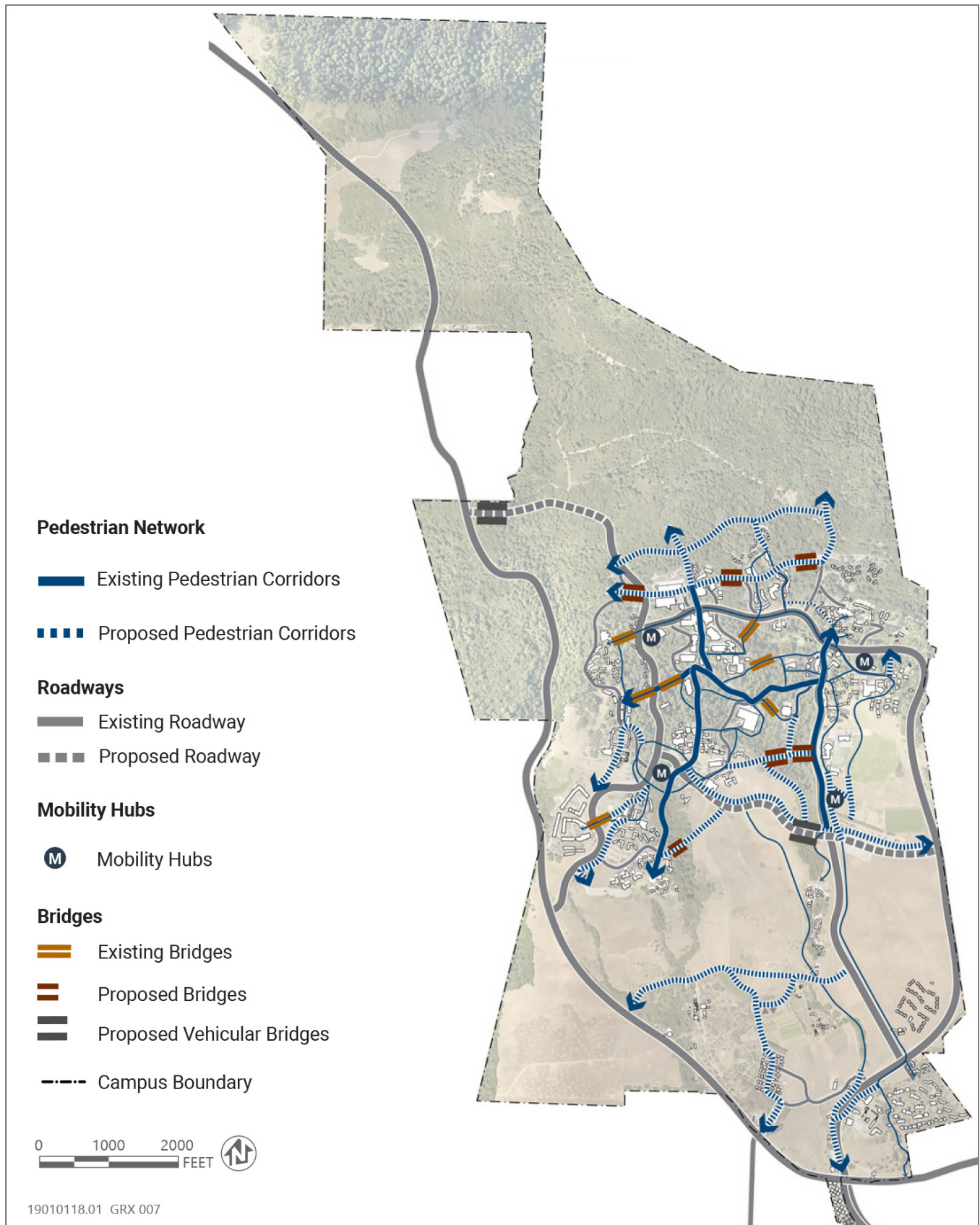
Pedestrian Corridors

The 2021 LRDP envisions expansion of the pedestrian network to provide more convenient access throughout campus. The following pedestrian corridors are proposed in the LRDP, which facilitates the following key connections:

- ▶ North of the Academic Core, two new east-west pedestrian corridors are proposed to expand the web of pathways, one connecting the engineering buildings on the west through Colleges Nine and Ten to the proposed student housing on the east at Chinquapin Road. Further north, another east-west pedestrian corridor would connect proposed academic and support space on the west with proposed student housing on the east.
- ▶ South of the Academic Core, an additional east-west connection would be needed to connect the south end of the academic core to future potential facilities on the current Hahn parking lot and Athletics and Recreation on the east and ultimately to housing on the west
- ▶ The Science Hill Corridor, Steinhart Way Corridor, and Hagar Drive Corridor would be emphasized as key pedestrian spines within the network.

