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Gensler | QKA



Sonoma County Junior College District

2016 Facilities Master Plan and Guidelines



Facilities Master Plan

- 3.1 Introduction & Facilities Planning Principles
- 3.2 Santa Rosa Campus
- 3.3 Petaluma Campus
- 3.4 Southwest Santa Rosa Center
- 3.5 Public Safety Training Center
- 3.6 Shone Farm

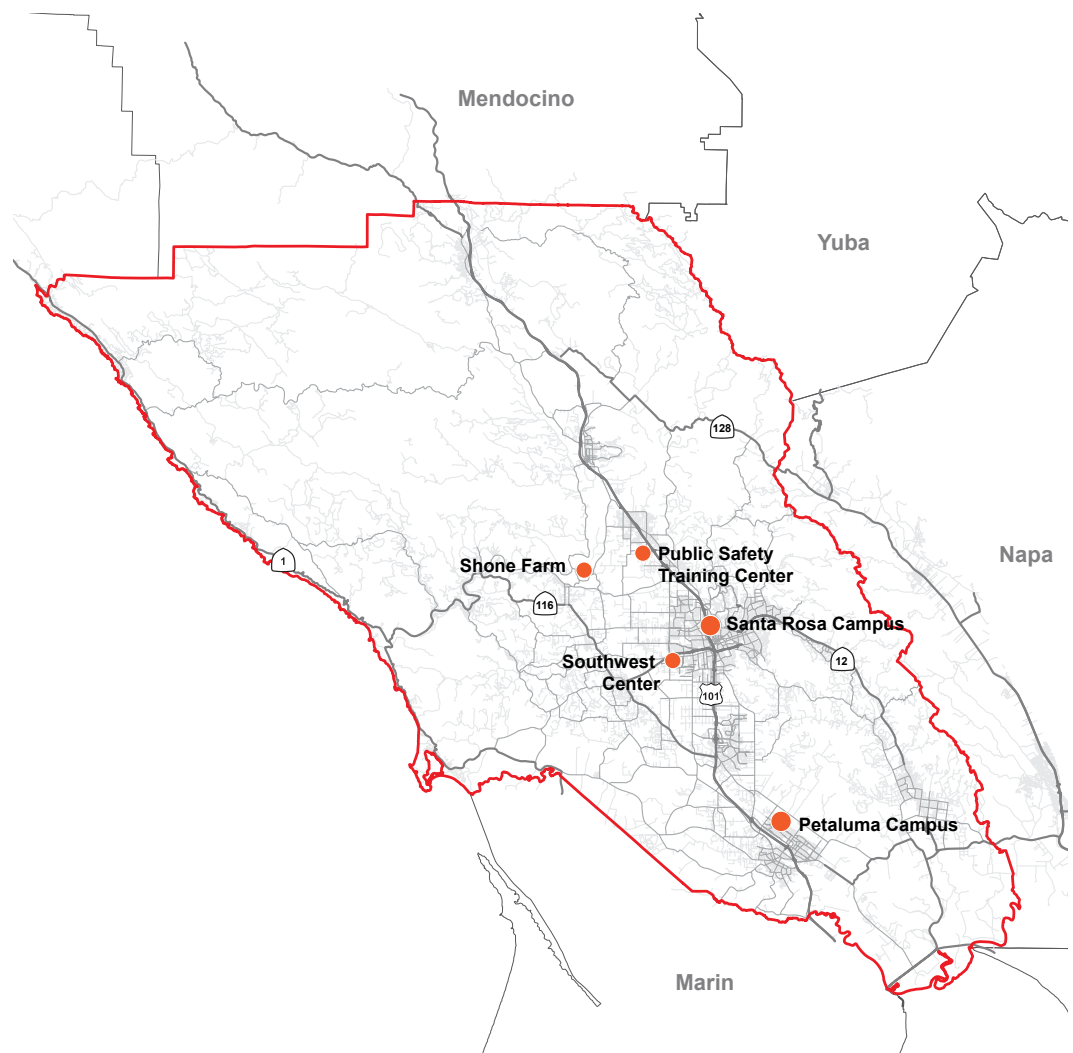


Analy Hall
Santa Rosa Junior College

Image courtesy of Santa Rosa Junior College

Introduction

The Sonoma County Junior College District operates two campuses in Sonoma County: the 100+ acre Santa Rosa Campus and the 40 acre Petaluma Campus. SCJCD also operates a regional Public Safety Training Center in Windsor and the 365 acre Shone Farm near Forestville. The District Southwest Center was also included in this Master Plan, although the property is not currently owned by the District.



Facilities Planning Principles

Focusing on the Campus Environment

An overarching set of facilities planning principles were developed during the planning process and served as the basis for detailed recommendations for the district.



PROMOTE STUDENT SUCCESS

- Create learner-centered environments
- Integrate and consolidate academic and student support services
- Develop spaces to encourage collaboration and engagement



REINFORCE CAMPUS GOALS AND IDENTITY

- Define and reinforce each campus' purpose and brand
- Focus CTE program locations to reinforce brands
- Enhance connections with community through collaborative partnerships



IMPROVE ACCESS AND CONNECTIVITY

- Provide safe and universal access
- Improve wayfinding and campus organizations
- Enhance physical connections (pedestrian, bike, vehicular, transit) within the campus and community



OPTIMIZE RESOURCES AND EFFICIENCIES

- Right-size space to address program needs
- Renovate where appropriate
- Replace inefficient and aging facilities where appropriate
- Improve functional zoning
- Position to maximize state and local funding



SIMPLIFY IMPLEMENTATION

- Develop flexible, multi-purpose facilities to adapt over time
- Minimize disruption and need for swing space
- Develop sequenced recommendations that feel complete at the end of each phase



SUPPORT A CULTURE OF SUSTAINABILITY

- Optimize available resources
- Promote all aspects of sustainability
- Create a healthy and safe campus for all

3.1

Santa Rosa Campus

SANTA ROSA CAMPUS

ANALYSIS

ANALYSIS

Context Map and Land Use Adjacencies

Santa Rosa Campus
Google Earth



CONTEXT

LOCATION

The SCJCD Santa Rosa Campus is located approximately one mile north of Downtown Santa Rosa and 50 miles north of San Francisco. Situated near the highest density areas of Sonoma County, the Santa Rosa Campus serves the City of Santa Rosa as well as students from across the region.

LAND USE ADJACENCIES

The Santa Rosa Campus is surrounded by a large mix of land uses, including low density residential, retail along Mendocino Avenue, and Santa Rosa High School to the South. The west side of campus is bordered by US Highway 101.

RESIDENTIAL

The land to the north and east (beyond on the retail strip on Mendocino Avenue) is primarily residential; ranging from low to medium density and including both single family and multi-family housing. Higher density housing is located across US Highway 101, adjacent to Coddington Mall.

COMMERCIAL

The commercial strip along Mendocino Avenue provides a mix of retail and food and beverage which serves the campus and the neighborhood. The Coddington Mall, located across US Highway 101, serves the broader community and includes an additional retail corridor along Cleveland Avenue.

INSTITUTIONAL

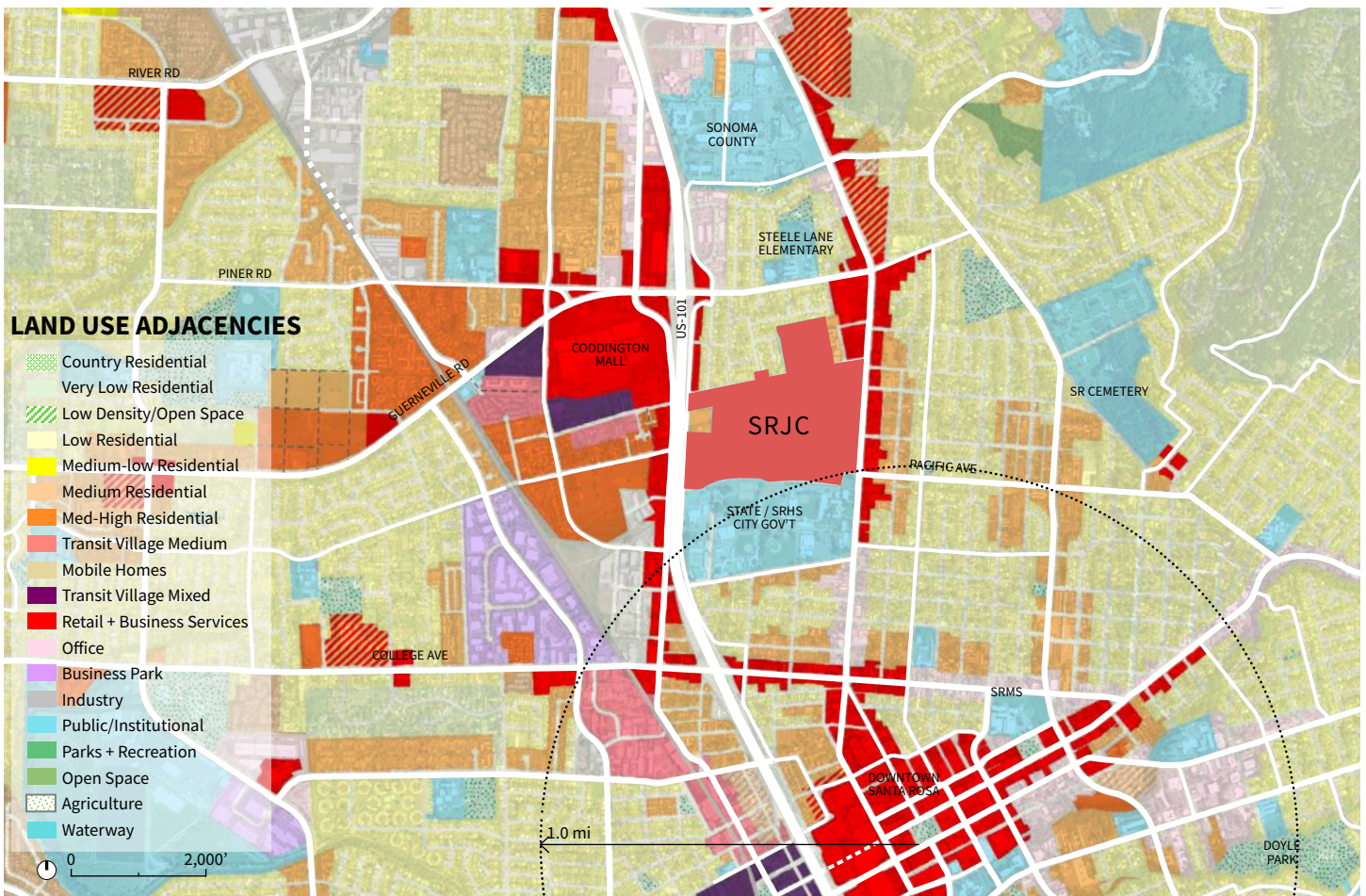
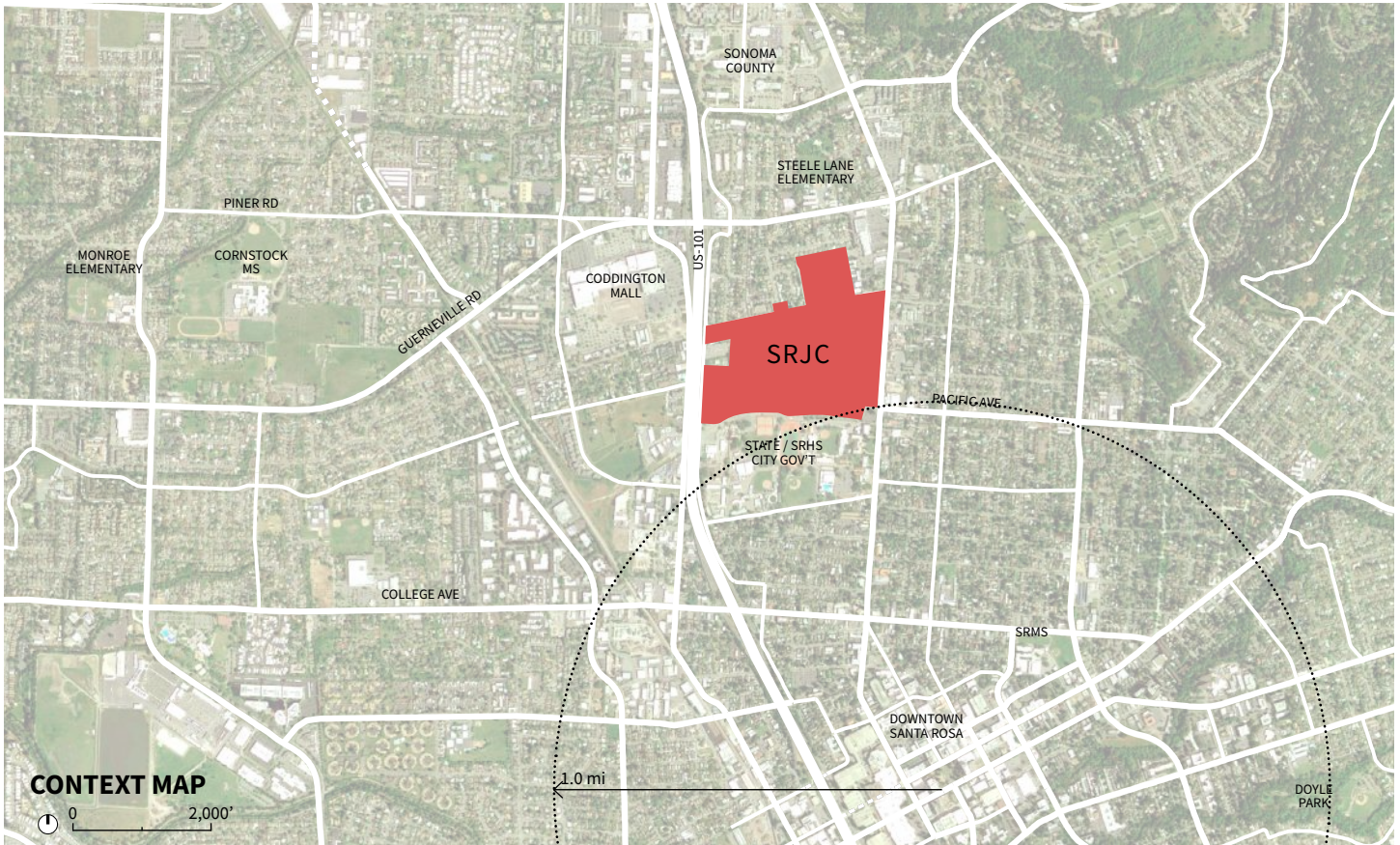
Santa Rosa High School, the flagship high school of the Santa Rosa City Schools District, borders the campus to the south. This site also includes the Santa Rosa City Schools District office and some State of California government facilities. Other proximate institutional uses include Steele Lane Elementary School to the north and the Sonoma County Civic Center Complex one block beyond.

OPEN SPACE

Three community parks are within proximity of the campus, including Steele Lane Park, Franklin Park, and Santa Rosa Memorial Park.

WATERWAYS

Santa Rosa Creek branches around the College, coming from the west. Branches run approximately 1/2 mile north of the campus and 3/4 mile south of the campus.



ANALYSIS

Campus Access (Vehicular)



Santa Rosa Legion Gates
Photo By: SCJCD

ROAD NETWORK

Located adjacent to US Highway 101, the Santa Rosa Campus is accessed by the College Avenue exit from the south and the Guerneville Road exit from the North. College Avenue connects with Mendocino Avenue, which directs traffic to the campus. Guerneville Road connects with Illinois Avenue, which dead ends into Elliott Avenue on the north side of the campus. Local access from downtown Santa Rosa is primarily from Mendocino Avenue, bordering the campus to the east.

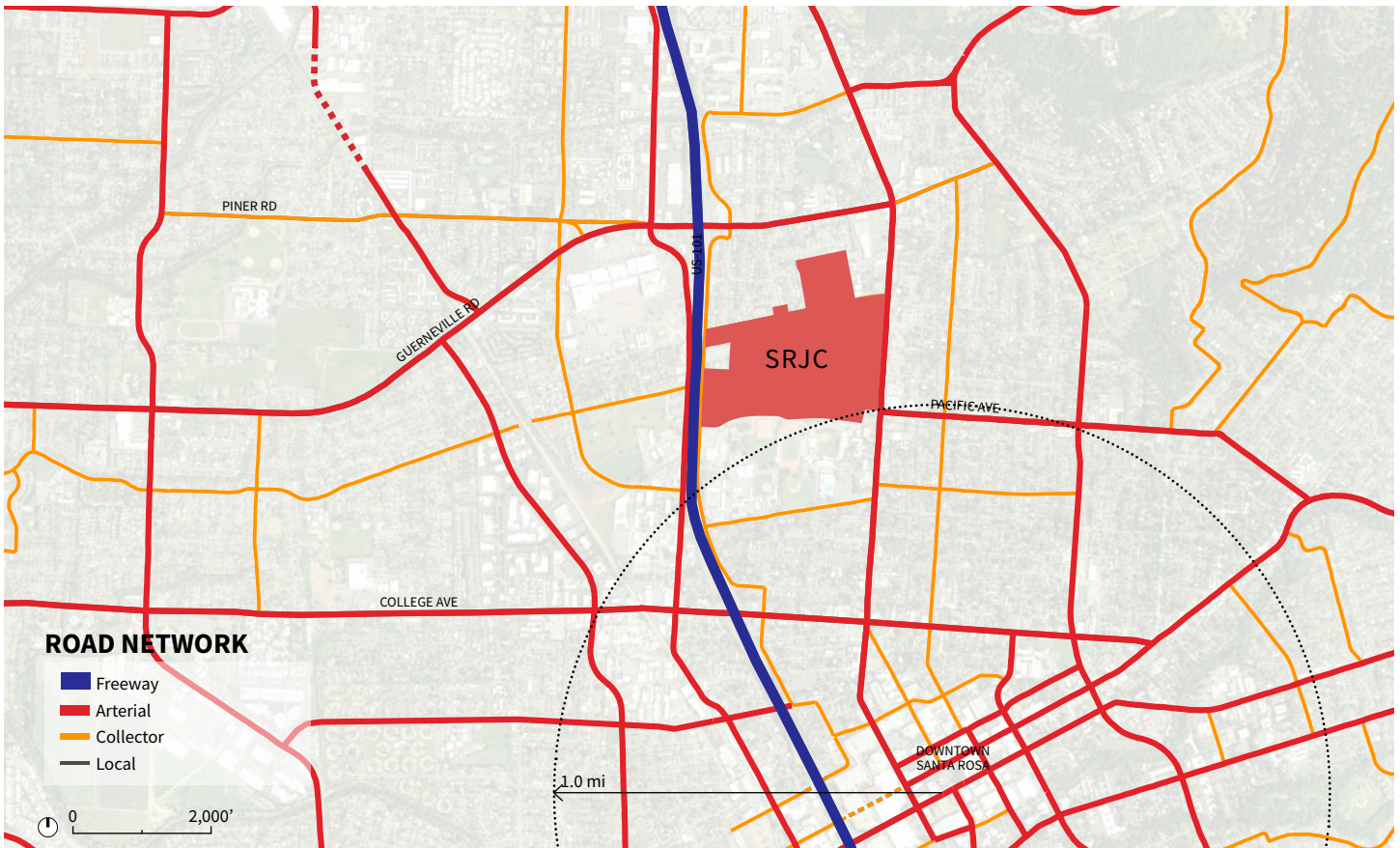
VEHICULAR ACCESS

Primary vehicular access to campus is via Mendocino Avenue, either at the intersections of Mendocino Avenue and Bear Cub Way or Mendocino Avenue and Elliott Avenue. Access for visitors is also provided via an entry mid-block on Mendocino Avenue. Secondary access is also provided along Armory Drive to the west and Elliott Avenue to the North. The primary intersections on Mendocino Avenue at Elliott Avenue and Bear Cub Way are signalized. Elliott Avenue, on the north side of the campus, facilitates through traffic that intersects with the pedestrian crossing to the north side of the campus, which creates safety concerns.

Collision records available from the Statewide Integrated Reporting System (SWITRS) and records available from the SRJC Campus Police were reviewed to determine if there were any identifiable safety concerns that should be addressed through future planning. In reviewing pedestrian- and bicyclist-involved crashes it was noted that, based on the information entered by the responding officer, drivers were at fault less than 40 percent of the time. The great majority of crashes occurred when pedestrians, or more typically bicyclists, made illegal movements of some sort.

Based on the types of incidents that have occurred as well as where they are most predominant, future expansion of facilities should include consideration of adequate connections for pedestrians and cyclists, such as the enhanced crossings of Mendocino Avenue at McConnell Avenue and Silva Avenue.

Refer to appendix for the complete safety assessment.



ANALYSIS

Campus Access (Non-Vehicular)



Sample Image from Santa Rosa Bicycle
Pedestrian Bridge Feasibility Study

TRANSIT ACCESS

Currently, the Santa Rosa Campus is served by Santa Rosa CityBus Routes 1, 14 and 10 running north-south along Mendocino Avenue, and Route 4, turning at the intersection of Mendocino Avenue and Pacific Avenue. CityBus routes connect to Downtown Santa Rosa with Routes 1 and 14 serving the north part of the City and Route 4 serving the east part of the City. Connections to other parts of the City are served through a transfer in downtown Santa Rosa. The Downtown Transit Mall also includes connections with the following transit systems: Golden Gate Transit, Sonoma County Transit, and Mendocino Transit Authority.

Regional bus lines serving the campus include the following along Mendocino Avenue: Golden Gate Transit Routes 72 and 74, serving the US 101 corridor to the south; Sonoma County Transit Routes 20, 30, 44, 48, 60, and 62, serving the Sonoma Valley; and Mendocino Transit Authority Routes 65, 66, and 95, serving Mendocino County.

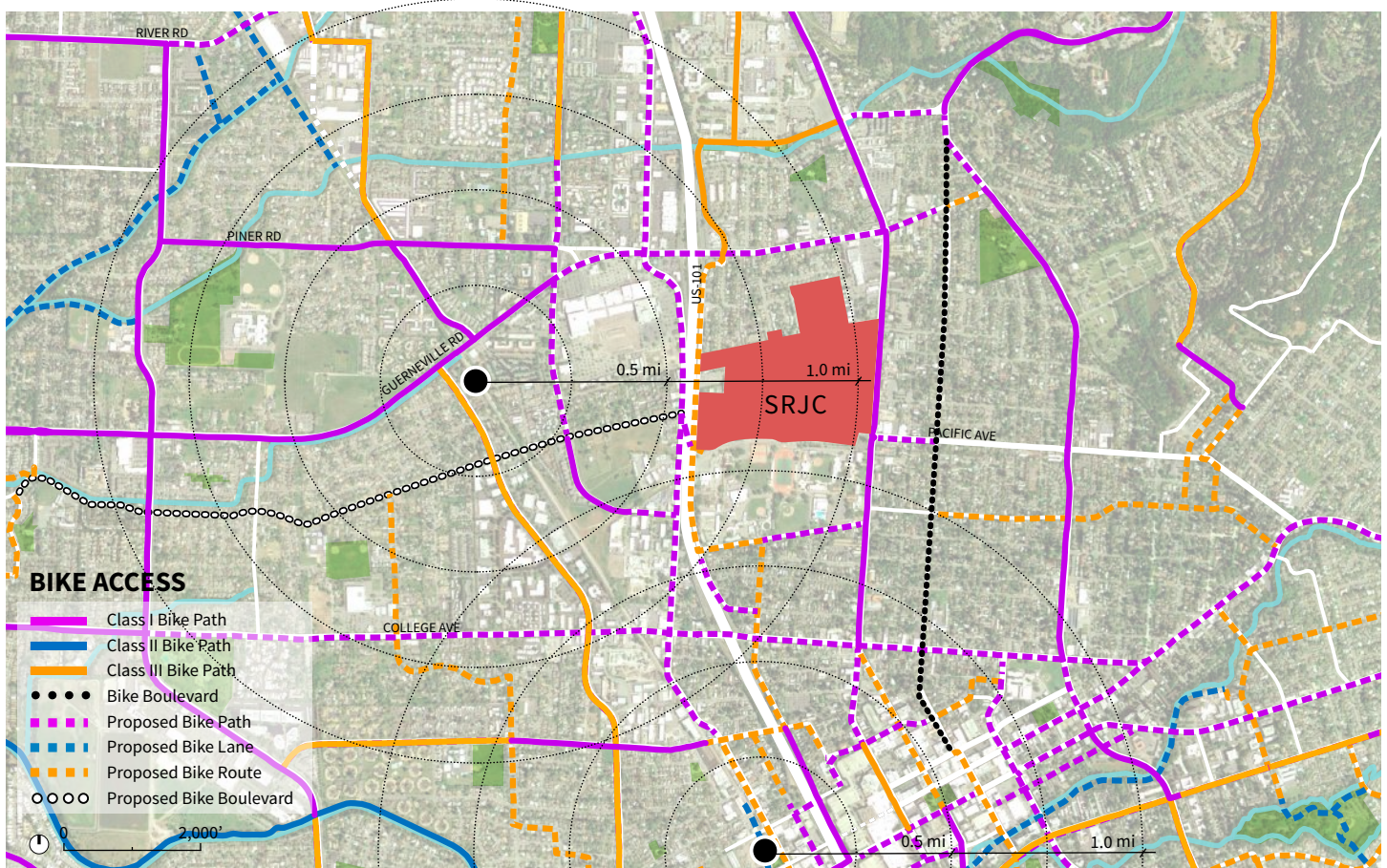
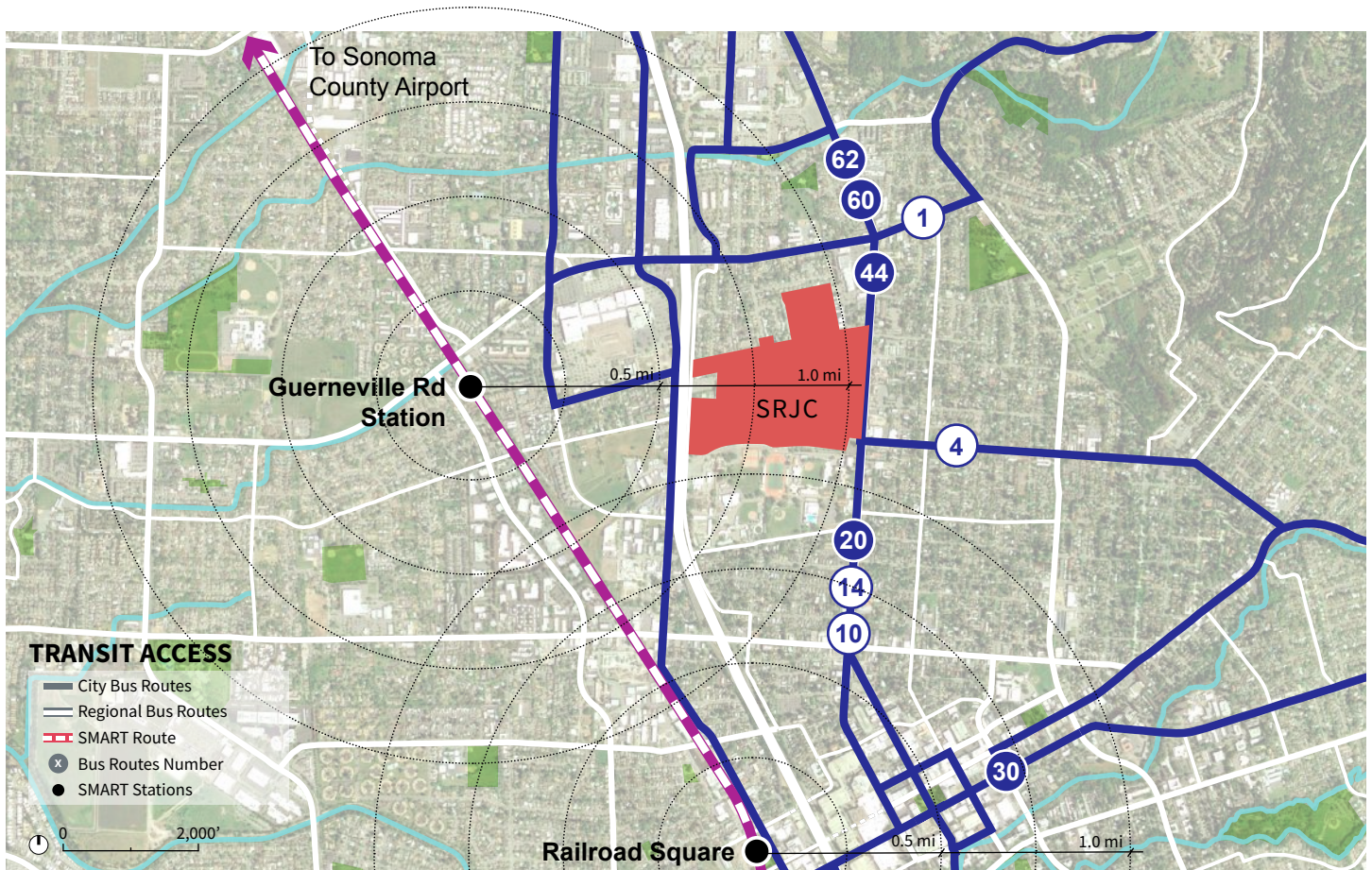
Additionally, the Sonoma-Marín Area Rail Transit (SMART), a passenger rail service and bicycle-pedestrian pathway project, is currently under construction, with the first phase to open in late 2016. The first phase of SMART will serve a 70-mile corridor from Northern Santa Rosa to Downtown San Rafael, eventually extending north to Cloverdale and south to Larkspur Landing. The planned Guerneville Road Station is within one mile of the campus and would provide access to campus via a bicycle-pedestrian bridge over US 101.

In 2016, Santa Rosa CityBus completed a draft report titled *Reimagining CityBus*, summarizing the short and long-term plans for the transit system. The short-term plan includes increasing the frequency and directness of routes serving the Santa Rosa Campus, which experiences the highest number of boardings in the system outside of the transit centers. Service will increase on most routes serving campus from 30-minute headways to 15-minute headways.

While the plan proposes to increase service to campus, it does not propose specific upgrades to amenities at the stops serving campus. The two transit stops on the east side of Mendocino Avenue serving northbound routes are on-line stops, which currently interrupt the flow of vehicular traffic and encourage cyclists to swerve into travel lanes to pass docked buses. The high ridership at these stops, which requires buses to be docked for long periods of time to complete boarding and alighting, suggests that future improvements should include providing off-line stops for the northbound routes on Mendocino Avenue, along with shelters at the waiting docks. The stop in front of Zumwalt Parking Pavilion on the west side of Mendocino Avenue, serving southbound routes, is currently an off-line stop with shelters at the waiting dock, and should be used as a model for the other stops on Mendocino Avenue serving campus.

BIKE ACCESS

A comprehensive system of existing and proposed bicycle routes in the City of Santa Rosa connects the campus to Downtown Santa Rosa, the city at large, and the greater Sonoma County. The main bike routes that provides access to campus is along Mendocino Avenue, with a US 101 crossing proposed to connect the campus to the west at either Jennings Avenue or Edwards Avenue.



ANALYSIS

Campus Evolution

Left: Analy Hall Under Construction Circa 1939
Photographer: John E. Meeker

Right: Emeritus Hall
Photographer Unknown

Source: Santa Rosa Junior College Archives



SITE HISTORY

Santa Rosa Junior College was founded in 1918, with the original part of the campus located adjacent to Mendocino Avenue.

1930's-1940s's FACILITIES

The initial phase of the campus development began with Analy Hall, built in 1939 using WPA funds, followed by Bussman Hall, Pioneer Hall, Burbank Auditorium, Garcia Hall, and Tauzer Gym, to form the core of the campus.

1950's-1960's FACILITIES

Phase 2 of the campus was building largely to the west during the late 1950's through late 1960's, consisting of Shuhaw Hall and Barnett Hall, followed by Bailey Hall, Baker Hall, Bech Hall, and a maintenance facility.

1970's-1990's FACILITIES

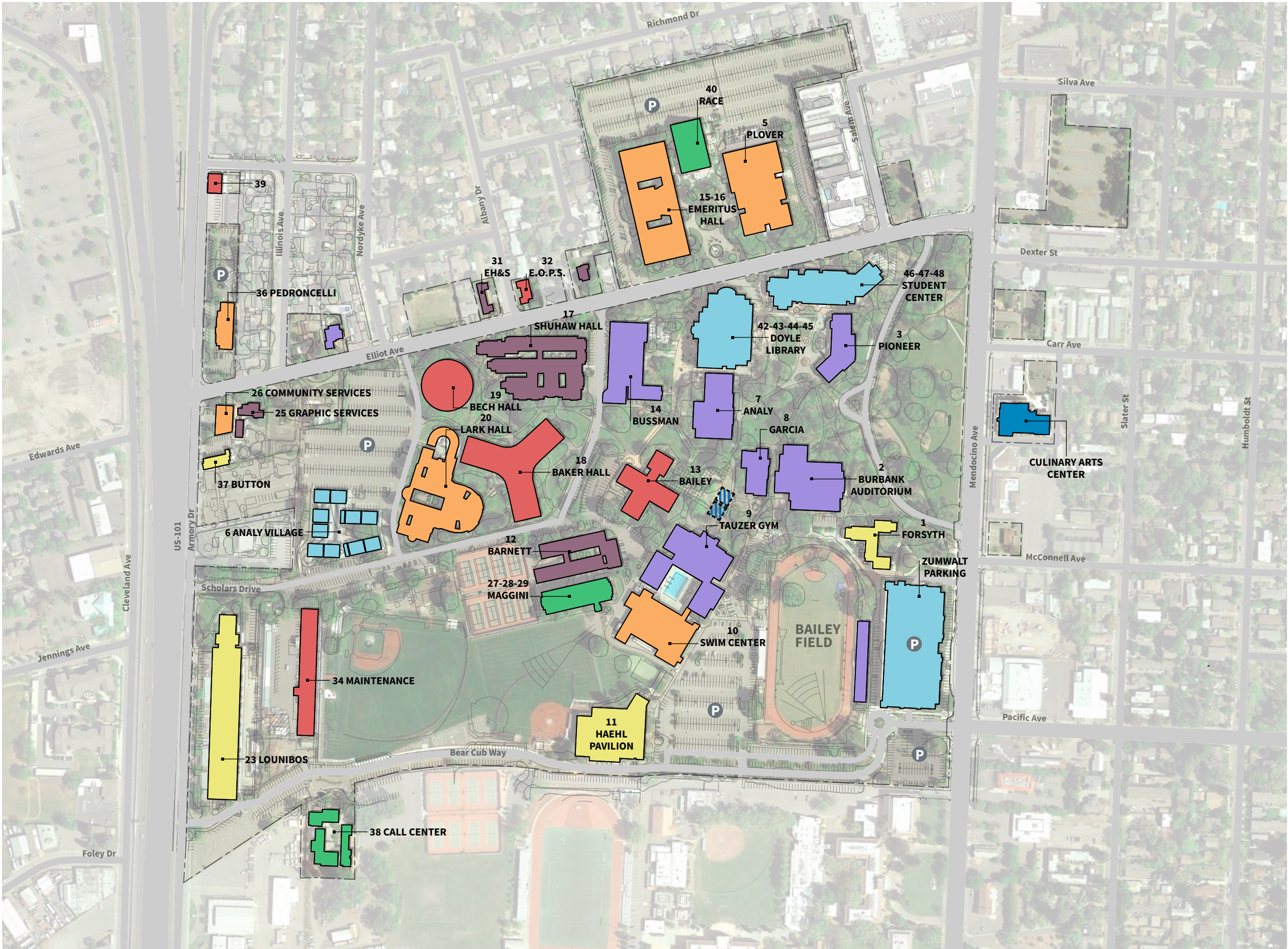
During the 1970's through 1990's, the campus was expanded across Elliott Avenue, adding Emeritus Hall, Plover Library (now Plover Hall), and the Race Building. Science facilities were expanded with Lark Hall, athletic facilities were expanded with the Quinn Swim Center and Haehl Pavilion, general education classrooms were added in Maggini, and the Call Child Development Center was built. Career Technical Education (CTE) facilities were also added with Lounibos.

2000's-2010's FACILITIES

During this period, the campus focused on infill development near the original campus core, including the Doyle Library and the Bertolini Student Center (replacing the original Doyle Student Center). The Zumwalt Parking Garage was added near Bailey Field, and the interim Analy Village was developed in an existing parking area. The most recent development is the Culinary Arts Center located across Mendocino Avenue.

CAMPUS EVOLUTION

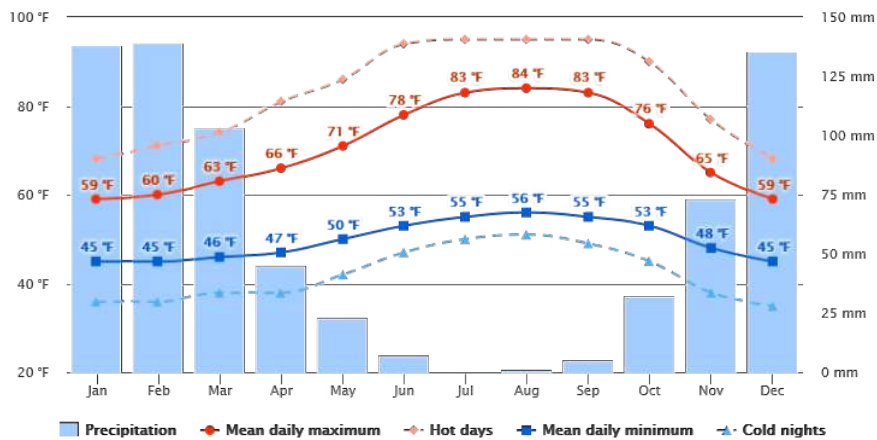
- Planned (Mi Casa)
- 2010s
- 2000s
- 1990s
- 1980s
- 1970s
- 1960s
- 1950s
- 1930s - 1940s



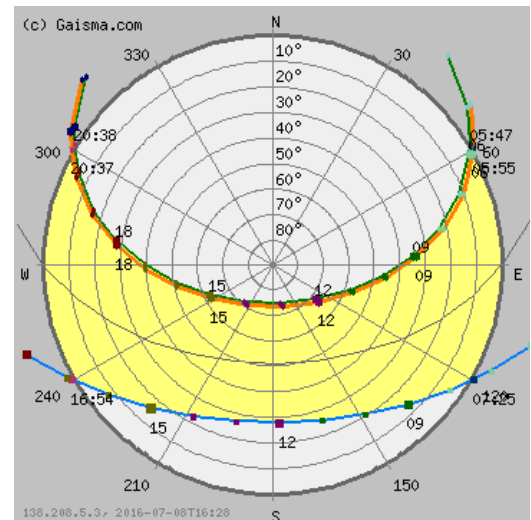
ANALYSIS

Environmental Conditions

LOCATION: 38.44°N 122.71°W

AVERAGE PRECIPITATION
AND TEMPERATURE

SUN PATH

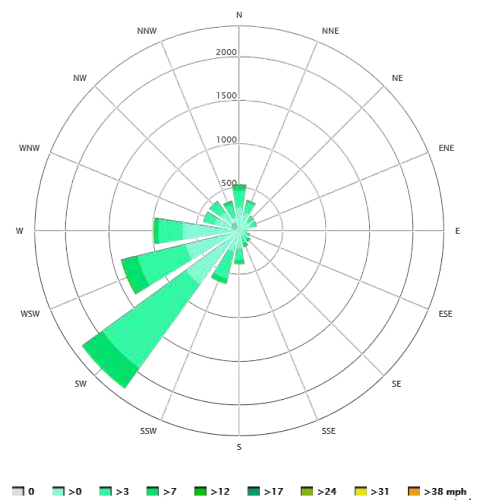


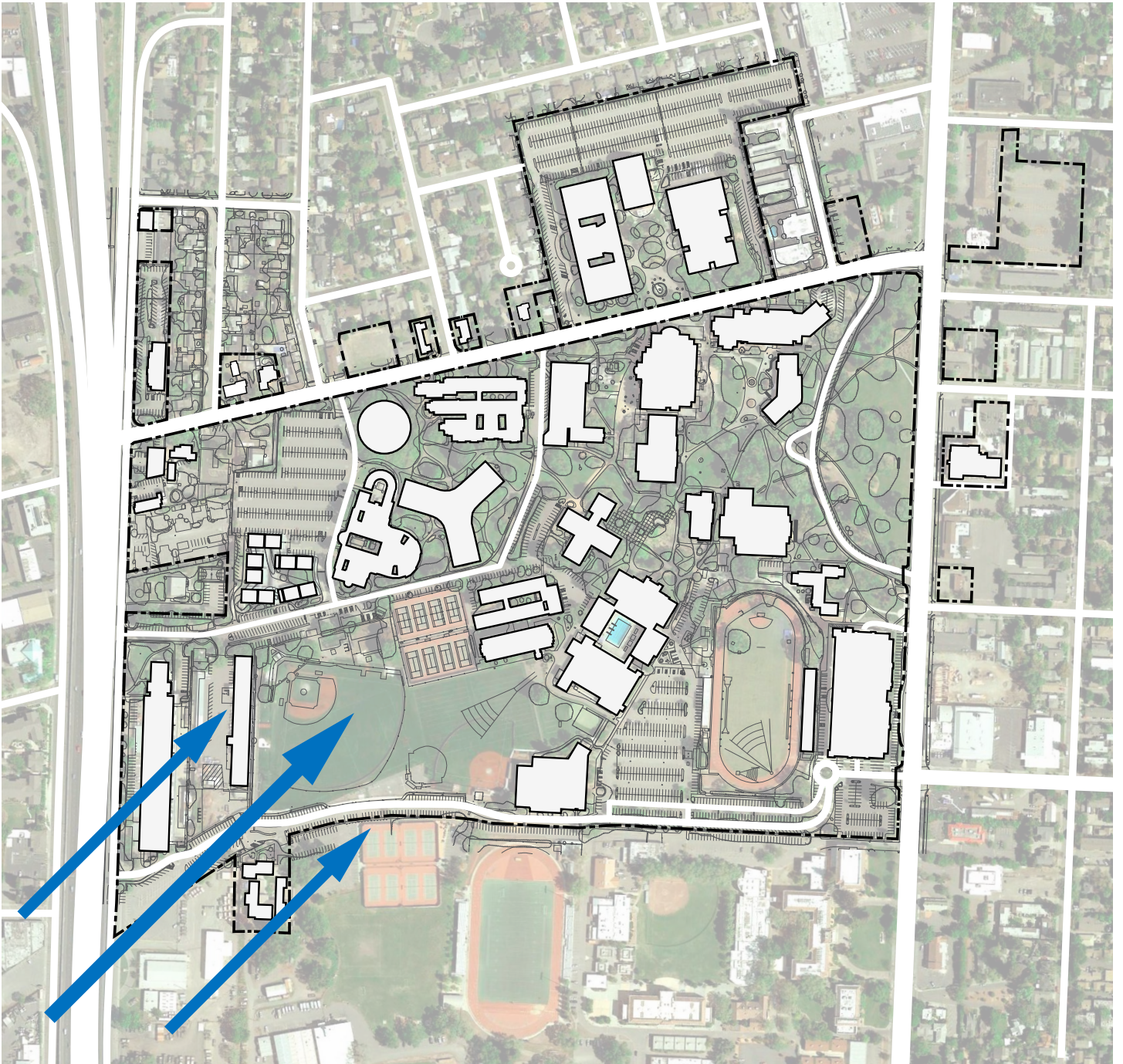
CLIMATE

The overall climate of the campus is fairly typical for interior coastal northern California. The annual average temperature is 59F degrees, with approximately 31 inches of rain, mostly falling between (November) and (March). In the spring and fall months, daytime temperatures can reach the 70F to 85F range. The campus receives prevailing breezes from the (west / west northwest / west southwest).