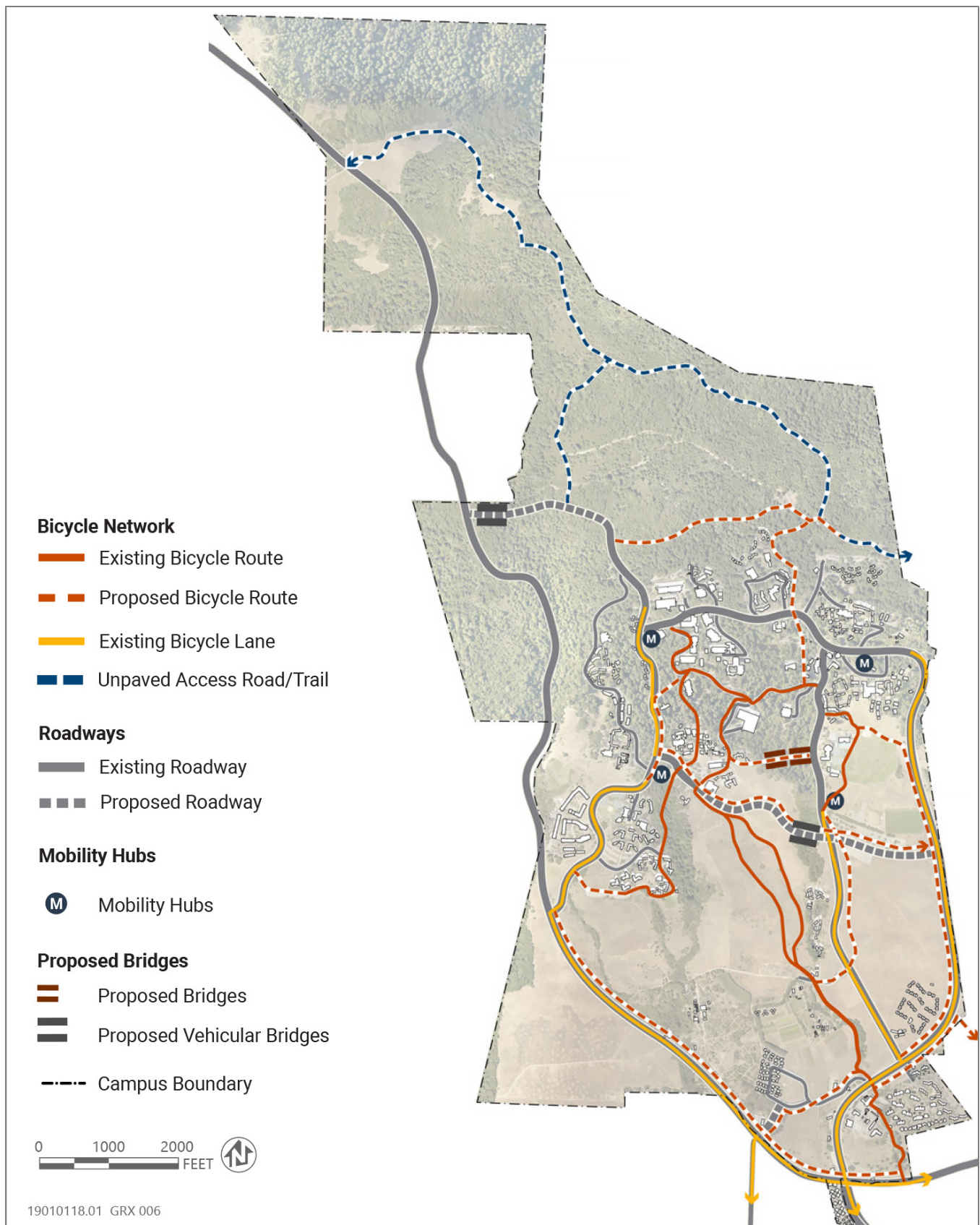
The planned pedestrian network of north-south and east-west corridors would be integrated with transit stops, mobility hubs, and activity clusters, and would strive to be multi-use to expand bicycle access across the campus.

Pedestrian crossings at major campus roadways may be improved to ensure safety. Depending on location and conditions, improvements may include raised or consolidated crosswalks, striping enhancements, and operational changes such as “scramble” crossings at high-volume locations, which is a type of traffic signal movement that temporarily stops all vehicular traffic, thereby allowing pedestrians to cross an intersection in every direction, including diagonally, at the same time. Intersections would be evaluated for traffic signals and traffic-calming measures to enhance the pedestrian experience and facilitate an increase of walking on campus. Sidewalk widths and lighting would be based on existing and planned pedestrian volumes to improve safety and congestion. Wayfinding along key pedestrian corridors would include walk-time estimates between campus destinations and directional signage. In addition, similar pedestrian improvements along Empire Grade may occur in cooperation with the County/City of Santa Cruz and in connection with other improvements to alternative transportation infrastructure.