Proper solar orientation and sun shading on buildings should be considered to reduce energy consumption; outdoor spaces should be designed to maximize year-round use; and appropriate landscape materials should be used to respect the climatic conditions and minimize water demand.

SANTA ROSA WIND ROSE





ANALYSIS

Facility Condition Plan

	Architectural	Access	Structural	Fire	Plumbing	Mechanical	Electrical	Overall
1700 Mendocino Ave			-	1	1	1	1	1
1710 Mendocino Ave			-	1	1	1	1	1
1808 Albany (EHS)	1		3	1	1	1	1	1
1809 Albany	1		-	-	-	-	-	-
425 Elliott Ave	1		2	1	1	1	1	1
437 Elliott Ave	1		2	-	-	-	-	-
525 Elliott Ave			-	-	-	-	-	-
650 Elliott Ave	1							
705 Elliott Ave	1		3	1	1	1	1	1
Analay Hall (Art)	2		1	-	-	1	1	2
Analay Village (+9 portables)			-	1	1	1	1	1
B. Burdo Culinary Arts Center	4		4	4	4	4	4	4
Bailey Field	3			1	1	N/A	1	3
Bailey Hall	3		1-2	1	1	1	2	3
Baker Hall	2	2	3	-	2		2	2
Barnett Hall			-	1	1	1	1	1
Bech Hall			-	1	1	1	1	1
Bertolini Student Center	4		4	4	4	4	4	4
Bussman Hall/Jesse Peters Museum	3		3	3	1	2	2	3
Button Building	3		3	2	1	2	2	2
Call Child Development Center	3		2-3	3	3	2	3	3
Community Service/Foundation	4		-	-	1	2	1	4
Custodial Services	2		-	-	2	2	3	2
Doyle Library	4		4	4	3	3	3	4
Emeritus Hall	3		2	-	1	1	2	3
Environmental Health + Safety				-	3	2	3	-
Forsyth Hall (Music)	2		2-3	-	3	2	2	2
Garcia Hall	2		2-3	2	1	2	2	2
Graphic Services	1		-	1	1	1	1	1
Lark Hall	2	1-2	2	-	1	2	2	2
Lounibos Center	2		2-3	-	2	1	2	2
Luther Burbank Theater	2	1-2	1	3	2	2	1	2
Maggini Hall (Lect/lab/offc)	3		2	3	3	3	3	3
Maintenance + Operations	1		2-3	-	1	2	2	1
Miller House (Graphic Services)				1	1	1	1	-
Pedroncelli Center (District Police)	3		4	3	3	2	2	3
Pioneer Hall (Bookstore)	2		2	-	1	3	1	2
Plover Administrative Center	4		4	4	1	3	3	4
Quinn Swim Center	2		2	-	2	1	1	2
Race Building	4		4	3	2	3	3	4
Shuhaw Hall			-	1	1	1	1	1
Staff Development HS				1	1	1	1	1
Tauzer Gym	2		3	-	1	1	2	2
Walter Haehl Pavilion	3		1	1	1	2	2	-
Zumwalt Parking Pavilion	4		4	3	3	3	3	-

FACILITY CONDITION PLAN

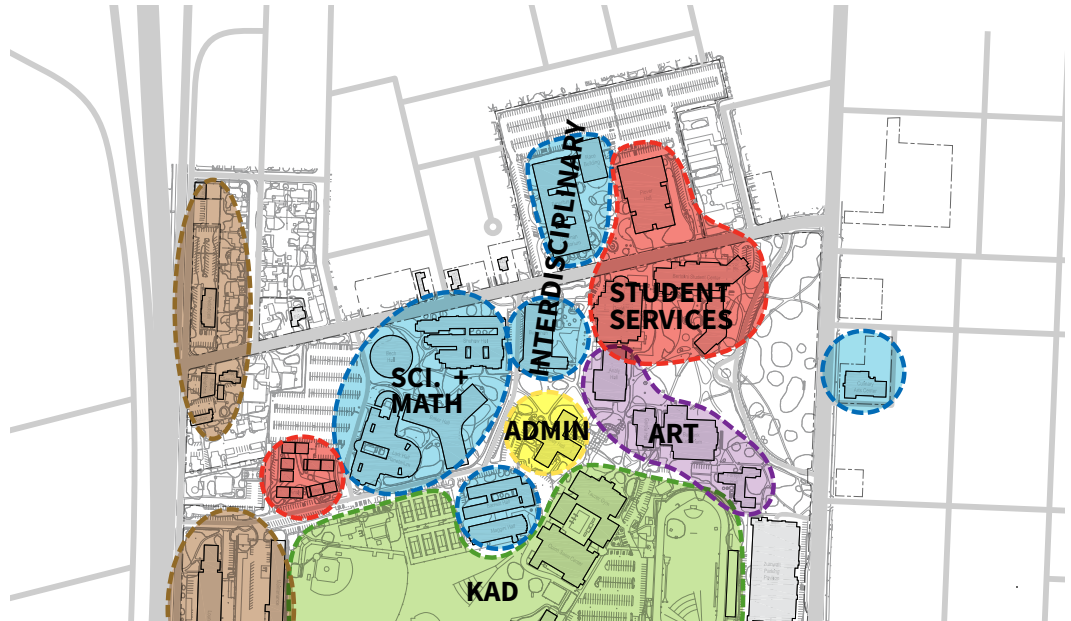
- Excellent
- Fair
- Poor
- Not Viable
- Not Assessed

0 300'



ANALYSIS

Campus Zoning and Building Use



CAMPUS ZONING

Student services are generally located along Elliott Avenue at the northeast of the campus, with the Doyle Library adjacent to the Bertolini Student Center, providing the heart of campus activities. Athletic facilities are located on the south half of the campus. Bailey Hall, with administrative functions, is in the center of the campus. The instruction functions, stretching east-west across the middle of the campus and up into Emeritus and Race, include more arts focused programs to the east, science /math programs to the west, and general education facilities in the center.

BUILDING USE

Buildings are zoned by the following uses: Student Services and Activities; Administration; Instructional; Kinesiology, Athletics and Dance (KAD); Library and Tutorial; Child Development; Arts and Performing Arts; Service and Support; and Parking. These zoning categories are useful to clarify the function(s) of each facility at a glance.

Several buildings have more than one use. Emeritus Hall, Burbank Auditorium, and Bussman Hall are a mix of Instructional and Arts. For example, in addition to instructional space, Emeritus contains Newman Auditorium, utilized for performances; and Bussman Hall is home to the Jesse Peter Native American Art Museum. Student Services and Activities are dispersed in several different buildings, including Bertolini Student Center, Race Hall, Barnett Hall, and Analy Village.

Buildings that are mainly single use include Plover Hall and Pioneer Hall, which are dedicated to Student Services + Activities; Doyle Library, which is dedicated to Library and Tutorial; Analy Hall, Garcia Hall, Forsyth Hall, Burdo Culinary Arts Center, Shuhaw Hall, Bech Hall, Baker Hall, Lark Hall, and Lounibos, which are mainly Instructional; and Tauzer Gym, Quinn Swim Center, Haehl Pavilion, which are dedicated to Kinesiology, Athletics, and Dance.

ANALYSIS

Campus Access and Parking



Santa Rosa Campus
Photo By: SCJCD

VEHICULAR CIRCULATION

The campus is served by multiple public bus lines. The campus' primary vehicle access points are from Mendocino and Elliott Avenues. Bear Cub Way and Armory Drive provide additional access points into campus parking lots from the south and west sides, respectively.

Inside the campus, vehicular drives and service drives are limited but are often shared with pedestrian paths, causing dangerous conflicts during peak hours. The connection across Elliott Avenue is also particularly prone to pedestrian / vehicular conflicts. Future development projects should aim to reduce and minimize these vehicular routes and internal parking areas where feasible to create a safer and more comfortable pedestrian environment.

PARKING

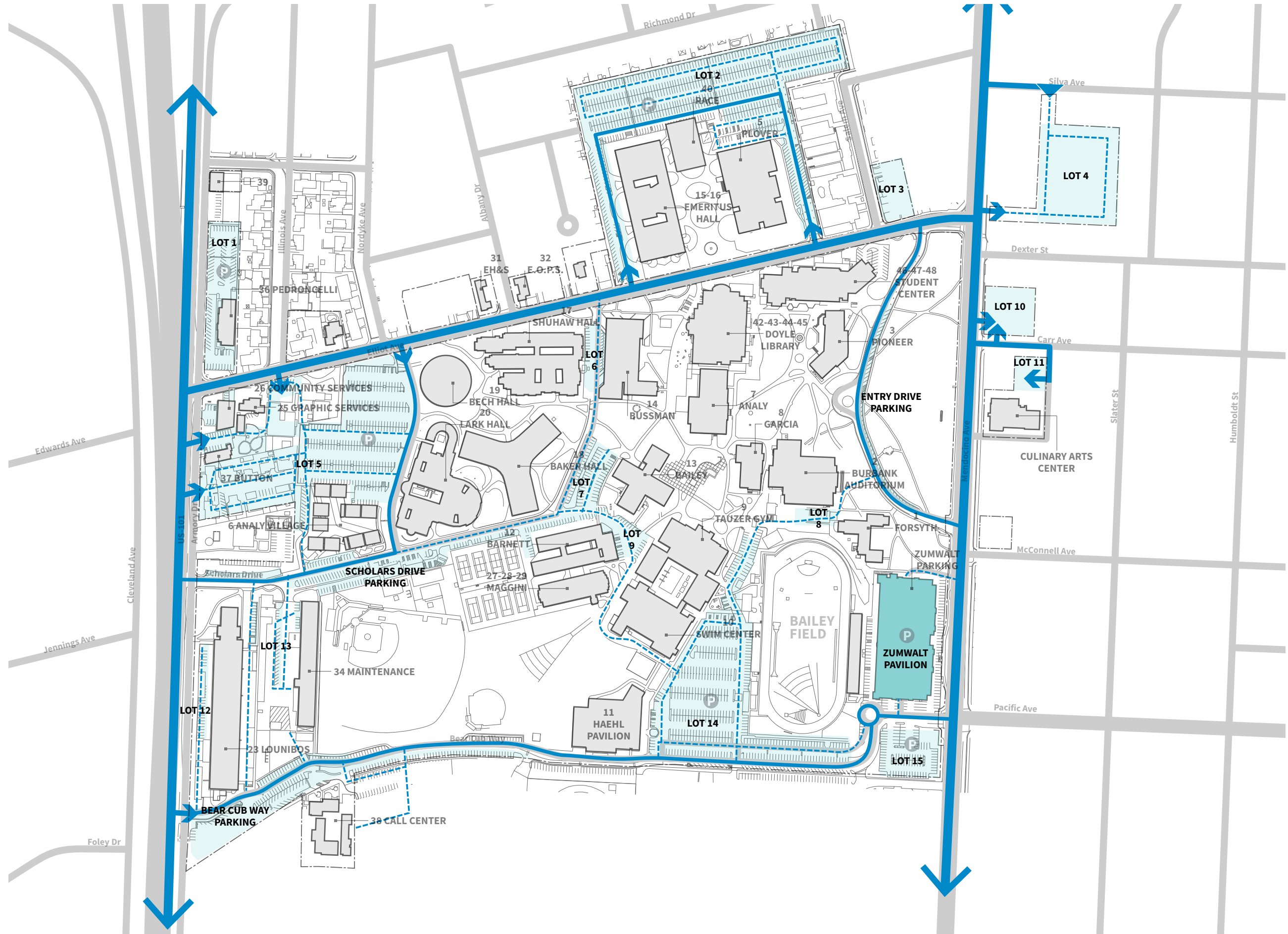
Parking for the Santa Rosa campus is generally located around the perimeter of the academic core, connected to city streets and/or campus drives, and within short walking distance to academic and student support buildings. However, to meet ever-growing demand parking spaces have been added to the inner campus and areas with relatively tight access, resulting in circulation and wayfinding issues. This is especially true on Scholars Drive.

There are a total of 3,674 marked parking spaces on campus, including 2,938 for students and 552 for staff use only. 1,083 spaces in the Zumwalt

Parking Pavilion at the southeast corner of campus, the only structured parking on campus. There are 82 accessible parking spaces in surface lots and 19 in the parking pavilion for a total of 101 accessible parking spaces campus-wide. Additionally, there are 13 marked parking spaces along with three designated fenced areas for motorcycles and 57 spaces that are metered or marked for short-term parking. The rest of the parking supply includes three police spaces, seven spaces for student government, and eight drop-off spaces.

In general, the parking supply on campus is fully used during the morning hours, though the supply exceeds the demand during the afternoon and evening hours. Field observations indicate that drivers must search for parking spaces during the morning hours; however, the parking occupancy rate campus-wide never surpassed 95 percent which means that there were always available parking spaces somewhere on campus, though perhaps not in the preferred location of the drivers seeking a space. Additionally, the distribution of small parking lots throughout campus creates circulation and wayfinding issues for vehicular traffic, making it difficult to find an available parking space. Computerized signing such as is used in parking lots in San Francisco and Oakland could be employed to guide drivers to available parking, or at the very least, notify them that a given lot or facility is fully occupied. Consolidation of parking is also recommended to address these issues.

Lot Name	Number of Parking Spaces		
	Standard	Accessible	Total
Lot 1	74	2	76
Lot 2	532	14	546
Lot 3	18	2	20
Lot 4	232	0	232
Lot 5	445	9	454
Lot 6	24	0	24
Lot 7	58	0	58
Lot 8	4	2	6
Lot 9	20	6	26
Lot 10	34	4	38
Lot 11	22	1	23
Lot 12	75	2	77
Lot 13	35	0	35
Lot 14	445	14	459
Lot 15	64	4	68
Scholars Drive	126	16	142
Entry Drive	57	2	59
Bear Cub Way	244	4	248
Zumwalt	1,064	19	1,083
Grand Total	3,573	101	3,674



ANALYSIS

Pedestrian Network and Bicycle Parking



Santa Rosa Campus
Photo By: SCJCD

PEDESTRIAN NETWORK

The campus contains a network of primary and secondary pedestrian routes that link academic buildings, athletics, student services, and recreation to one another and the parking lots. A majority of the academic buildings exist within a 10-minute walk of each other, and the entire length of the campus can be traversed in a 20-minute walk, creating a very walkable environment. The non-linear walking paths provide for a park-like campus setting, but also pose challenges for wayfinding and safety. Future development should provide clear, safe connections to the academic core, athletics, and parking to promote a walkable campus.

Connections across Elliott Avenue pose a serious challenge for the campus, given the vehicular traffic on this street. Connections across Mendocino avenue are at Elliott Avenue and near Forsyth Hall. Many students also park in the Zumwalt Parking Pavilion and walk to classes from there, creating a concentration of foot traffic along the path to the north of the Parking Pavilion.

BICYCLES / BICYCLE PARKING

Bicycles are currently prohibited on campus; however, bicycle parking is provided at various

distributed locations around the perimeter. Based on information provided in a 2013 survey, 2.7% of students travel to campus via bicycle. Site observations indicate that the bicycle parking supply is generally sufficient to meet the existing demand; bicycle racks regularly had spaces available during the busiest times of the day.

As the District looks toward permitting bicycle riding on campus, providing for appropriate separations and controls between pedestrian and bicycle routes will be extremely important. By providing adequate bicycle facilities, including sufficient parking, a substantial shift in mode choice is likely to occur. Assuming that the percentage of students commuting to campus via bicycle increases to 10 percent by 2030, the number of bicycle parking spaces would need to be increased to approximately four times the number currently provided. Bike parking should be in the form of racks, lockers, and bike barns/pavilions and should be placed directly adjacent to bicycle routes and within close proximity to academic buildings. Possible locations for future bicycle parking include north of Burbank Auditorium, west of Tauzer Gym, west of Doyle Library, south of Plover Hall, and north of the future STEM building.

PEDESTRIAN NETWORK /
BICYCLE PARKING

- Pedestrian Path
- Primary Entry
- Secondary Entry
- Crossing
- Building Entries

0 300'



ANALYSIS

Open Space and Landscape

HISTORIC

Landscapes affiliated with the original campus open space and still serving as a signature campus identity. Physical development of any structures and facilities is prohibited along the park-like vista area at the front of campus (Resolution #33-04).



COURTYARD

Landscapes that are varied and unique to their architectural setting, and rich in detail and sensory appeal. Courtyards are public living spaces.



CONNECTIVE

Multi-functional spaces that usually occur between buildings and function as pedestrian corridors, passive open space, service areas, and small visual landscapes.



UNIQUE

Landscapes that serve a specific function or role on the campus and should be designed and maintained accordingly.



Santa Rosa Campus
Photo By: Gensler / SCJCD

OPEN SPACES & LANDSCAPE

- Historic
- Courtyard
- Connective
- Unique



ANALYSIS

Tree Canopy

The campus is home to a wide variety of tree species planted throughout the decades. The planting arrangements are mostly informal, supporting the park-like character depicted in early master plans. Some formal arrangements are found reinforcing pedestrian walk alignments and framing outdoor rooms. Future tree species, spatial organization, and layouts relating to buildings and significant pedestrian spaces should be carefully considered. (See board mandates 6.5.4 and 6.5.4P regarding tree canopy policies)

Santa Rosa Campus
Photo By: SCJCD



Santa Rosa Campus
Photo By: SCJCD



TREE CANOPY

Existing Tree Canopy



ANALYSIS

MEP Campus Systems

Electrical Campus Infrastructure



FEEDER SCHEDULE PLAN

- FEEDER 1
- FEEDER 2
- FEEDER 3
- FEEDER 4
- FEEDER 5

EXISTING FEEDER RATING

- 12.47V 200A
- 12.47V 200A
- 12.47V 200A
- 12.47V 200A
- 12.47V 150A

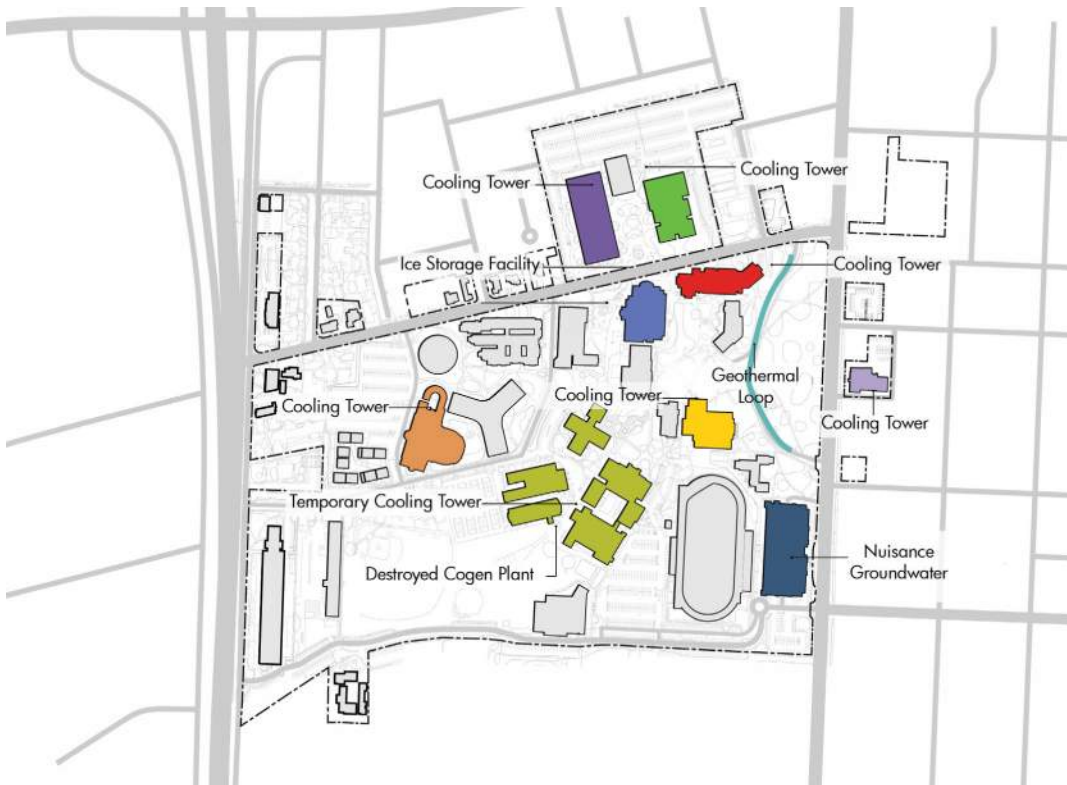
DISTRIBUTED POWER CAPACITY

- 40 A 498 KW
- 40 A 498 KW
- 40 A 498 KW
- 40 A 498 KW
- 30 A 374 KW

The Santa Rosa Campus buildings are fed from five different feeders at 12.47kV. Feeders 1 through 4 are protected by a 200 amp fused switch and Feeder 5 is protected by a 150 amp fused switch. Under California Electrical Code (CEC) 2013, Feeders 1 through 4 are able to support 498 kW of distributed power each and Feeder 5 is able to support 374 kW of distributed power. The Main Distribution Switchgear is capable of supporting the maximum distributed power of all five feeders, able to support 2992 kW of distributed power.

System capacity noted here is based on available as-built documentation and in-effect code cycle. Further investigation of existing system conditions and new code requirements is required. Renewable energy sources interconnection shall follow PG&E requirements.

Mechanical Campus Infrastructure



The Santa Rosa Junior College Campus has limited common HVAC infrastructure that serves small or large clusters of buildings. The above figure shows the location of buildings served by individual chillers and cooling towers. The existing ice storage system, geothermal field and cogeneration plant are also indicated on the map. The Santa Rosa Campus also has a source of ground water originating from the foundation of the Zumwalt garage, which can become a source of non-potable water and be used for geothermal heat exchange.

SANTA ROSA CAMPUS

RECOMMENDATIONS

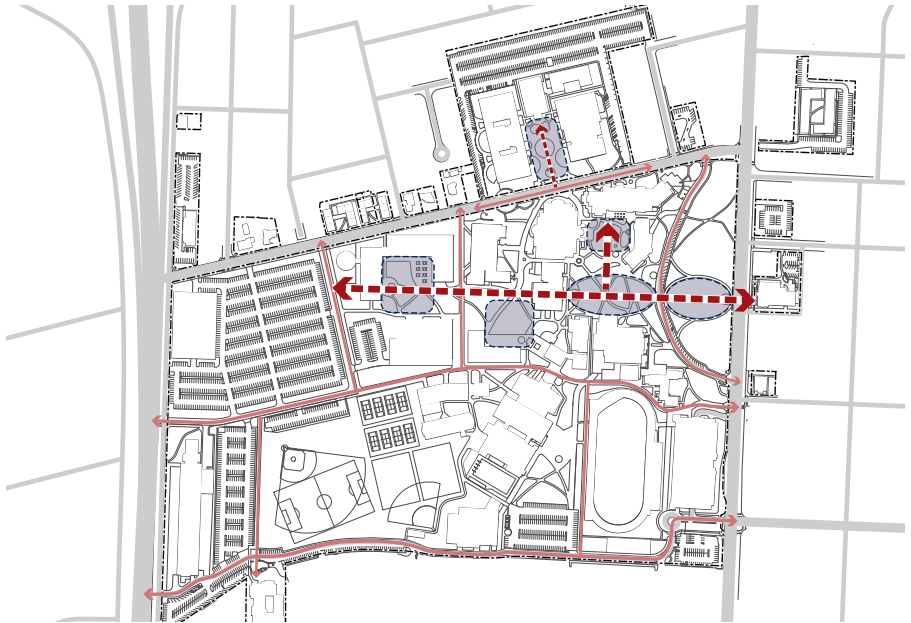
RECOMMENDATIONS

Campus Planning Principles

Unify the Campus

ORGANIZE THE CAMPUS WITH CLEAR GATEWAYS AND CIRCULATION SPINES.

Providing hierarchy to the Campus Gateways and Pathways creates stronger visual continuity and connectivity, establishing cohesiveness amongst diversity.



Strengthen Campus Identity

PRESERVE THE EXISTING CAMPUS CHARACTER AND THINK OF THE BUILDINGS AS “STRUCTURES WITHIN THE LANDSCAPE.”

Capitalizing on the historic campus character and introducing components that provide learning opportunities for both students and the broader community.





Advance Learning and Discovery

INTEGRATE SOCIAL AND ACADEMIC SPACES AND ACTIVITIES IN SUPPORT OF THE EDUCATIONAL MISSION.

Re-organizing the functional zoning of the campus and buildings



Improve Connections

STRENGTHEN VISUAL AND PHYSICAL CONNECTIONS BETWEEN THE CAMPUS AND THE NEIGHBORING COMMUNITY.

Opening visual access to the heart of campus and allowing greater mobility and connectivity across the campus. Calming traffic on Elliott Avenue to improve pedestrian circulation and safety.

RECOMMENDATIONS

Vision Plan

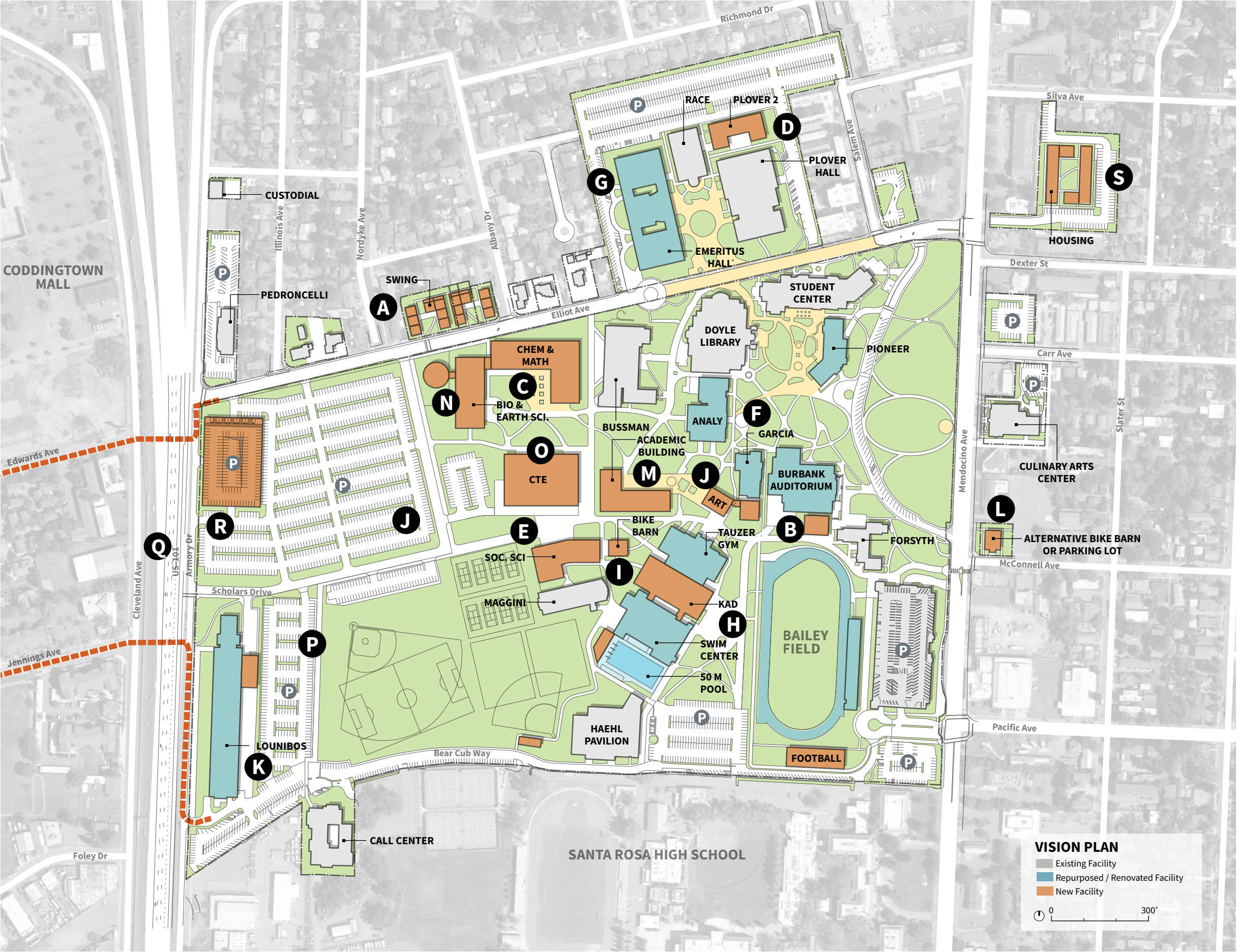


Santa Rosa Campus
Photo By: SCJCD

Overview

Following the Planning Principles, the Vision Plan recommends concepts and projects that unify the campus, strengthen campus identity, advance learning and discovering, and improve connections. Most importantly, the Vision Plan supports the educational goals of the Santa Rosa Campus, and in doing so, the success of students within the Sonoma County Junior College District.

Proj. Concepts	
A	Swing Space <ul style="list-style-type: none">Construct non-instructional buildings for swing space, which will become (at the end of the program) the permanent home to HR, Foundation and Public Relations
B	Burbank Auditorium – Renovation + New Multi-Purpose Learning Lab
C	Chemistry, Technology, Engineering, and Math building
D	“Plover 2” - Consolidated Student Service Functions from Analy Village and other locations
E	New Social Sciences Building to replace Barnett Hall
F	Heritage Rehab <ul style="list-style-type: none">Renovate and Re-purpose Analy Hall as an administrative or student-centric building.Renovate and Re-purpose Garcia Hall for Art programsRenovate and Re-purpose Pioneer Hall as a “student center”Landscape development recalls historical master plan
G	Emeritus Renovation/ Modernization
H	KAD Facilities <ul style="list-style-type: none">Re-surface Bailey track, Tauzer, Quinn + Haehl renovations, new 50m pool, new football locker rooms, new softball restrooms/concessions
I	New Bike Barn (Specific Location To Be Determined)
J	Demolish HR, Foundation, Public Relations, and Analy Village to replace with surface parking
K	Renovate Lounibos for equipment upgrades and seismic retrofit, create new Makers Lab addition
L	Alternate Bike Barn or Parking Lot Location
M	Demolish or repurpose the building for academics to better fit the campus framework plan
N	New Biology + Earth Science (including AG/NR) Building with Planetarium and GreenhouseThe
O	Future CTE (or other Science/Engineering) building, with Makers Lab
P	Demo Warehouse + create new surface parking
Q	Future bike/ped crossing over US-101 (Options shown pending City decision)
R	<ul style="list-style-type: none">Future multi-story Parking Structure or additional surface parking if additional capacity is needed.Surface parking shown south of parking structure requires purchase of property from LDS
S	Potential Off-Campus Housing (non-bond funded)



RECOMMENDATIONS

Facility Details

New - Instructional

CHEM + MATH BUILDING

A new Chemistry, Technology, Engineering, and Math building to replace Shuhaw Hall and Bech Hall has been approved at Final Project Proposal stage, and will be partially funded by the State.

BIOLOGY / EARTH SCIENCES BUILDING + PLANETARIUM

The existing Lark Hall and Baker Hall are both in poor condition. A new Biology / Earth Sciences building is recommended to replace those buildings, including Agriculture / Natural Resources and a Greenhouse.

BARNETT HALL

New Social Sciences Building to replace the current outdated Barnett Hall.

CTE BUILDING WITH MAKERS LAB

A future CTE (or other Science/Engineering) building with Makers Lab is recommended to be placed in the science and technology quad.

BAILEY HALL

Demolish or repurpose the building for academics to better fit the campus framework plan.

KAD FACILITIES

Re-surface Bailey track, Tauzer, Quinn + Haehl renovations. Add new 50m pool, new football locker rooms, and new softball restrooms/ concessions.

New - Student Services / Support

SWING SPACE

Eventually permanent home to HR, Foundation and Public Relations, Swing Space will be constructed to support interim program move needs.

PLOVER 2

Consolidated Student Service Functions from Analy Village and other locations to a new building north of Plover Hall.

BOOKSTORE

Potential relocation of Bookstore from Pioneer Hall to east of Mendocino Ave.

OFF-CAMPUS HOUSING

Potential Off-Campus Housing (non-bond funded).

BICYCLE / PEDESTRIAN BRIDGE

The city is moving forward with a bike/ped crossing over US-101. Two options are under discussion for final decision.

BIKE BARN

Construct Bike Barns in the center of the campus for bike parking.

PARKING

Demolish underutilized buildings and replace with surface parking. Recommended demolition include Analy Village, HR, Foundation and Public Relations, and Warehouse. Future multi-story Parking Structure should be considered if additional capacity is needed.

* Surface parking shown south of parking structure requires purchase of property from LDS.

Repurposed / Renovated / Expansion

BURBANK AUDITORIUM

Renovation + New Multi-Purpose Learning Lab, currently under design development.

EMERITUS HALL

Renovation/ Modernization.

ANALY HALL

Re-purpose Analy Hall as an administrative or student-centric building.

PIONEER HALL

Re-purpose as a “student center”.

GARCIA HALL

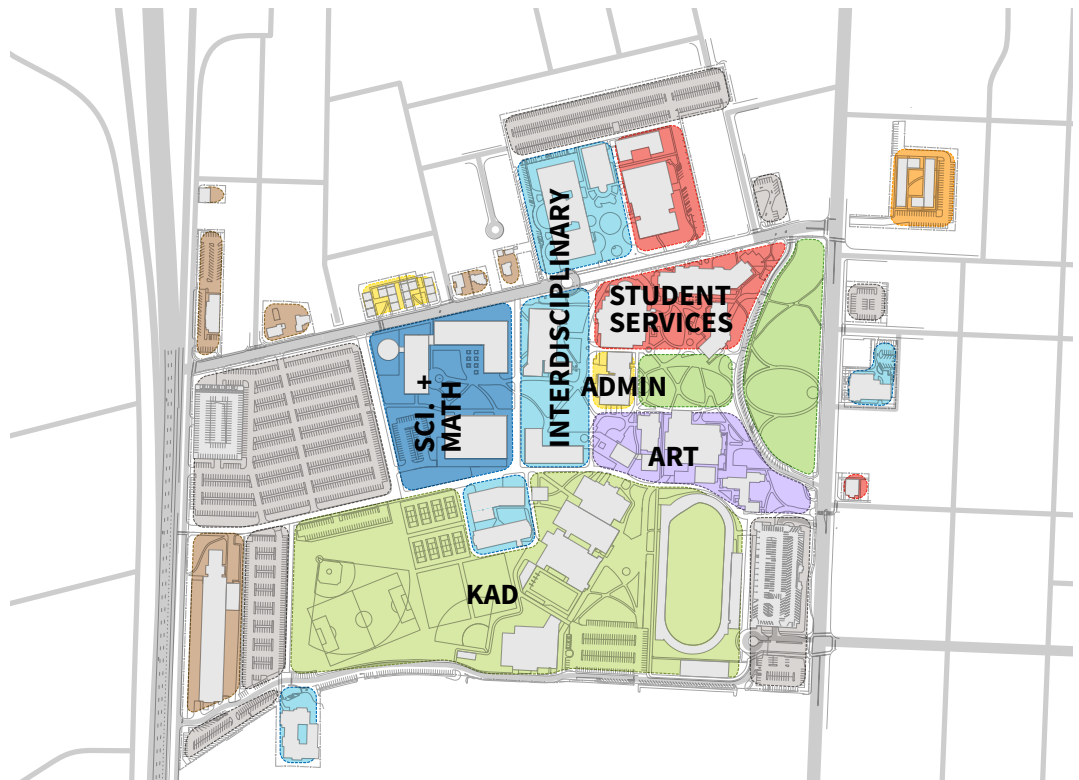
Re-purpose Garcia for Art and add expansion.

LOUNIBOS HALL

Re-purpose Lounibos for Facilities Ops in later phases. Add a makers lab to Lounibos for interim CTE needs.

RECOMMENDATIONS

Campus Zoning and Building Use



Following implementation of the Vision Plan recommendations, the Campus Zoning and Building Use diagrams illustrate the consolidation of like programs in these zones:

INSTRUCTIONAL

Instructional programs are consolidated in the campus core. A Science and Math quad is formed by the new facilities: Science and Math, Biology and Earth Science, and CTE. An interdisciplinary spine is formed, north to south, with existing and new facilities: Race Hall, Emeritus Hall, Bussman Hall, Academic Building, Social Sciences, and Maggini Hall.

STUDENT SERVICES & ACTIVITIES

Student Activities and Services are consolidated in the existing and repurposed Plover Hall, Bertolini Student Center, and Pioneer Hall. The new Plover 2 will strengthen the identity of the northeast corner of campus as the centralized student services and activities zone.

ARTS

Arts have been consolidated in existing and new facilities near the front of campus, in Burbank Auditorium, Forsyth Hall, Garcia Hall, and the new Art facility.

KINESIOLOGY, ATHLETICS & DANCE

Recommendations to KAD include renovations and new construction to support the program needs and replace aging facilities.

SERVICE & SUPPORT

Support functions for Santa Rosa are to be located on the periphery of campus. The most notable recommendation in the vision plan is the relocation of the warehouse to Lounibos Hall.

PARKING

The vision plan recommends that all internal parking be removed from campus. Parking is to be located on the edges to improve wayfinding and decrease the likelihood of vehicular-pedestrian conflicts.

**CAMPUS ZONING /
BUILDING USE**

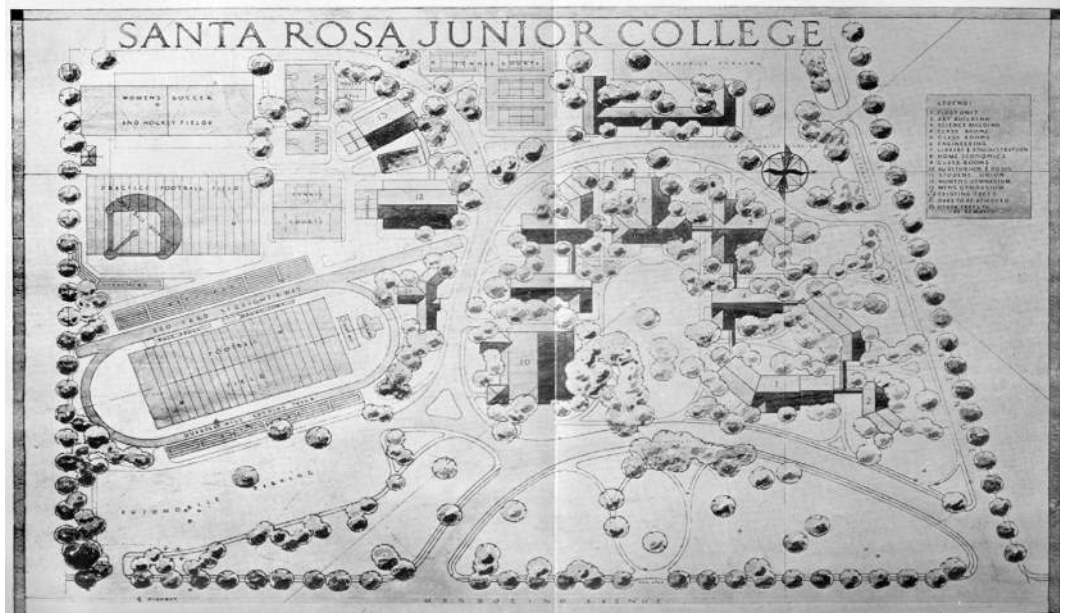
- Student Services + Activities
- Administration
- Instructional
- Athletics + Physical Education
- Library / Tutorial
- Child Development
- Arts / Performing Arts
- Service + Support
- Athletic Fields
- Housing
- Parking



RECOMMENDATIONS

Open Space and Landscape

Campus plan, 1931 Santa Rosa Junior College Patrin yearbook
Photo By: Santa Rosa Junior College



Outcomes

Existing landscape conditions and proposed Vision Plan recommendations suggest a series of distinct landscape areas and types characterized by its use, function, experience, and configuration in the campus. The open space and landscape diagram works in support of the Campus Planning Principles and illustrates the following outcomes:

- Improved Site Circulation
- Addition of Educational Gardens
- Strengthened Campus Identity

IMPROVED SITE CIRCULATION

The introduction of a bicycle circulation network improves connections across campus and out to the community beyond. Designated bicycle paths also comprise part of a new hierarchy of circulation on campus, bringing clarity to the wayfinding system. The Vision Plan also redistributes parking spaces central to the campus out to larger perimeter lots, creating a safer pedestrian environment.