Source: UC Santa Cruz 2020

Figure 2-8 Campus Pedestrian Network Under the 2021 LRDP



Source: UC Santa Cruz 2020

Figure 2-9 Campus Bicycle Network Under the 2021 LRDP

Pedestrian Trails

Existing trail networks could be improved and new connections provided within campus and to adjacent public lands surrounding the campus. Unpaved multi-use trail networks could include east-west connections in the north campus from Wilder Ranch State Park to Henry Cowell State Park via Pogonip City Park. North-south trail networks could connect through the Moore Creek Preserve and the Great Meadow, connecting routes north to the east-west trail network in the north campus. Additional trail improvements could include improved connections between the Spring Trail and Spring Street within the LRDP area. The Spring Trail also provides pedestrian connection to Highway 9. Trail corridors that provide access to campus research areas could be limited to pedestrians only, such as Red Hill Road gravel fire road in the north campus.

Bicycle Routes

The planned bicycle network recognizes and builds on the success of existing campus bicycle facilities. The plan envisions a combination of dedicated and multi-use path corridors to enhance connectivity between major population centers, co-located with other bicycle supportive uses such as food services and gathering places. Secure indoor and outdoor bike parking would be provided at mobility hubs and key buildings, including facilities such as showers, lockers and charging stations. UC Santa Cruz would explore the concept of an electric bike (eBike) fleet for faculty and staff use, and a campus/regional bikeshare program.

The 2021 LRDP proposes improved and new bicycle routes to connect key locations on campus. Some of these routes may be multi-use corridors, which include a separated bicycle path with adjacent pedestrian path or combined bicycle and pedestrian routes. The following bicycle routes are proposed in the 2021 LRDP, facilitating the following key connections:

East-west connections:

- ▶ North Connection: New route between proposed academic and support development north of Science Hill to proposed housing development north of Chinguapin Road;
- ▶ Steinhart Way Improvements: Improved bicycle route as part of corridor between Kerr Road and Quarry Plaza;
- ▶ New Meyer Drive Extension: New bike facility between Heller Drive and Coolidge Drive;

North-south connections:

- ▶ Empire Grade: Bicycle improvements along Empire Grade between Heller Drive and Cardiff Place;
- ▶ New Connection to Housing in Northeast: New bike route from Quarry Plaza to proposed housing development north of Chinguapin Road
- ▶ New Link along Hagar Drive: New bike route between the Farm entrance and the East Remote Lot
- ▶ Coolidge Drive: Bicycle improvements along Coolidge Drive between the Historic District to the East Field House Complex

In addition, several other minor bicycle connections are proposed to close gaps in the existing network and provide new links to mobility hubs and key destinations.

Non-Roadway Bridges

The 2021 LRDP includes the construction of three new non-roadway bridges in the north campus subarea from Crown and Merrill Colleges to east of Heller Drive, providing a new pedestrian and bicycle corridor across campus. Two additional bridges would span over existing gulches connecting the east and west campus area between McHenry Road in the Arts Area, the Hahn parking lot development site, and Hagar Drive to the Athletic and Recreation Services area. Non-roadway bridge design would accommodate bicycles where feasible, to minimize the impact of bridge structures over drainages. Bicycle facilities in these key corridors would consider the surrounding context and emphasize safety and convenience.

Westside Research Park

A commuter mobility hub, a multi-use trail, and path connections would be constructed concurrent with development at the Westside Research Park, providing site connections to existing regional bus and campus shuttle routes, coastal rail trail, and proposed new regional transit within the former rail corridor. Figure 2-10 identifies the current transportation network options available in the vicinity of Westside Research Park.

Transportation Demand Management Programs

TDM programs promote alternatives to driving to campus alone and reduce trips to and from the campus. These include walking, cycling, riding transit, carpooling, and vanpooling. Existing UC Santa Cruz TDM programs include:

- ▶ Transit, bicycle shuttle, and vanpool subsidies;
- ▶ Bicycle loans, bicycle parking, and education;
- ▶ Carpool incentives and carshare programs;
- ▶ Electric car incentives and EV charging; and
- ▶ Parking permit restrictions.

The 2021 LRDP would build on existing TDM programs and explore new efforts to further reduce campus trips and single-occupant vehicles (SOVs).

Parking Management

Parking supply on campus would be limited for on-campus housing and SOV commuters through changes to parking policies, pricing, and convenience to encourage carpooling, transit, and other non-SOV alternatives. Improved transit service from remote parking areas would be supported by enhanced pedestrian and bicycle facilities, improving connectivity with key corridors from parking areas to major campus activity centers and relieving some transit capacity for those commuters willing to walk and bike to their final campus destination.

Ride Hailing

Transportation Network Companies (TNCs), such as Uber and Lyft can be managed with designated drop-off and pick-up areas, co-located with mobility hubs. The campus would explore options, such as surcharges and geo-fencing, to better manage this emerging technology. This would increase campus roadway capacity for more frequent and reliable transit service, reduce trip numbers and VMT, and reduce vehicle/pedestrian conflicts to promote a more pedestrian-friendly campus.