ADDITION OF EDUCATIONAL GARDENS

The addition and improvement of educational gardens on campus help leverage program adjacencies to foster the education environment by incorporating living laboratories that serve as functional landscapes for use by students, faculty, and staff. These easily accessible spaces could be stormwater gardens, demonstration gardens, or other opportunities to support the advancement of learning and discovery.

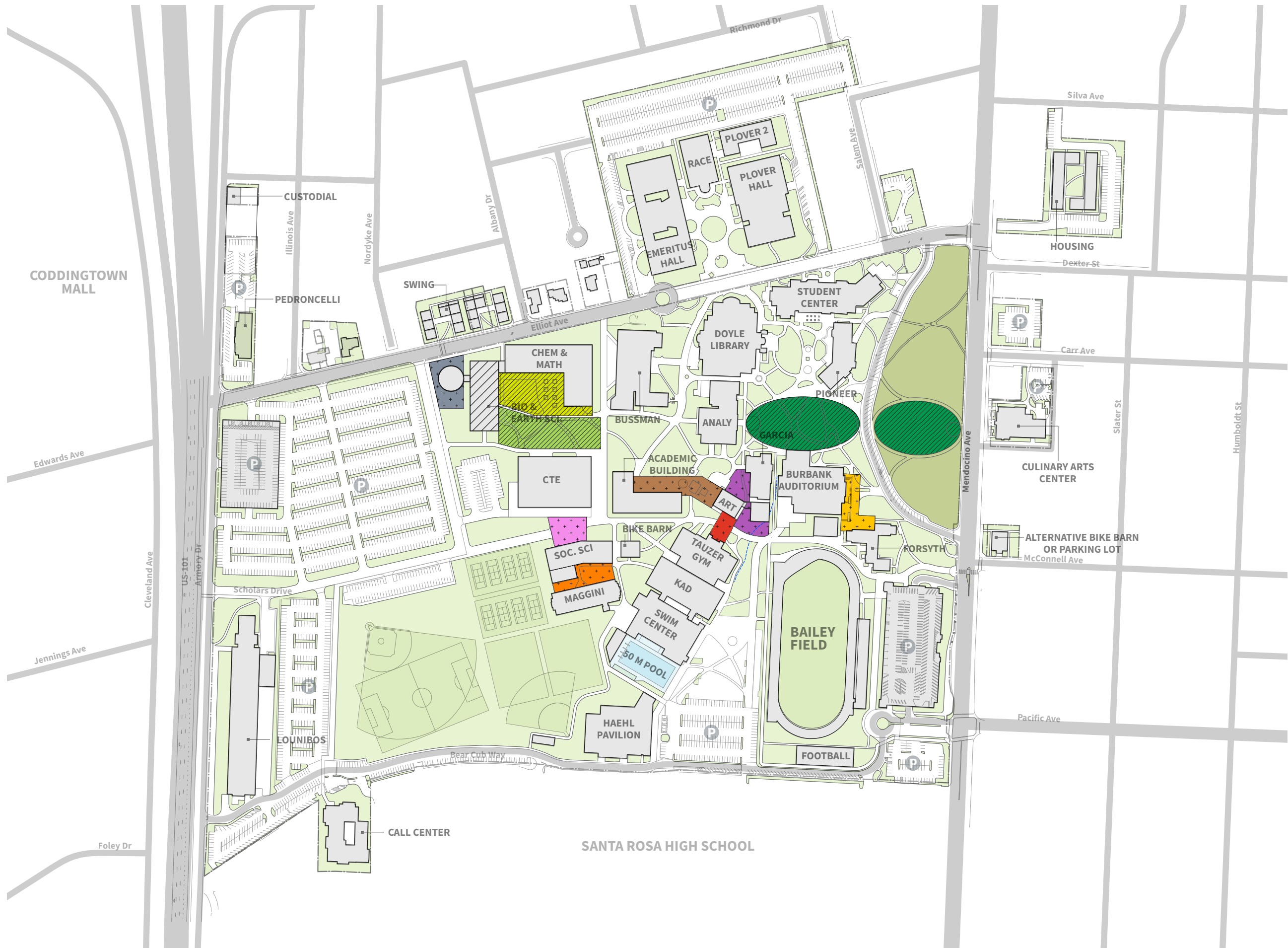
STRENGTHENED CAMPUS IDENTITY

The Vision Plan recommendations for the organizing framework look to past plans of the Santa Rosa Campus, with Analy Hall as the central focus on campus. From Analy Hall, east and west axial spines are extended to create a stronger visual frontage along Mendocino Avenue as well as unify the west academic core to the more historic east part of campus, all while maintaining its park-like quality.

OPEN SPACE &
LANDSCAPE

- Scholars Drive Entry Plaza
- Burbank Auditorium Plaza
- Historic / Formal Event Lawn
- Historic Campus Frontage to Remain
- Social Science Courtyard
- Art / Sculpture Garden
- Tauzer Plaza
- Heritage Plaza Renovation / Expansion
- Bio / Earth Science Eco-Garden + Green Roof
- Bio / Earth Science Plaza
- Science + Math Courtyard
- Open Space - KAD
- Open Space - Other

0 300'



RECOMMENDATIONS

Campus Access and Parking



Santa Rosa Campus
Photo By: SCJCD

TRAFFIC CALMING

The Vision Plan recommends traffic calming along Elliott Avenue from Mendocino Avenue west to Emeritus Hall. Traffic calming measures may include textured and/or colored paving, limited traffic access, and/or physically redesigning the street in order to enhance pedestrian safety and continuity between the different parts of campus.

CAMPUS PARKING

The daily average parking occupancy rate campus-wide was measured at 70%, which suggests that the parking supply is generally adequate for the current demand. Increasing the parking supply would be useful during the morning hours, but would be unnecessary during the afternoon and evening hours since the existing supply is more than adequate for the majority of the day.

The Santa Rosa campus has a projected increase in enrollment of 6,329 students between 2015 and 2030. Using the data from the parking occupancy counts, approximately 0.20 parking spaces per student (3,511 divided by 17,000) are currently needed based on the number of students, faculty and staff who drive to campus. Application of this rate to the additional students indicates that 1,266 more parking spaces would be needed due to

the increase in enrollment. However, if provision of bicycle facilities causes 10% of students to travel via bicycle compared to the current 2.7%, this would result in approximately 1,675 more bicycle riders daily, freeing up parking spaces to accommodate some of the increase in enrollment. Because the demand placed upon the existing parking supply is expected to decrease once bicycle facilities are constructed, additional parking facilities appear to be less necessary.

Although increasing the parking supply is not recommended, restructuring of the parking layout will be integral in addressing the existing circulation and wayfinding issues. Consistent with the Vision Plan, internal parking lots and the parking spaces on Scholars Drive should be removed to enhance pedestrian/bicycle safety, reduce conflict points, and improve vehicular circulation. Additionally, it is recommended that the parking ticket machine located on the entrance to the parking lot north of the Race Building be relocated approximately 100 feet north so that queues do not extend onto Elliot Avenue and block the roadway during peak times. Providing a campus where pedestrians and bicyclists feel safe will be essential to creating a mode shift toward alternative forms of transportation.

Parking Count

Lot Name	Number of Parking Spaces		
	Standard	Accessible	Total
Lot 1	74	2	76
Lot 2	532	14	546
Lot 3	18	2	20
Lot 4	84	4	88
Lot 5A	816	17	833
Lot 5B	61	3	64
Lot 10	34	4	38
Lot 11	22	1	23
Lot 13	215	7	222
Lot 14	158	6	164
Lot 15	64	4	68
Scholars Drive	59	3	62
Entry Drive	50	2	52
Bear Cub Way	244	4	248
Zumwalt	1,064	19	1,083
Armory Dr Pavilion	TBD	TBD	TBD
Grand Total	3,495	92	3,587

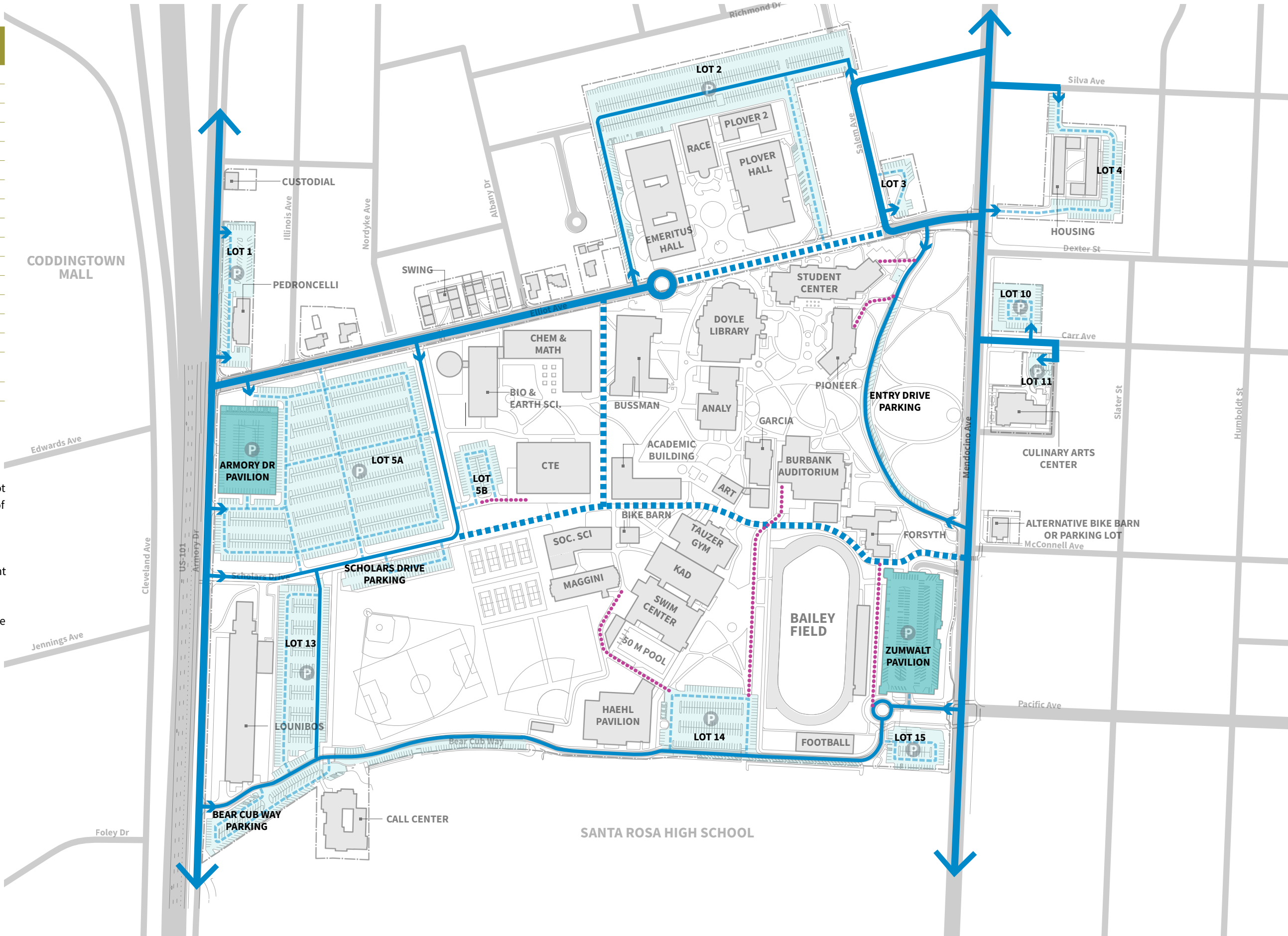
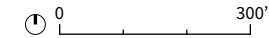
* Parking lot and structure names for parking count purpose only
* Field check underway for existing parking count

Recommendations include:

- Demolish facilities in the northwest parking lot (Lot 5) to expand and increase the efficiency of thi sparking area.
- Remove all internal parking spaces along Scholars Drive and inside the campus. As an interim step designate these spaces at efficient vehicle spaces.
- Re-evaluate parking sufficiency after initial bicycle measures are put in place to determine need for a future parking structure.

CAMPUS ACCESS / PARKING

- Public Road
- Campus Road
- Limited / Parking
- Service / Loading
- Campus Access
- Surface Parking
- Parking Structure



RECOMMENDATIONS

Pedestrian Network and Building Entries



Santa Rosa Campus
Photo By: SCJCD

PEDESTRIAN NETWORK

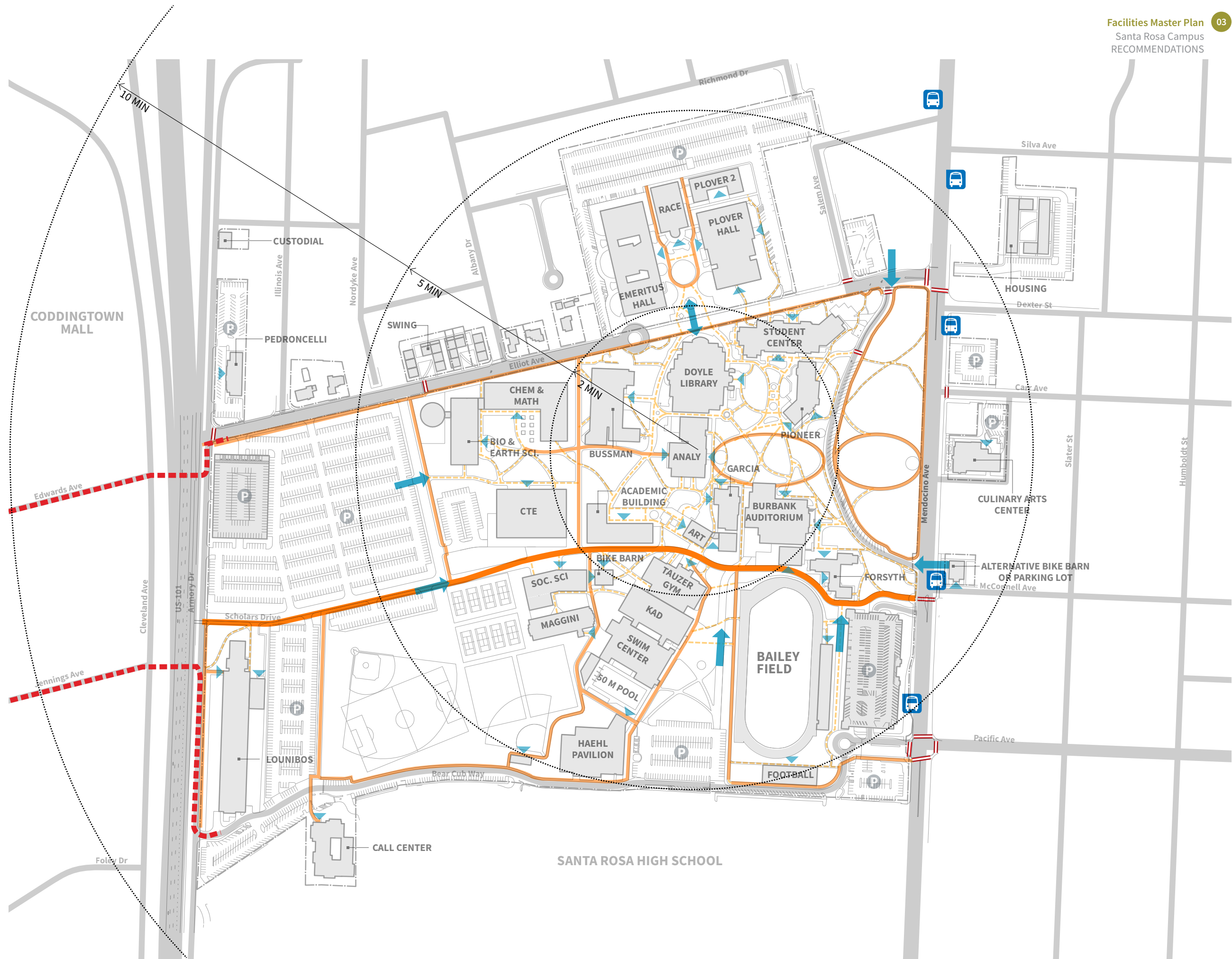
The existing system of meandering pathways are one of the most loved aspects of the Santa Rosa campus. The Vision Plan recommendations for the Pedestrian Network aim to respect the existing pathways, while creating hierarchy for improved wayfinding. Primary pathways, designed for larger volumes of traffic, are wider and more rectilinear in character, offering direct access across campus and to major destinations. Secondary pathways retain the wandering quality, winding through the campus landscape.

Additional recommendations include removing internal parking and limiting vehicular access inside campus for pedestrian safety.

**PEDESTRIAN NETWORK /
BUILDING ENTRIES**

- Primary
- Secondary
- Tertiary
- Bike Bridge over US-101
- Crossing
- Campus Entry
- Building Entries
- Bus Stop

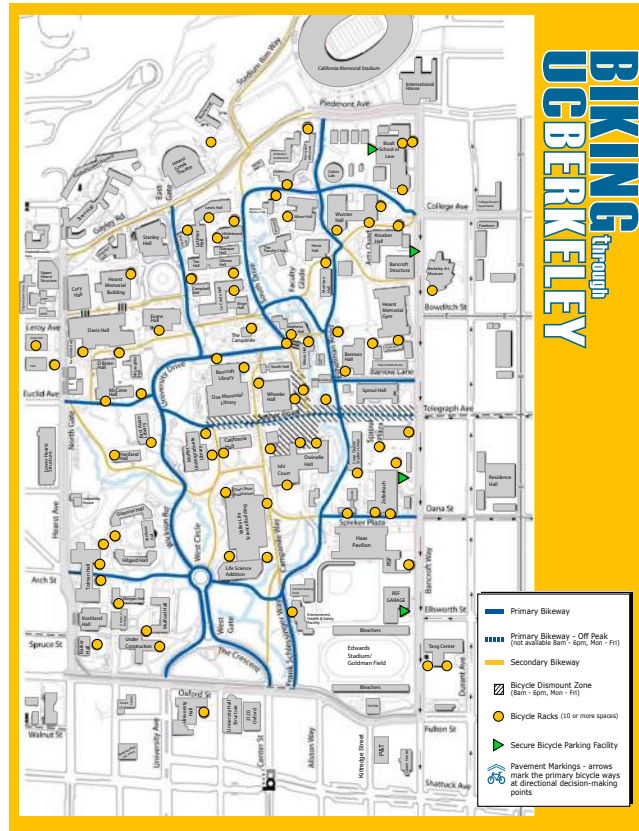
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RECOMMENDATIONS

Bicycle Network

University of California,
Berkeley Bike Plan Example



BICYCLE NETWORK

A Bicycle Network is another addition to the Santa Rosa Campus Vision Plan. An overlay to the Pedestrian Network, the major pathways are designed for multi-modal transportation: pedestrians, bicycles and other campus-approved human-powered transport, service, and emergency vehicles. Speed limits, textured paving, and separated lanes of transportation mode, e.g. wheeled and foot, maintain safety, and help to avoid pedestrian conflicts.

The Santa Rosa Junior College Student Survey performed during in the fall of 2013 indicated that only 2.7% of students bicycle to campus. Field observations confirmed that very few students are currently biking to campus. In terms of setting, the Santa Rosa campus is more similar to universities located in college towns than it is to many other community colleges in the state which are primarily

set up for commuters. Creating a mode shift from 2.7% to 49% of students commuting via bicycle may not be realistic, but providing bicycle programs and facilities that get at least 10% of students to travel via bicycle is attainable considering the university-like setting of the main campus, proximity of campus to residential neighborhoods, climate that permits active forms of transportation, and the “bike-friendly” attitude of the region in general. Future provision of student housing on campus would also help create the mode shift toward sustainable forms of transportation.