Bike Shuttles and Bikeshare

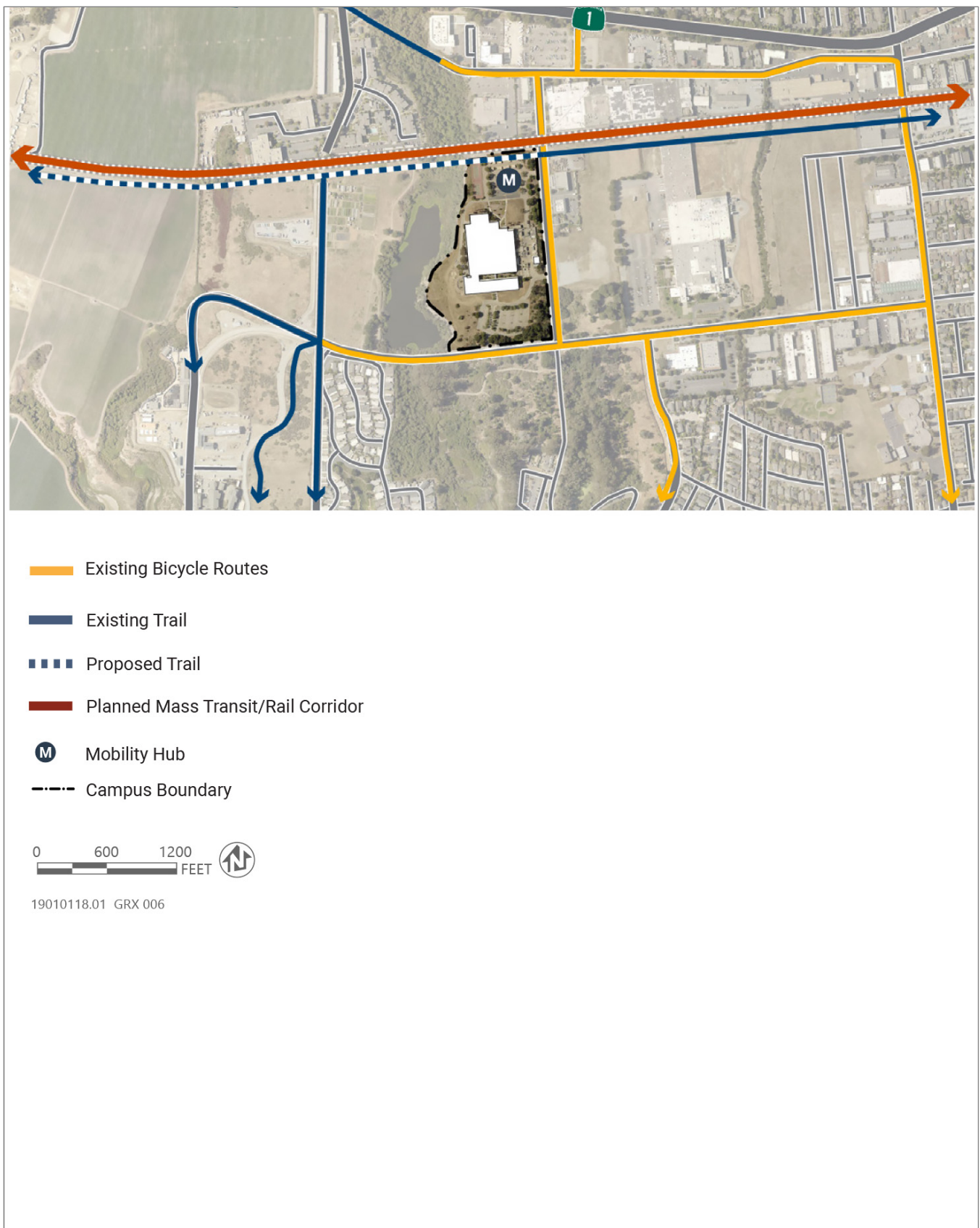
UC Santa Cruz would expand the success of the bike shuttle program and explore on- and off-campus bikeshare programs, including those with electric-assisted bicycles or eBikes, to make traversing the campus's challenging terrain more appealing and convenient. Incentives would be expanded to promote the use of these and other emerging electric mobility options.

Integrated Land Uses

New campus development under the 2021 LRDP would be guided by transit-oriented design concepts, with buildings clustered, pedestrian areas enhanced, parking consolidated in periphery lots, transit stops integrated into pedestrian corridors, and vehicle access restricted. New development at Westside Research Park would be designed and oriented as a transit village, integrating the recent multi-use rail trail, bus routes, and planned rail with planned housing, academic, and other mixed uses on-site. Increased student support and public services on-campus would also help reduce trips by those living and working on campus.

TDM Data Collection and Monitoring

The measured success of 2021 LRDP TDM programs would rely on accurate and ongoing data collection, monitoring, and performance evaluations. The 2021 LRDP proposes to identify, establish, and implement a data collection and planning program to establish existing transportation trends, establish metric-based goals, and track performance over time.



Source: UC Santa Cruz 2020

Figure 2-10 Westside Research Park Transportation Network

2.6.7 Public Services

UC Santa Cruz is serviced by a full range of public services: fire, police, school, and recreation. On campus, police protection is provided by UC Santa Cruz Police through on-campus stations and staffing, while the City of Santa Cruz provides fire protection service through an on-campus fire station at the main residential campus. At Westside Research Park, the City of Santa Cruz provides fire protection services and the UC Santa Cruz Police provides police service. Currently, UC Santa Cruz also has mutual-aid agreements with the City of Santa Cruz Fire and Police Departments, as well as the County of Santa Cruz Sheriff's Office.

With respect to schools, the Santa Cruz City Schools District provides kindergarten through grade 12 education for the Santa Cruz area, including the UC Santa Cruz campus population with school-aged children. With respect to recreation, the UC Santa Cruz campus provides on-campus recreational facilities for the campus population and open space that is available to both the on-campus population and the public. In addition, the City of Santa Cruz maintains public parks and recreation areas in the area. Refer to Section 3.15, "Recreation," for further information regarding recreation areas provided by UC Santa Cruz and in the community.

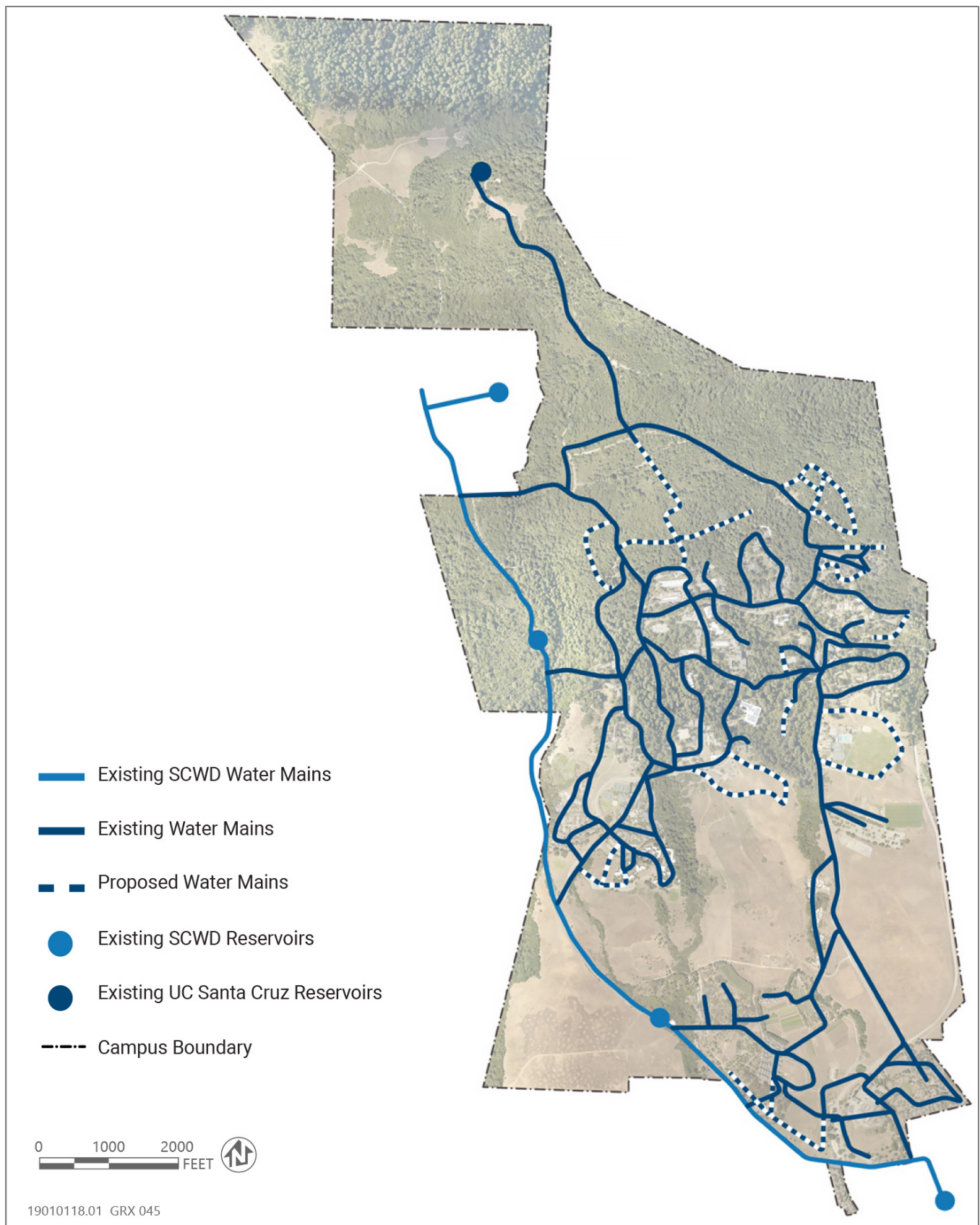
2.6.8 Utilities and Infrastructure

UC Santa Cruz is provided a full range of utility services through a well-developed utility infrastructure owned and operated by the Campus, augmented by water, wastewater, natural gas, electricity, and telecommunications services from outside providers, including the City of Santa Cruz. The City of Santa Cruz provides water and wastewater treatment service to the main residential campus and Westside Research Park via its existing treatment plants and reservoirs, and owns and operates the landfill that provides regional disposal capacity for the City and UC Santa Cruz. With respect to water service, UC Santa Cruz and the City have existing agreements in place dating back to the inception of the campus that require the City to provide water service to the entire campus, including areas outside the City's designated service boundary.