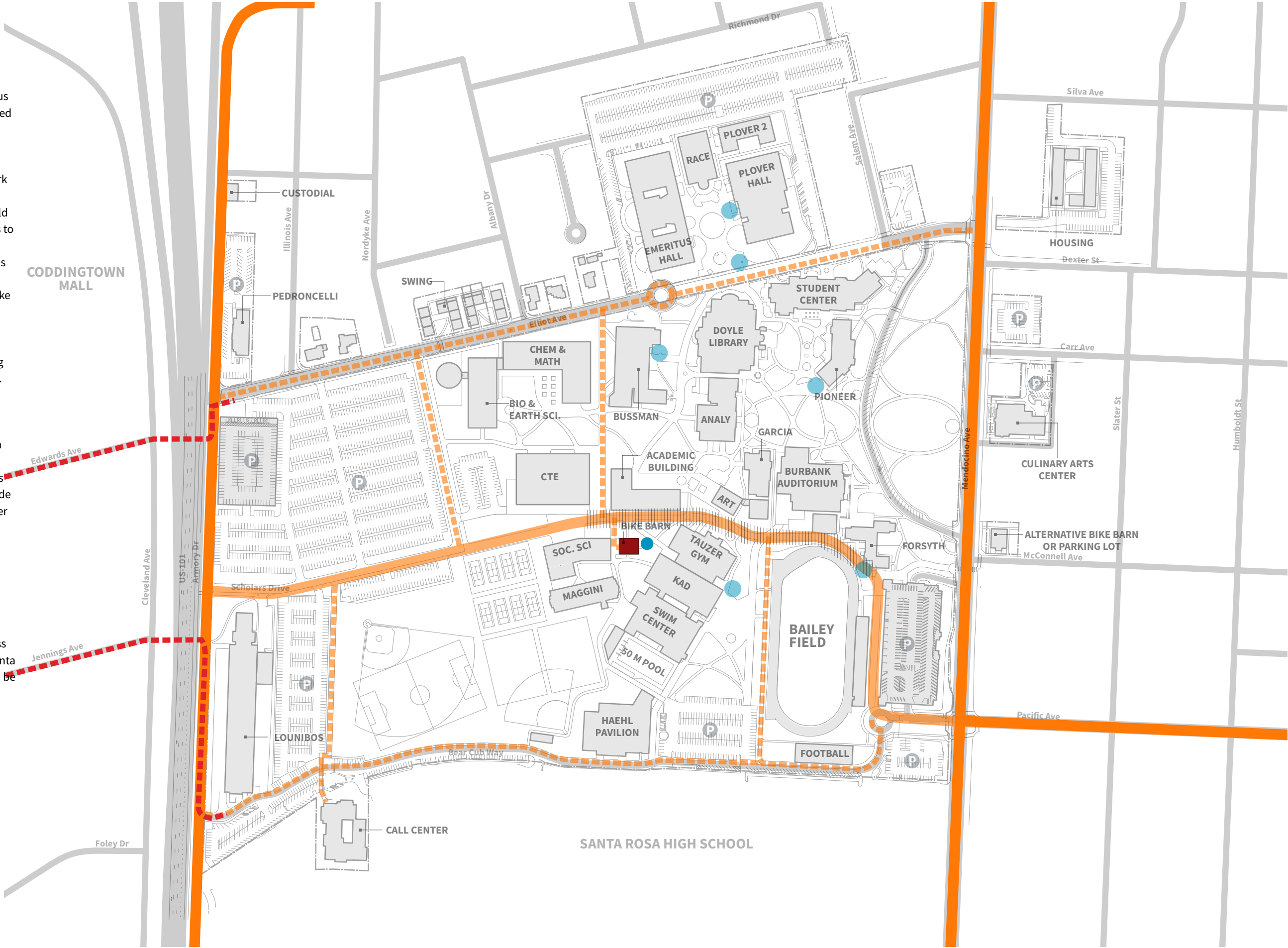
The following actions are recommended to increase the number of students biking to campus and to grow the bike culture in order to offset need for additional parking:

- Permit bicycles to be ridden on campus.
- Provided a complete bike-dedicated network on campus that allows cyclists to navigate campus safely and efficiently. Network could initially be indicated by pavement markings to be later constructed more permanently.
- Provide sufficient bicycle parking on campus to accommodate the projected student population growth by 2030 in the form of bike racks, bike lockers, and bike barns.
- Have a system in place to deal with bikes abandoned on campus, perhaps by storing them in a bike lost-and-found then donating the bikes to charity or to incoming students.
- Create a bicycle registration process to deal with stolen bikes being reported.
- Partner with nearby bike shops for repairs and encourage bike shops to hold events on campus.
- Work with SMART to subsidize transit passes for students and work with the City to provide the planned bicycle/pedestrian crossing over US 101.
- Create a comprehensive Transportation Demand Management (TDM) plan to reduce single-occupancy vehicle trips to campus complete with incentives to encourage alternative forms of transportation.
- Create a website with easily accessible information about alternative ways to access campus. Santa Barbara City College and Santa Monica College have such websites that can be used as models.

BICYCLE NETWORK

- Existing (High Speed)
- Bike Bridge Options over US-101
- On-campus Primary (Low Speed)
- On-campus Secondary (Low Speed)
- Dismount Zone (During School Hours)
- Bike Barn (with parking)
- Existing Bike Parking to Remain

0 300'



RECOMMENDATIONS

Signage and Wayfinding



Santa Rosa Campus
Photo By: SCJCD

SIGN TYPE LIST

Refer to signage design guidelines document for details and usage information.

IDENTIFICATION SIGNS

- A1** - Campus ID
- A2** - Campus ID (Dynamic)
- A3** - Campus ID (Landscape)
- A4** - Parking Lot ID
- A5** - Building ID (Wall-mounted) *Not shown on plan*
- A6** - Building ID (Freestanding) *Not shown on plan*
- A7** - Building ID (Dimensional Letters) *Not shown on plan*
- A8** - Parking Zone ID (Pole-Mounted) *Not shown on plan*

DIRECTIONAL SIGNS

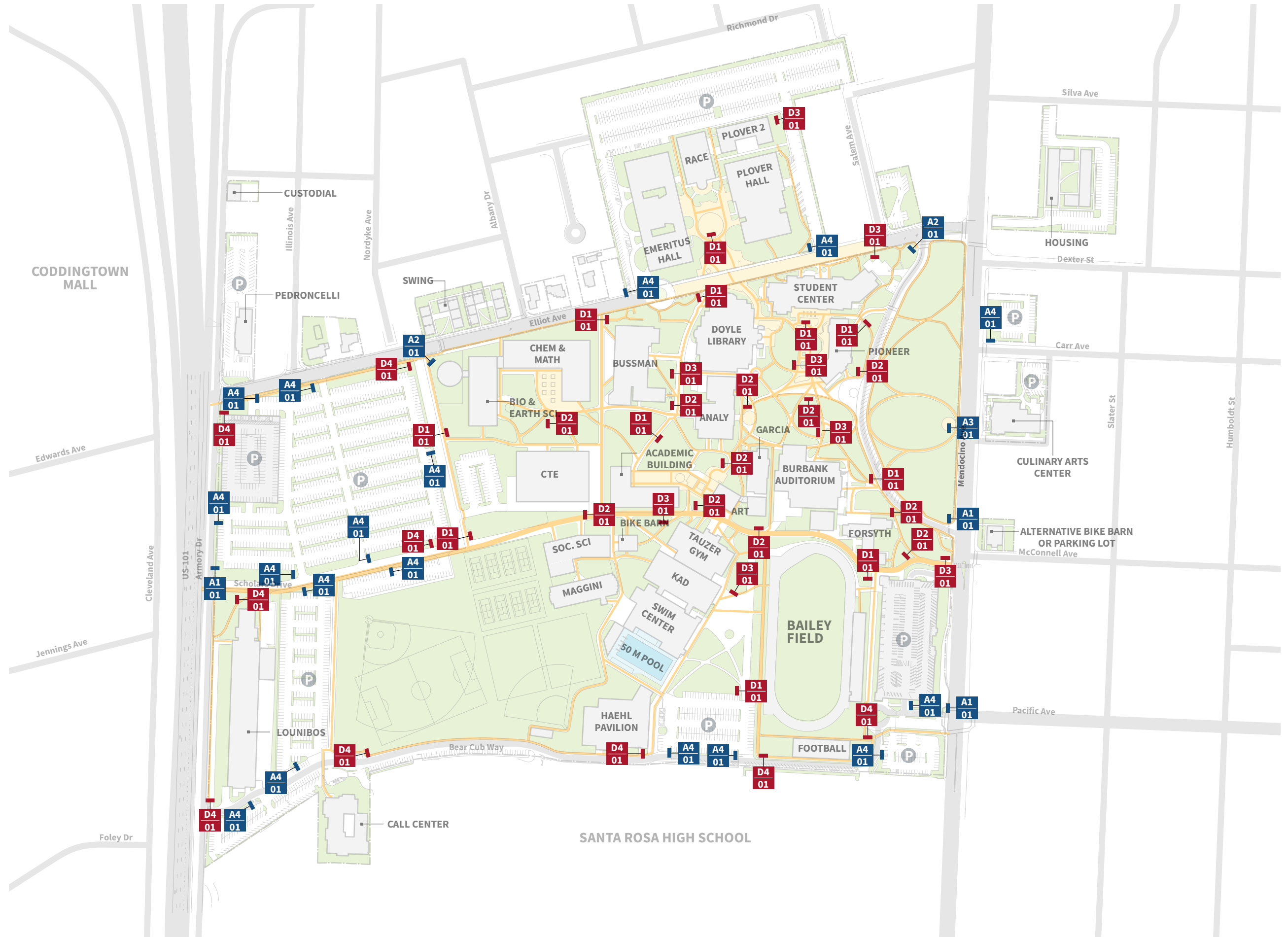
- D1** - Campus Map + Directional
- D2** - Finger Post Directional
- D3** - Campus Map (Pedestal)
- D4** - Vehicular Directional

REGULATORY SIGNS

- R1** - Regulatory Sign *Not shown on plan*
- R2** - Parking Policy / Zone ID Sign *Not shown on plan*
- R3** - Emergency Evacuation Area ID Sign *Not shown on plan*

SYMBOL KEY

A4	Sign Type
01	Sign Number



RECOMMENDATIONS

Measure H Plan

PROJECTS LIST

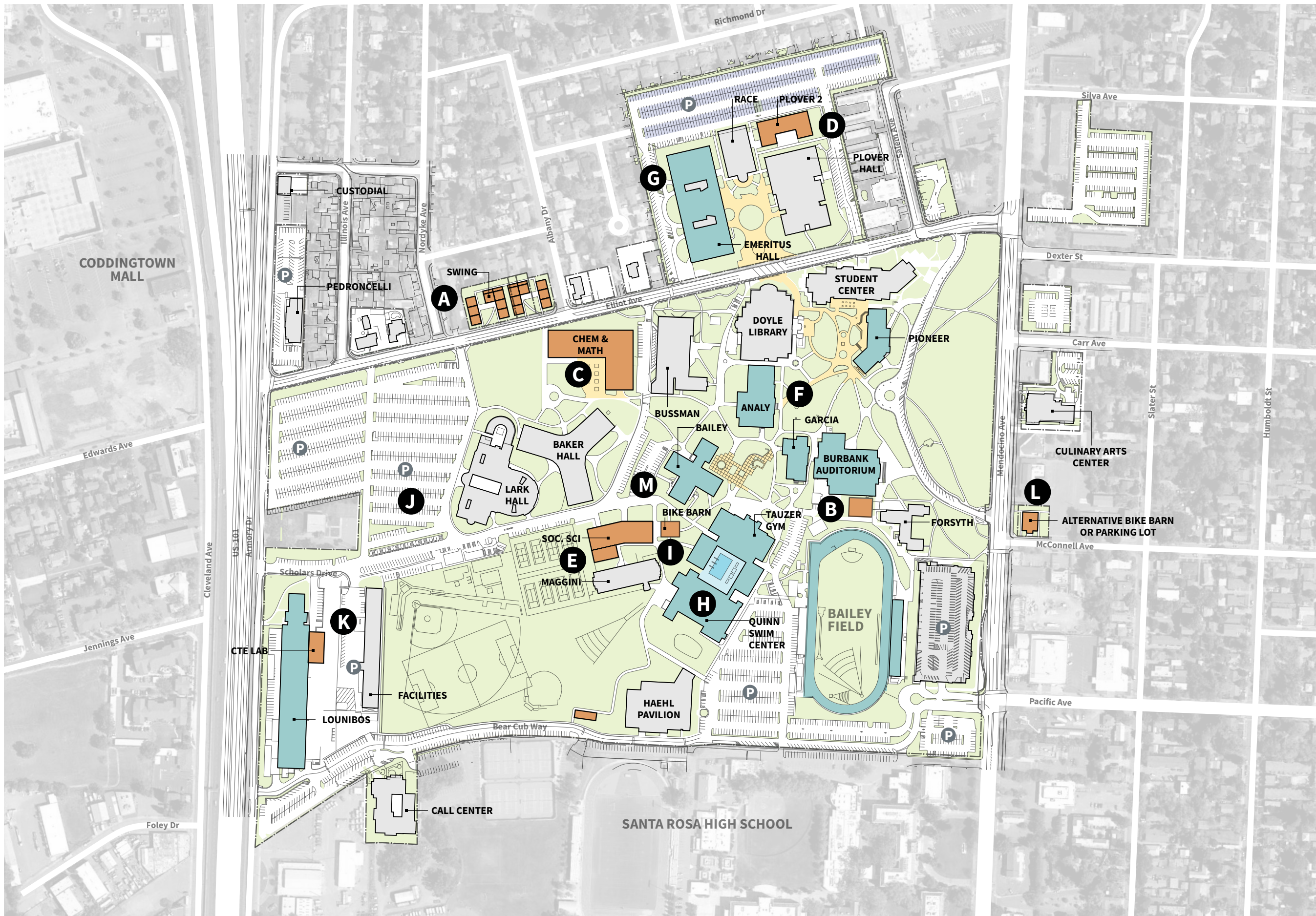
Proj. Concepts

- | | |
|----------|---|
| A | Swing Space <ul style="list-style-type: none"> Construct non-instructional buildings for swing space, which will become (at the end of the program) the permanent home to HR, Foundation and Public Relations |
| B | Burbank Auditorium – Renovation + New Multi-Purpose Learning Lab |
| C | Chemistry, Technology, Engineering, and Math building <ul style="list-style-type: none"> Demolish Shuhaw Hall and Bech Hall |
| D | “Plover 2” - Consolidated Student Service Functions from Analy Village and other locations |
| E | New Social Sciences Building to replace Barnett Hall |
| F | Heritage Rehab <ul style="list-style-type: none"> Renovate and Re-purpose Analy Hall as an administrative or student-centric building. Renovate and Re-purpose Garcia Hall for Art programs Renovate and Re-purpose Pioneer Hall as a “student center” |
| G | Emeritus Renovation/ Modernization |
| H | KAD Facilities <ul style="list-style-type: none"> Re-surface Bailey track + Retrofit Bailey Bleacher Tauzer Gym + Quinn Swim Center Retrofit + Modernization |
| I | New Bike Barn (Specific Location To Be Determined) |
| J | Demolish HR, Foundation, Public Relations, and Analy Village to replace with surface parking |
| K | Renovate Lounibos for equipment upgrades and seismic retrofit, create new Makers Lab addition |
| L | Alternate Bike Barn or Parking Lot Location |
| M | Bailey Hall Seismic Retrofit <ul style="list-style-type: none"> Replace current parking stalls with alternative fuel / electric vehicle parking |

MEASURE H PLAN

- Existing Facility
- Repurposed / Renovated Facility
- New Facility

0 300'



RECOMMENDATIONS

Recommended MEP Campus Systems

Energy and water analysis was done to reach the recommended systems and strategies below, that analysis is included in the MEP report included in the appendix of this document. Refer to that document for detailed information on the data that supports the following MEP recommendations.

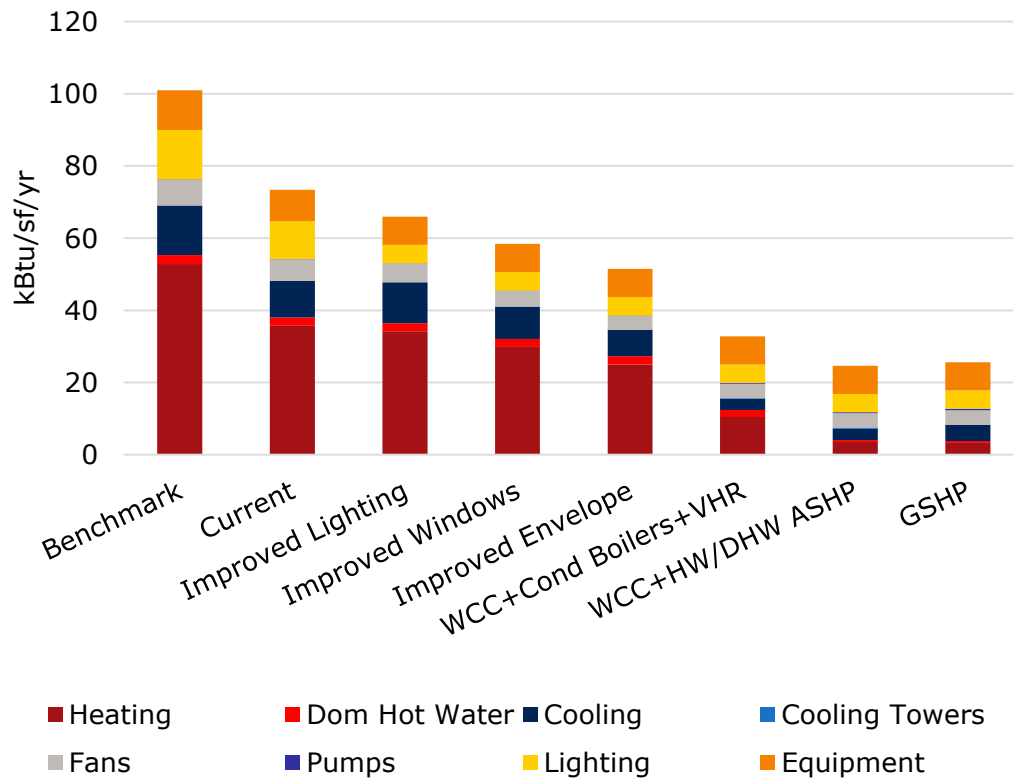
Energy

For all new construction or renovation projects we recommend that the efficiency measures described in this section be implemented. Once sub-metering data is available, specific buildings might be identified as candidates for energy upgrades.

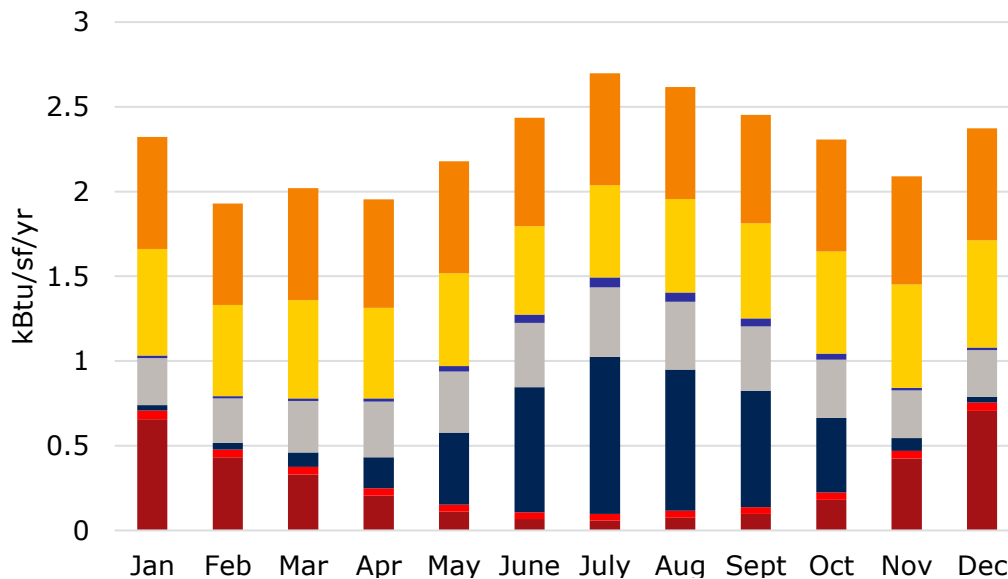
The energy efficiency measures are presented sequentially with the lighting upgrades first (typically the measure with the shortest payback), followed with improved glazing and envelope, more efficient cooling and heating (e.g. water cooled chillers, condensing boilers, ventilation heat recovery, and reduced lab exhaust), and finally with the ground source heat pumps solution.

Based on the estimated current EUI, the efficiency measures are applied to each of the program type and the impact on the resulting weighted average for the campus EUI. With all the measures applied to every building, the campus average EUI would be about 25 kBtu/sf (67% reduction) which would bring the campus within reach of being Net Zero Energy.