Pacific Gas and Electric Company (PG&E) provides electrical and natural gas supplies. Additionally, the main residential campus meets some of its electricity demand via an existing cogeneration facility turbine within the central campus subarea that adds utility redundancy and resiliency.

SBC and California Research and Education Network currently provide telecommunications service to UC Santa Cruz and on-campus operations are managed by the UC Santa Cruz Information Technology Services (ITS), which is located in the Communications Building. ITS also manages the campus wireless network.

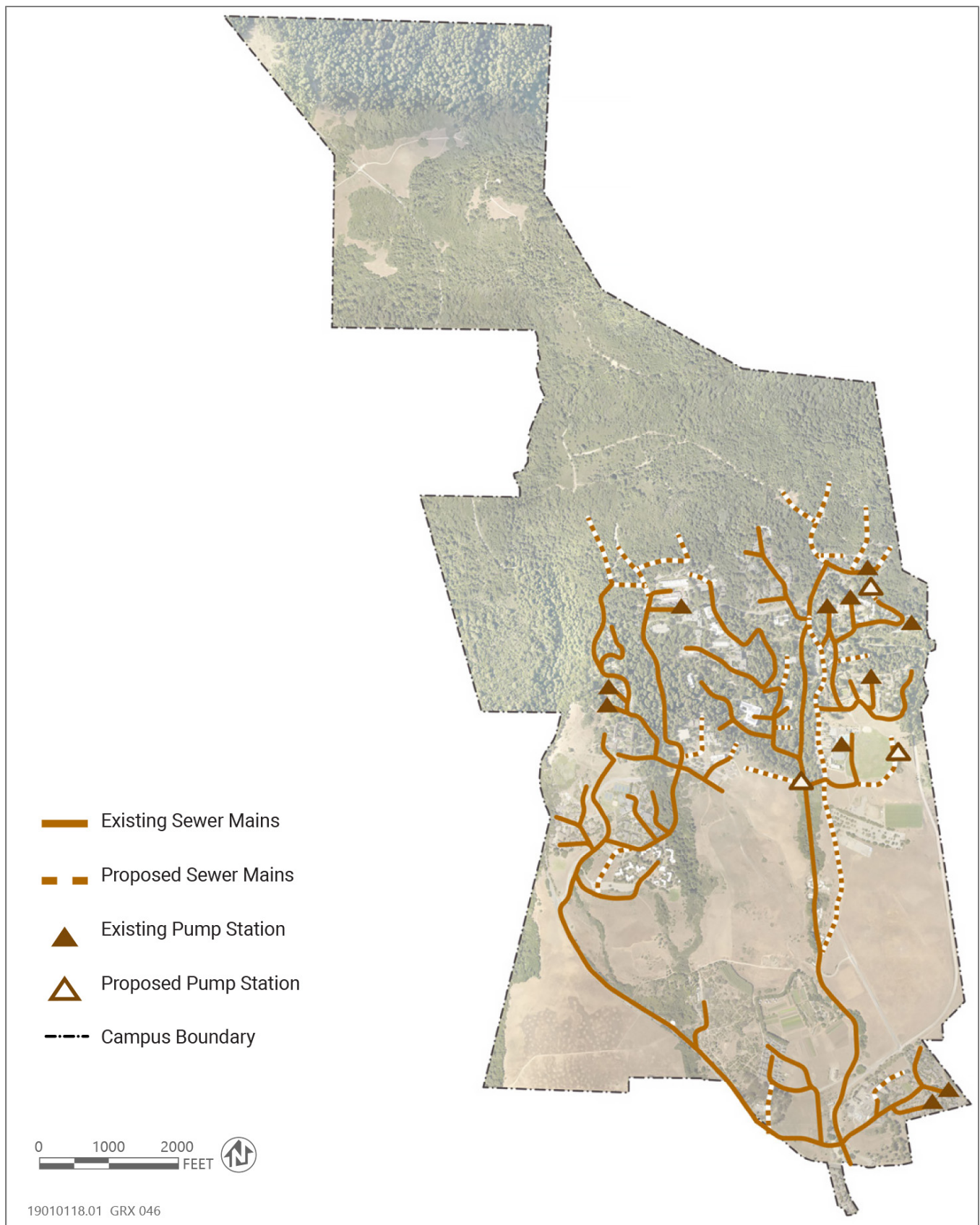
UC Santa Cruz upgrades its utility systems regularly to adjust to changes in demand and in accordance with existing utility agreements, and it has a program of planned upgrades and replacements that will continue throughout the period covered by the 2021 LRDP. As part of the 2021 LRDP, UC Santa Cruz has identified preliminary utility improvements/projects that would be undertaken as part of the 2021 LRDP to ensure adequate and reliable utility service to existing campus facilities, as well as the future facilities that would be developed as part of 2021 LRDP implementation. These efforts are intended to address specific infrastructure needs through the lens of proposed development under the 2021 LRDP, as well as to address long-term and aged infrastructure issues that UC Santa Cruz has identified to reduce the risk of failures related to sensitive geological and environmental conditions within the LRDP area. Utility improvements may include new utility connections to envisioned development areas; a new electrical service entrance and standby generator facility in the southwest portion of the main residential campus; a natural gas line along Empire Grade and Heller Drive; stormwater and drainage improvements; and additional sewer pump stations within the eastern portion of the main residential campus. Additionally, and as noted in Sections 3.10, "Hydrology and Water Quality" and 3.17, "Utilities and Service Systems," UC Santa Cruz may consider additional on-site utility improvements on a project-by-project basis, which may include water recycling facilities and associated non-potable distribution infrastructure. Currently envisioned utility infrastructure under the 2021 LRDP are shown in Figures 2-11, 2-12, 2-13, and 2-14 for water, wastewater, natural gas, and electricity, respectively.