ENERGY EFFICIENCY MEASURES IMPACT EUI - SANTA ROSA

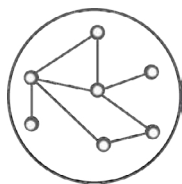


PROJECTED MONTHLY ENERGY PROFILE - SANTA ROSA



RECOMMENDATIONS

Recommended MEP Campus Systems



RECOMMENDED CAMPUS LEVEL ENERGY STRATEGIES

As suggested by the Projected Monthly Energy Profile graph, even after the efficiency measures have been implemented, the campus will still have simultaneous demand for heating and cooling, representing opportunities for energy transfer using a campus central condenser water loop. We estimate that four (4) 1,000 ton condenser water plants would be required to serve the whole campus.

In addition to implementing a central condenser water system, we recommend restoring the cogeneration plant that will allow to generate electricity while using the waste energy to heat the swimming pool.

An alternate to the cogeneration plant would be to install solar thermal panels on the gym building, which would be an attractive solution to achieve carbon neutrality.

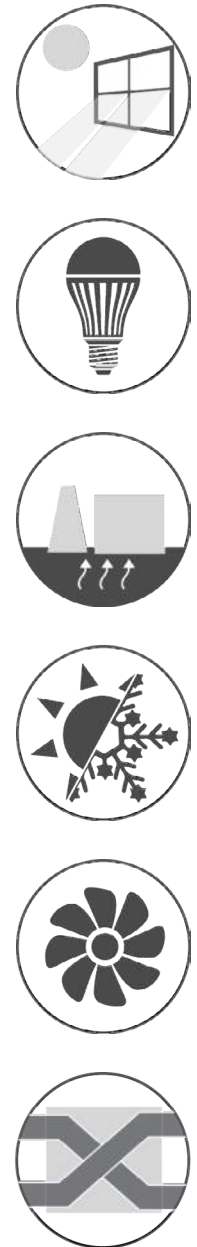
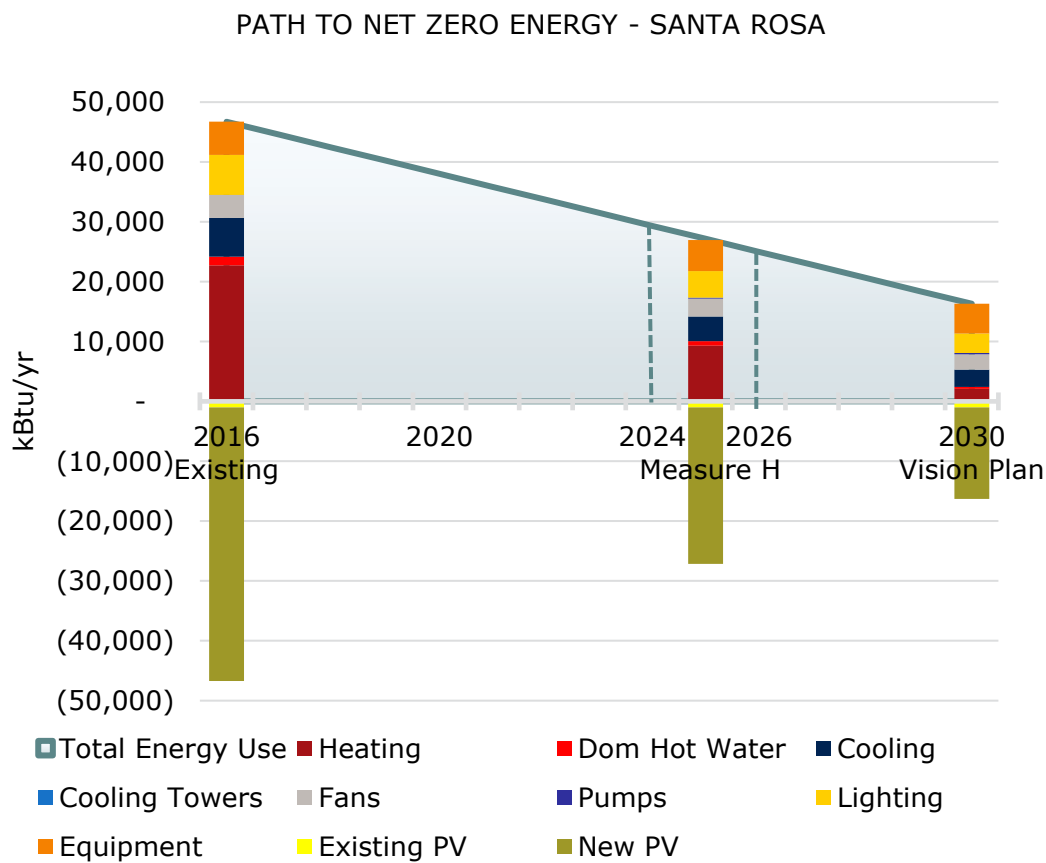
Currently, Santa Rosa has about 214 kW of PV installed on campus. Based on the actual and projected EUI at completion of Measure H and the Vision Plan, assuming that all the efficiency measures have been implemented, the amount of additional PV required to achieve net zero energy operation is indicated in the table. These estimated areas have been calculated assuming a constant campus space square footage and program.

PV AREA REQUIRED

	Area (sf)	Cost (\$)
Current	585,000	29,800,000
Measure H	340,000	17,300,000
Vision Plan	204,000	10,400,000

RECOMMENDED BUILDING LEVEL ENERGY STRATEGIES

The amount of PV required to achieve Net Zero Energy is directly related to the ability to reduce the campus' energy consumption. Each of the building efficiency measures (energy efficient glazing, daylight harvesting, efficient lighting, heat recovery ventilation, laboratory low airflow minimum and ground source heat pumps) are recommended for new constructions and should be evaluated for building retrofits through LCCA analysis.



RECOMMENDATIONS

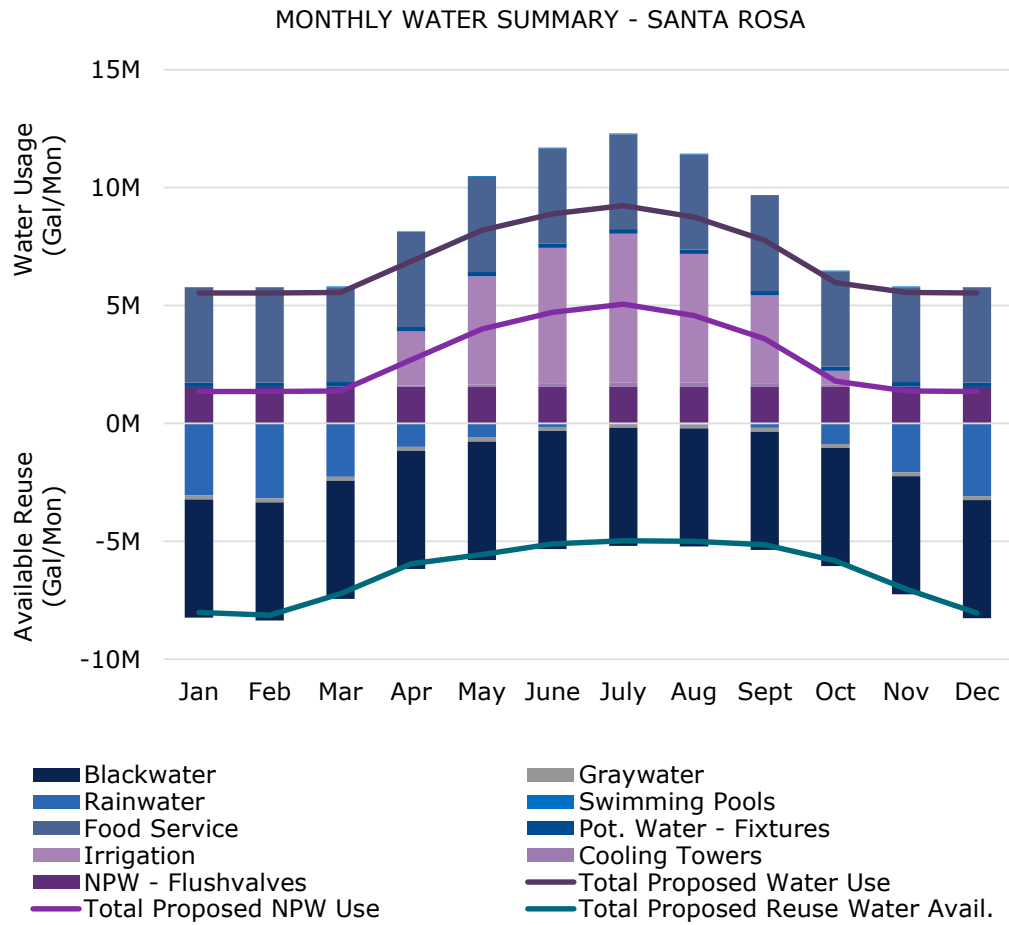
Recommended MEP Campus Systems

Water

Similar to the Existing Monthly Water Use graph in the appendix, the graph below shows the monthly water use of meeting code minimum of CalGreen, by the bar graph. The lines through the graph depict the proposed case of implementing low flow fixtures, drought tolerant landscape and swimming pool covers. These strategies are evaluated in the following section.

There are some key water usage trends depicted in this graph, that show why certain water saving strategies are recommended or not. When reviewing this graph it is important to understand that treated reclaimed water from rainwater, greywater or blackwater can only be reused for non-potable water, indicated in a shade of purple. Treated water can't be reused for any potable water, indicated in a shade of blue.

The Monthly Water Use graph shows that with the proposed case rainwater and greywater treatment would not be able to meet the non-potable water demand (line in graph is above non-potable water use) for the campus in the summer months due to the irrigation load. It also shows that with the proposed case, if blackwater treatment and reuse was implemented the campus' total non-potable water demand would be met, even in the summer months (line in graph is within non-potable water use bars).



RECOMMENDATIONS

Recommended MEP Campus Systems



Recommended Water Strategies

The following strategies are recommended because they offer significant water savings with relatively low to medium cost and because they are critical to achieving the Vision Plan goals.

LOW FLOW PLUMBING FIXTURES

Replacing all the existing fixtures with the efficient low flow plumbing fixtures is outlined in Section 6.16 “Low Flow Plumbing Fixtures”. If low flow fixtures are installed estimated water savings is 40% from LEED and 14% savings from CalGreen. For new buildings the cost difference between the low flow fixtures and CalGreen fixtures is negligible.



An important item to note is that food service water usage has the highest indoor water demand. This water usage is based on process loads for equipment and fixtures. If the water usage was reduced by a significant factor, it would affect the fixture/equipment’s functionality. It is assumed that no water savings will be obtained from food service.



DROUGHT TOLERANT LANDSCAPE

Replacing all existing vegetation and irrigation systems with low water use plants and efficient subsurface irrigation, can have a large impact on water savings. This provides an estimated of 44% water savings from the assumed baseline of medium water use plants with an overhead spray irrigation system.



SWIMMING POOL COVERS

Providing swimming pool covers for all swimming pools can result in 30-50% reduction in pool evaporation. This is a relatively simple water savings measure.



GEOTHERMAL

Geothermal heat exchange technology can greatly reduce or eliminate the need for cooling towers and thus the make-up water demand for the cooling towers. A geothermal system has the potential to reduce the cooling tower water demand by 100%. The Santa Rosa campus already has one geothermal heat exchange system which provides all the heating and cooling for the Bertolini Student Center, and expanding this technology to the rest of the campus is encouraged. Geothermal heat exchange systems are evaluated on the Santa Rosa Campus energy section above.

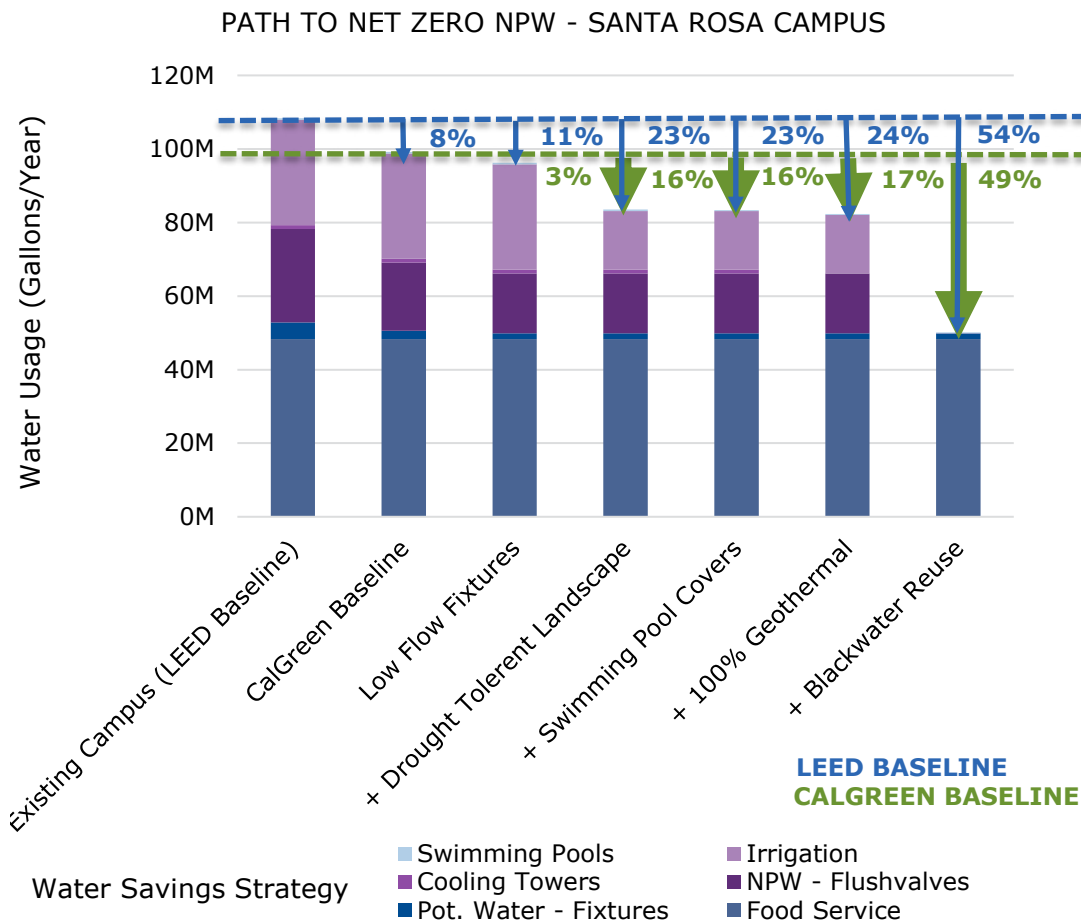
BLACKWATER TREATMENT & REUSE

Providing a central modular blackwater treatment system for the campus is recommended. The treatment system will be in a central location, possibly in the same location as the modular condenser water central plant discussed in the energy section, which can expanded out to the new buildings and areas of the campus as they are remodeled. Central water treatment plants are more cost effective, offer ease of maintenance, and operate better due to balancing effect of fluctuating loads (diversity) within the campus.

For the Santa Rosa campus, it is estimated that there is an adequate amount of blackwater available on campus to meet the campus indoor and outdoor non-potable demand. Implementing a blackwater treatment system allows the campus to reach net-zero non-potable water use.

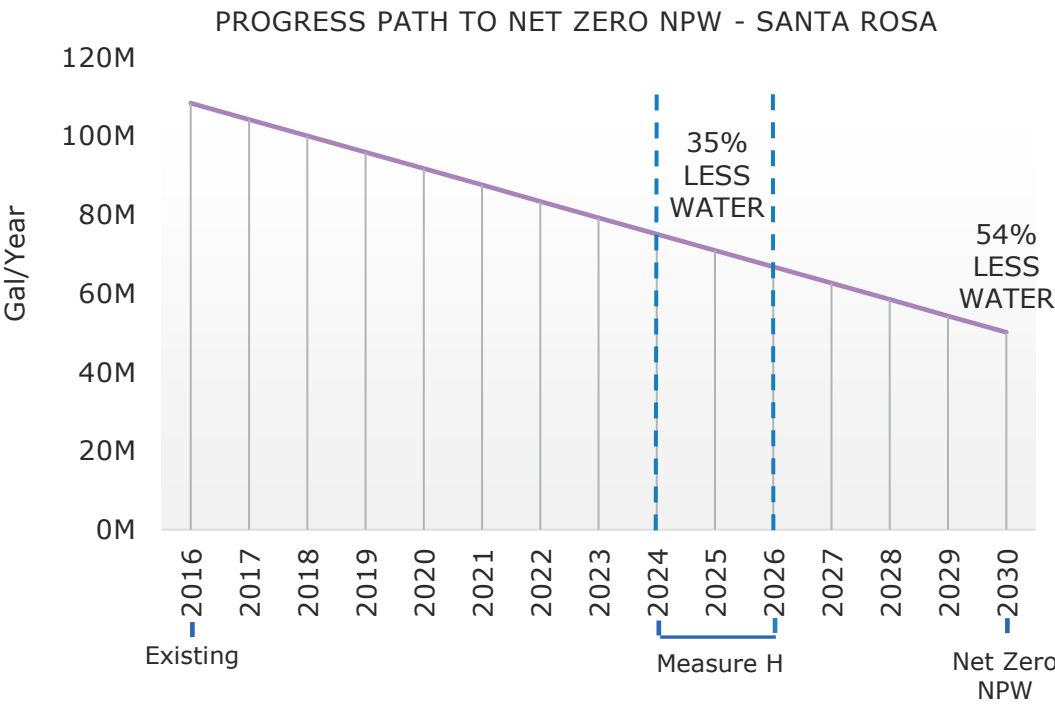
Path to 2030

By incrementally implementing the campus water saving measures within the “Reuse Proposed Case”, the campus can achieve net zero-non-potable water. The Path to Net Zero graph shows the water savings achieved.



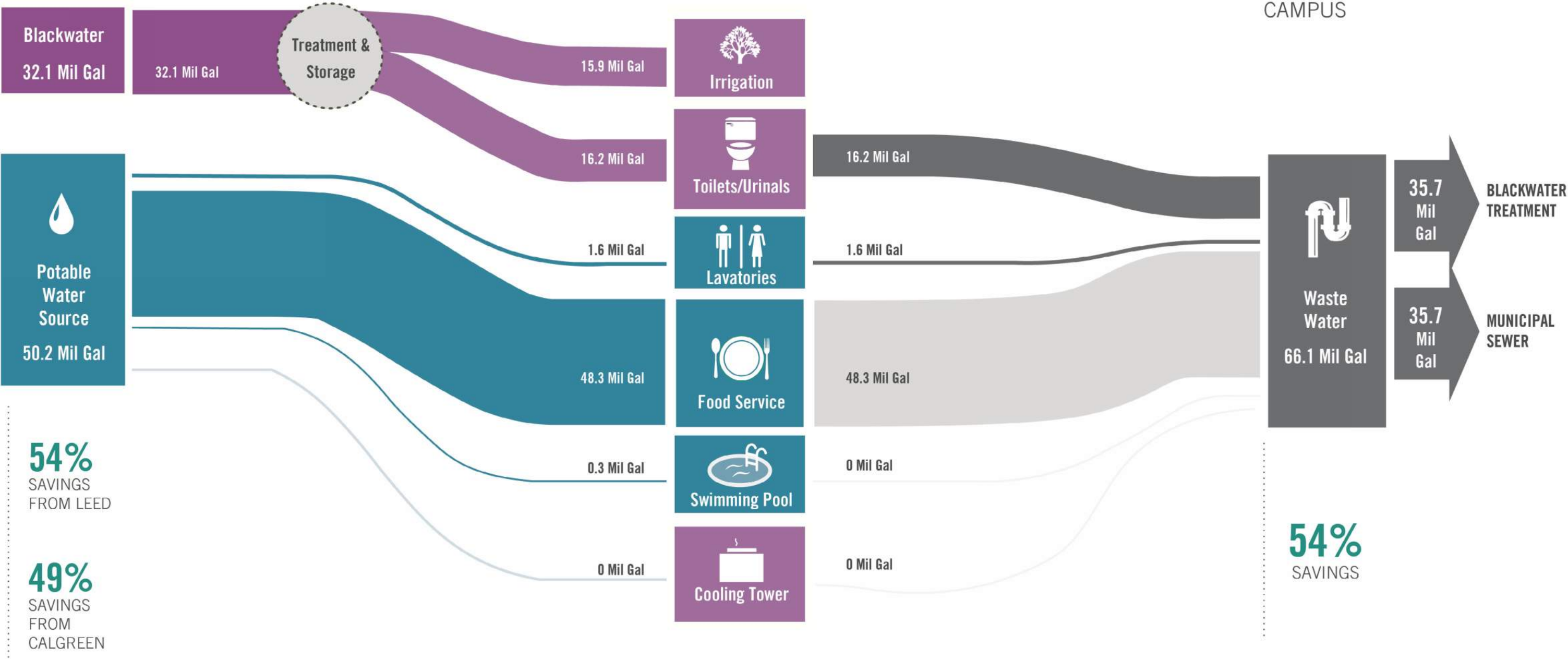
RECOMMENDATIONS

Recommended MEP Campus Systems



The Progress Path to Net Zero Non-Potable Water graph depicts the current campus water usage, along with the net-zero non-potable water goal in 2030. Measure H is tracking for years 2024 to 2026 and the percent water savings indicated should be achieved by Measure H, in order to be on track to reach the 2030 goal of net-zero non-potable water.