19010118.01 GRX 045

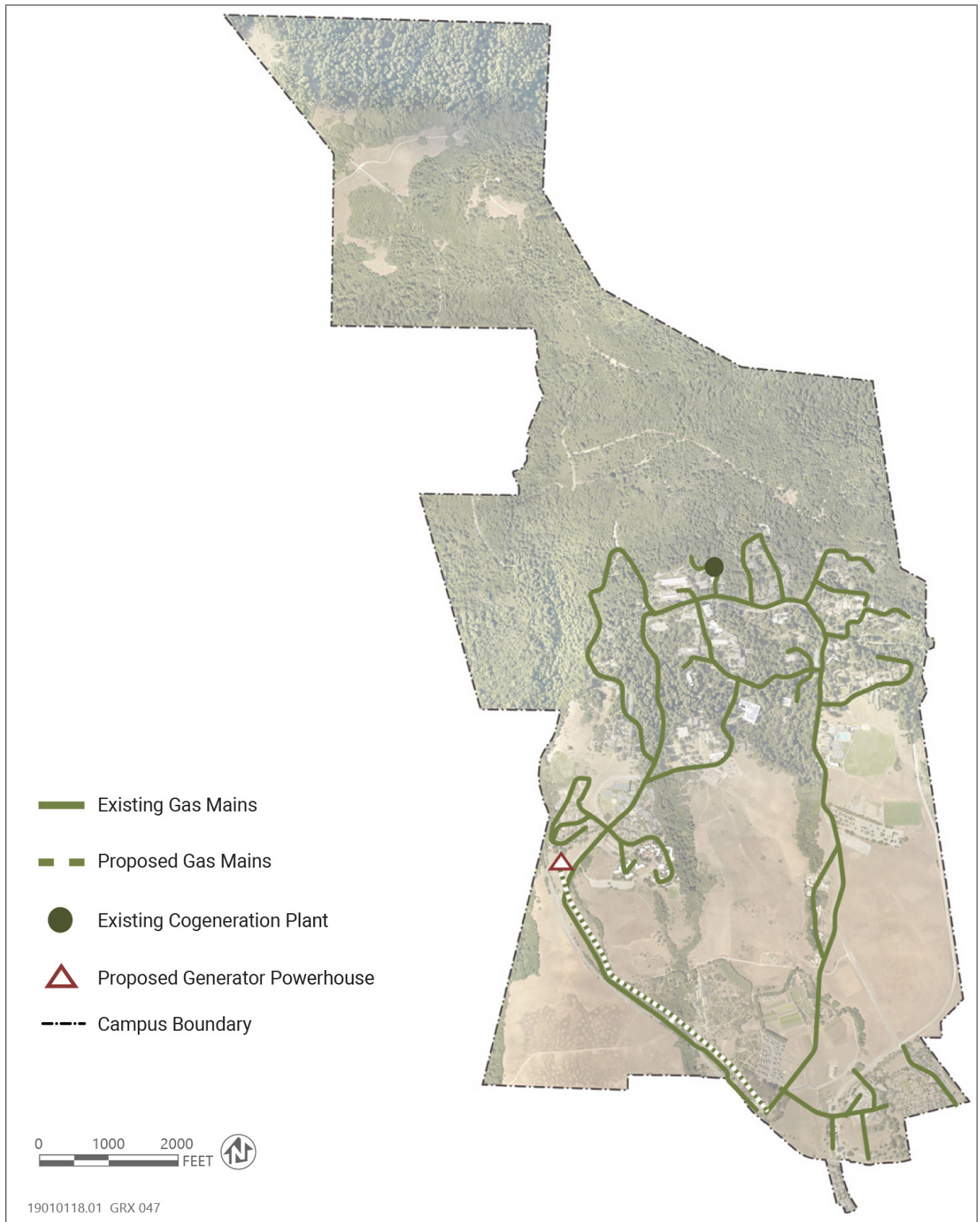
Source: UC Santa Cruz 2020

Figure 2-11 Water Infrastructure Under the 2021 LRDP



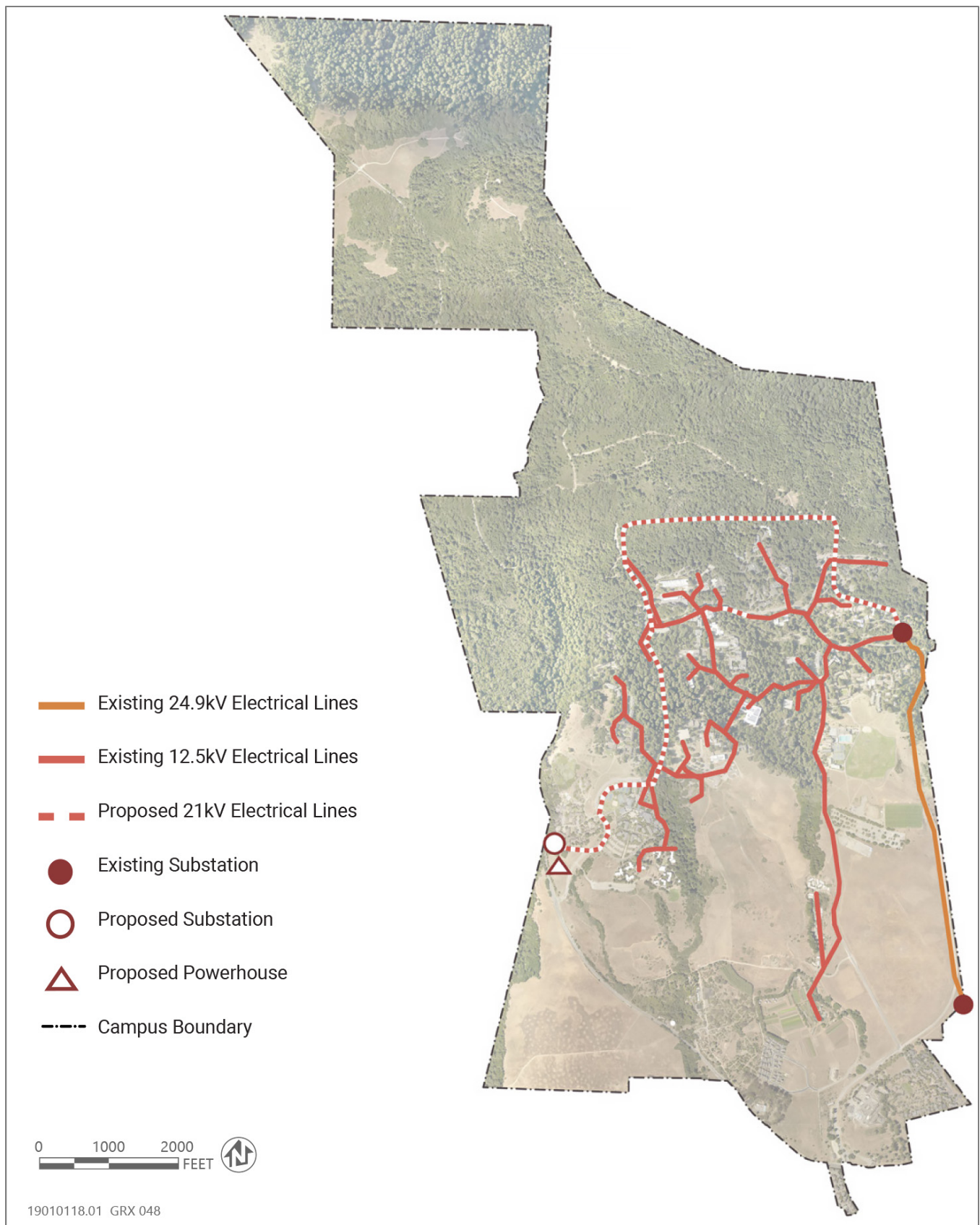
Source: UC Santa Cruz 2020

Figure 2-12 Sanitary Sewer Infrastructure Under the 2021 LRDP



Source: UC Santa Cruz 2020

Figure 2-13 Natural Gas Infrastructure Under the 2021 LRDP



Source: UC Santa Cruz 2020

Figure 2-14 Electrical Infrastructure Under the 2021 LRDP

Further, utility plans for domestic water, condensing/cooling water, stormwater, sanitary sewer, electrical generation and distribution, natural gas, and heating water are developed and reviewed on an ongoing basis and updated as necessary. Increases in the level of on-campus development and changes in the types of on-campus facilities associated with implementing the 2021 LRDP may affect demand for campus utility services as described in Section 3.17, "Utilities and Service Systems." The transmission/collection/treatment systems may be modified to address changes in demand or supply or implementation of new, more efficient systems to increase campus sustainability, and add utility redundancy and resiliency.