SANTA ROSA CAMPUS



REUSE PROPOSED CASE:
LOW FLOW FIXTURES, DROUGHT TOLERANT LANDSCAPE,
SWIMMING POOL COVERS, GEOTHERMAL & BLACKWATER REUSE

RECOMMENDATIONS

Recommended MEP Campus Systems

Proposed MEP Upgrades

Based on the campus energy efficiency measures and the water strategies presented above, Figure 18 indicates the potential locations for the first phase (Measure H) of the modular central plant, the black water plant, geothermal field, and the co-generation plant for the pool complex. Figure 19 indicates the potential locations for the final phase (Vision Plan) of the modular central plant, the black water plant, geothermal field, and the solar thermal array for the pool complex. For the Vision Plan the co-generation plant may be replaced by solar thermal array to achieve carb on neutrality, however other options can be the use of a bio-gas powered co-generation plant or the use photo-voltaic array (PV) to generate hot water via a heat pump system using the condenser water loop/plant

MEASURE H RECOMMENDATIONS

- hhv Central Plant
- Black Water Plant
- Geothermal Field
- Cogeneration Plant



VISION PLAN RECOMMENDATIONS

- HVAC Central Plant
- Black Water Plant
- Geothermal Field
- Cogeneration Plant
- Solar Thermal (Alternate)



3.2 Petaluma Campus



PETALUMA CAMPUS

ANALYSIS

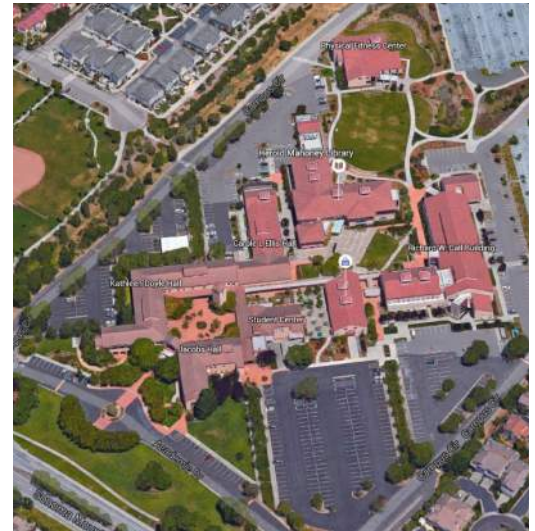
ANALYSIS

Context Map and Land Use Adjacencies

CONTEXT

LOCATION

The SCJCD Petaluma Campus is located approximately two miles north of Downtown Petaluma and 35 miles north of San Francisco. Sixteen miles south of the SRJC Santa Rosa Campus, the Petaluma Campus ably serves the south region of Sonoma County.



Petaluma Campus
Google Earth

LAND USE ADJACENCIES

RESIDENTIAL

Most of the developed land adjacent to the Petaluma campus is Residential; ranging from low density to high density; from mobile homes to single family homes, to multi-family housing.

COMMERCIAL

The Leghorn Marketplace is west of Leghorn Park along Sonoma Mountain Parkway. It provides a mix of retail, food and beverage, and service offerings to the neighborhood.

INSTITUTIONAL

To support the mostly residential neighborhood, there are many local schools within the vicinity. Sonoma Mountain Elementary School, Kenilworth Junior High School and Meadow School are all short distances from the Petaluma Campus.

OPEN SPACE

There is a 300-foot wide swath of open space that runs the span of the north edge of campus. Classified as an Urban Separator on the Petaluma General Plan, and an Open Space and Park Zone on the City of Petaluma Zoning Map, it is to be maintained as open space for the protection of public health and safety.

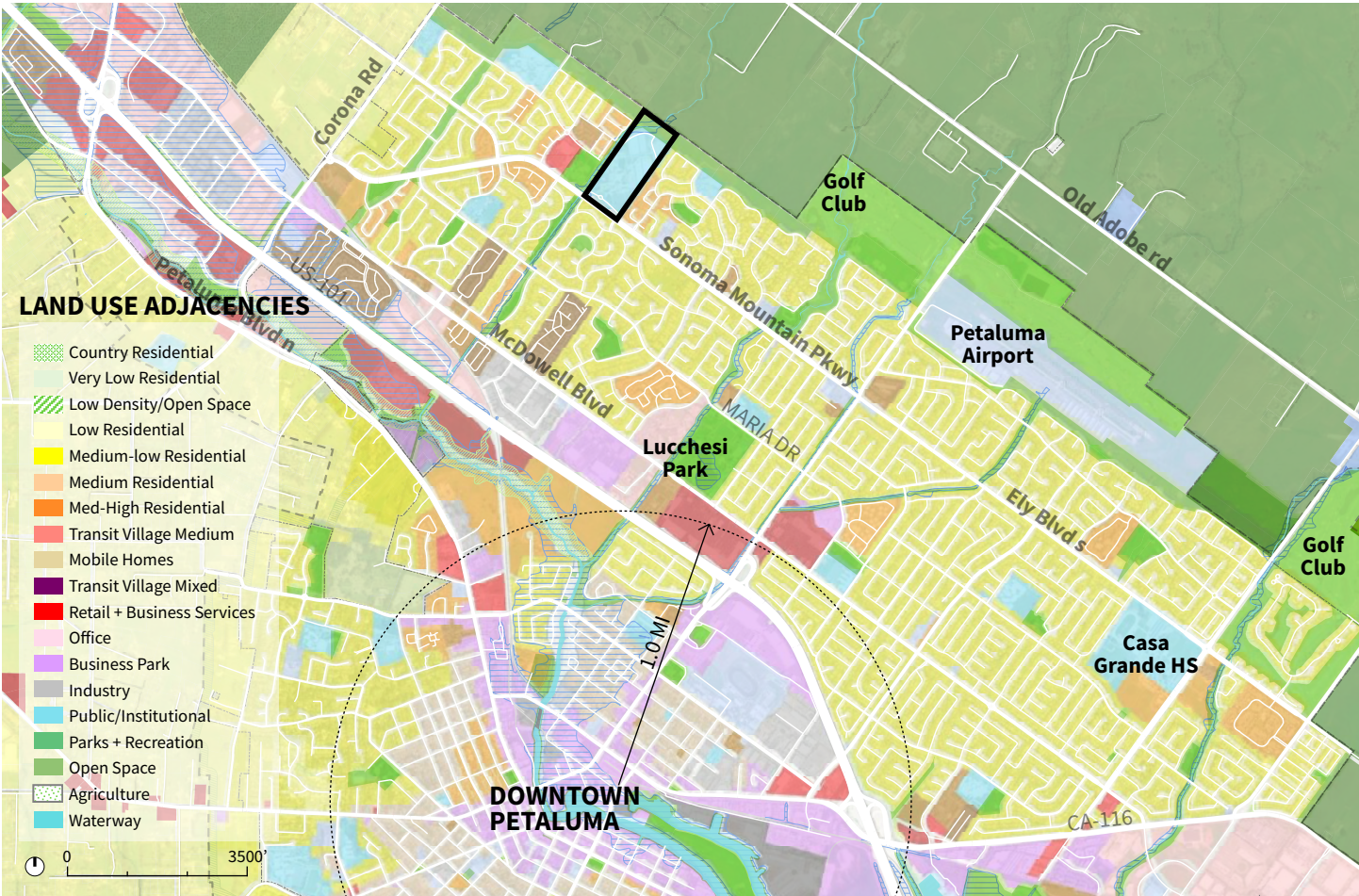
Leghorns Park is a 9.37-acre community park to the east of Petaluma Campus along Sonoma Mountain Parkway. It features walking paths that connect to the Urban Separator and the Petaluma Campus.

WATERWAYS

Capri Creek runs alongside the western boundary of the Petaluma Campus. FEMA flood maps show minimal flooding risk to campus.

PUBLIC EASEMENTS

Within the designated open space in the north end of campus, SRJC has granted the City of Petaluma a 30-foot wide public water easement . The facilities may include such underground water lines and all appurtenant facilities to transport potable and recycled water together with the rights to perform any work necessary to maintain such systems. This centerline of said easement is roughly 50 feet north of the Maintenance Compound fence, parallel with the northern boundary. See Easement Dedication for further details.



ANALYSIS

Campus Access



Petaluma Campus
Photo By: SCJCD

ROAD NETWORK

Located on the northeast side of Sonoma Mountain Parkway, the Petaluma Campus is easily accessed both locally and regionally. East Washington Street and the Old Redwood Highway, both via Sonoma Mountain Parkway, provide access to and from Highway 101.

VEHICULAR ACCESS

Vehicular access to campus is via the intersections of Sonoma Mountain Parkway and Campus Circle (east and west). Both intersections are signalized, though most traffic enters through Campus Circle East. This creates congestion problems and some pedestrian conflicts at the intersection with cars stacking at the signal to exit and enter. No ongoing safety concern was shown in collision records.

TRANSIT ACCESS

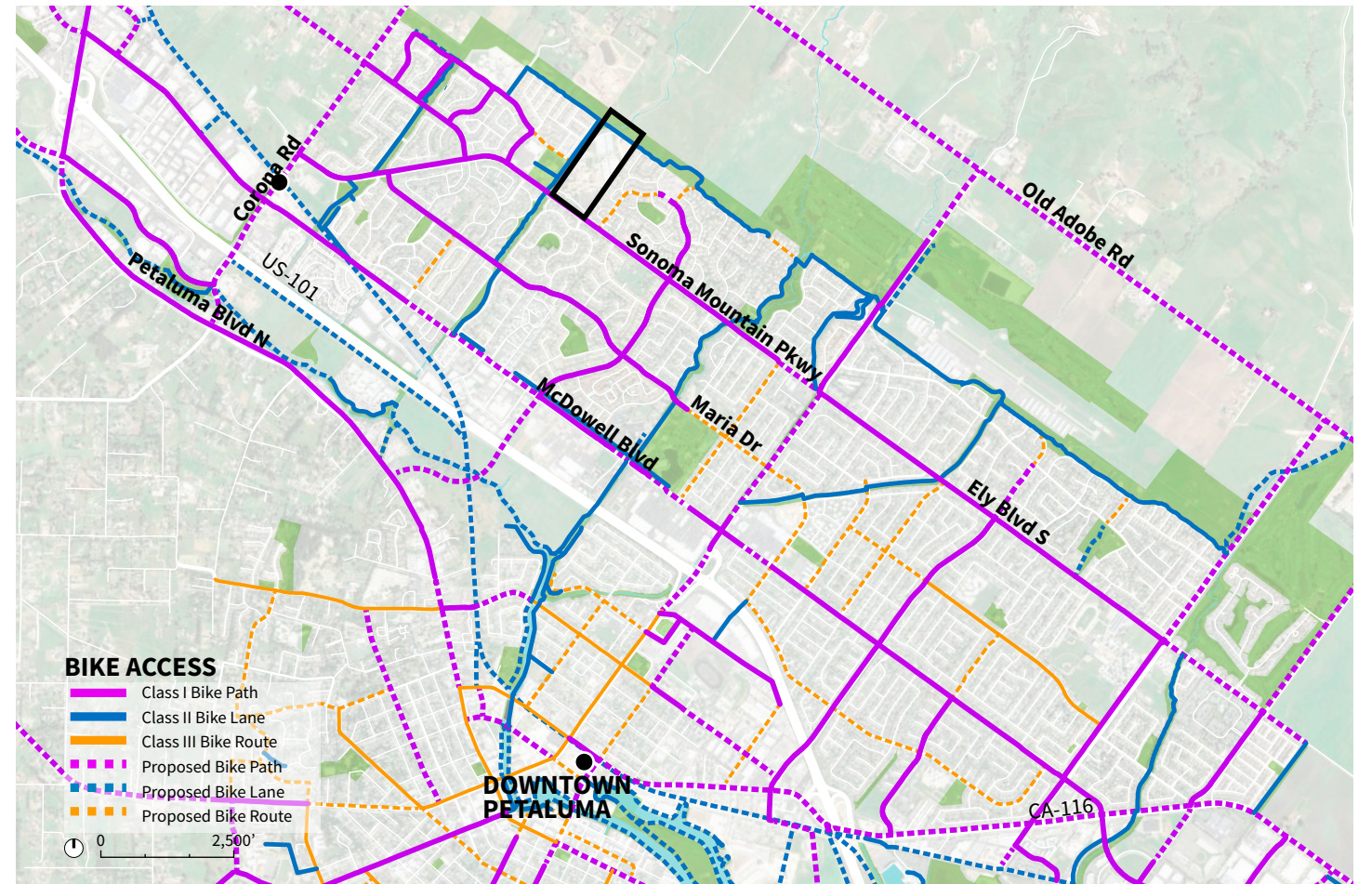
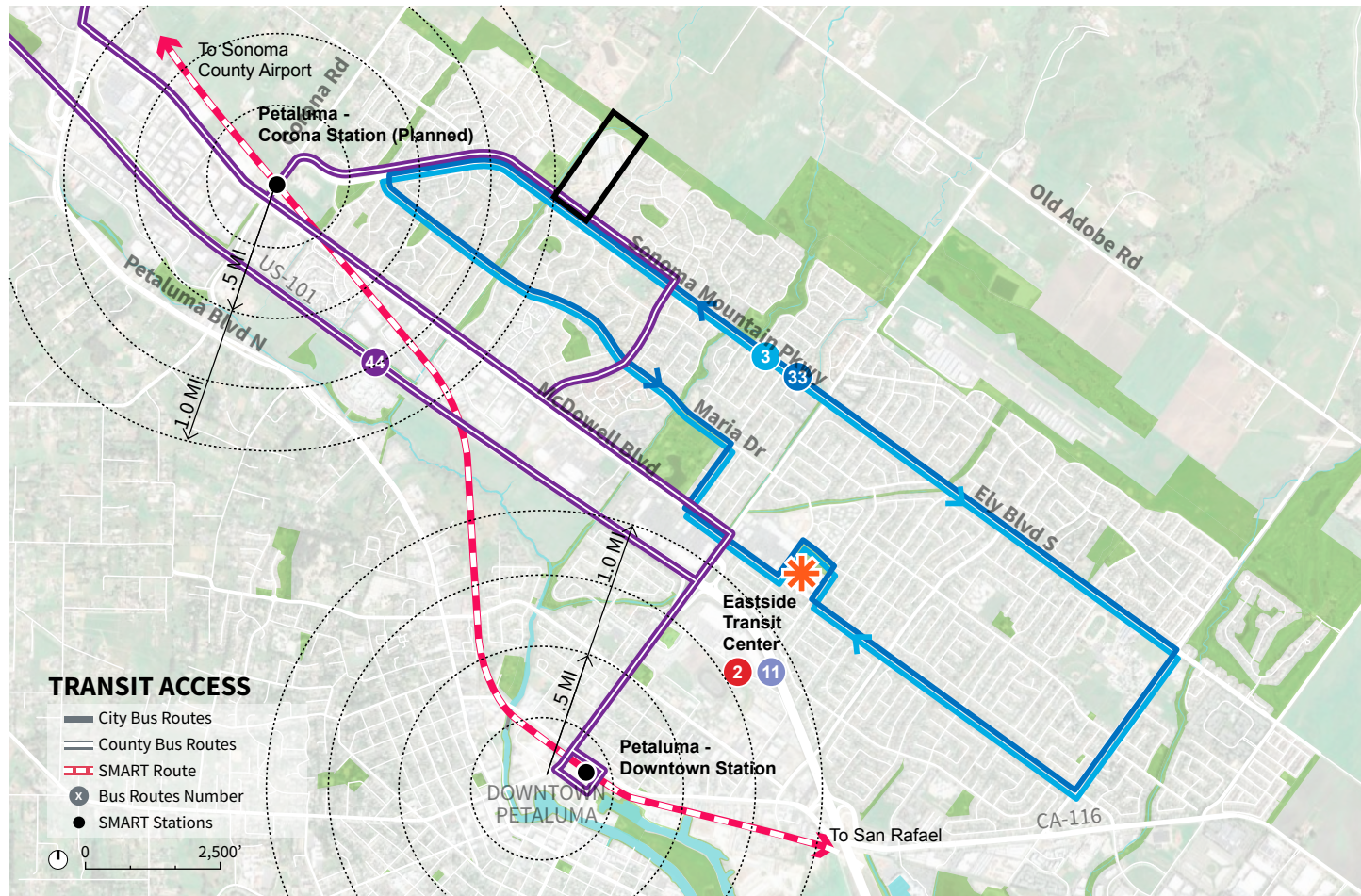
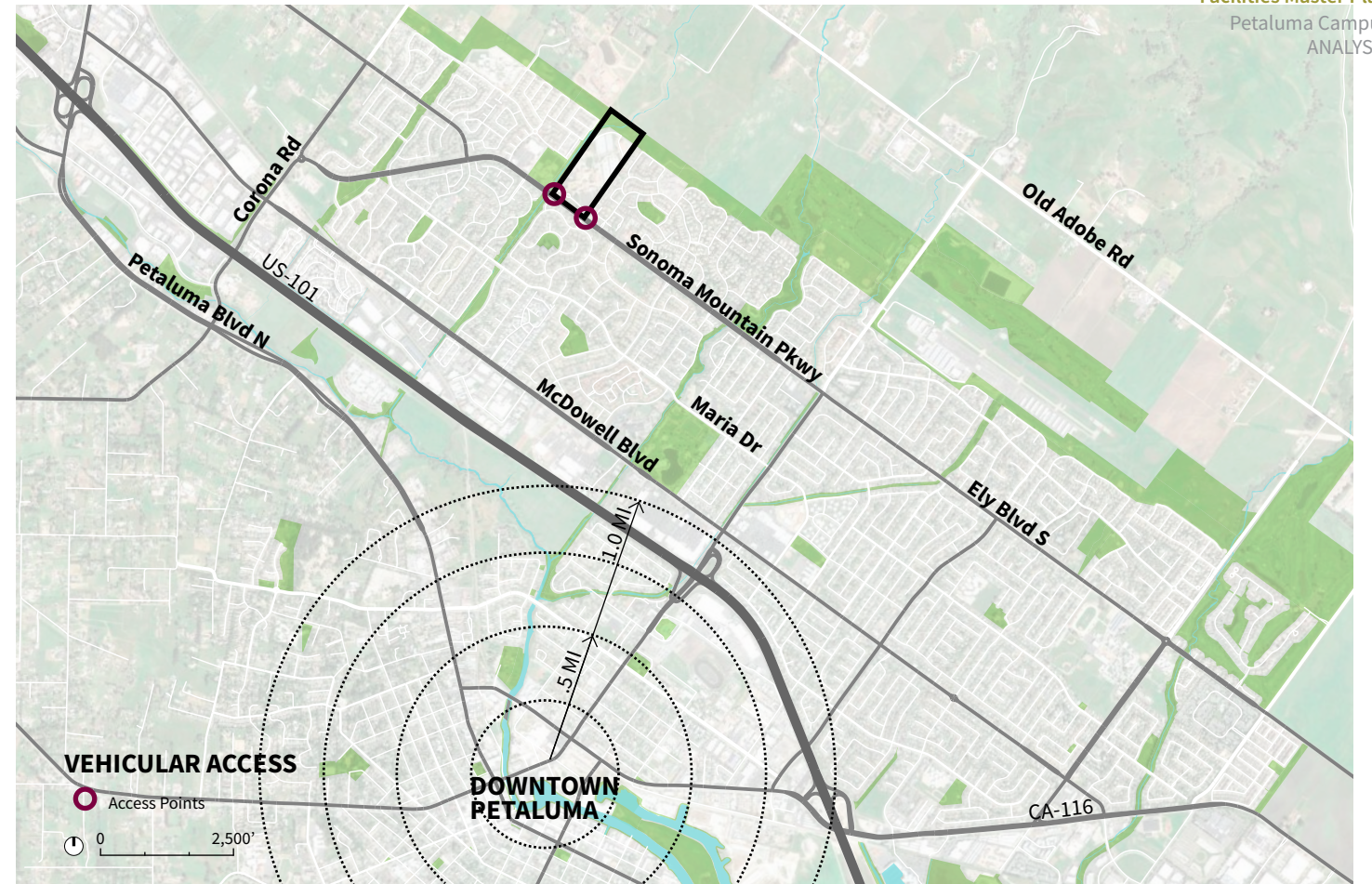
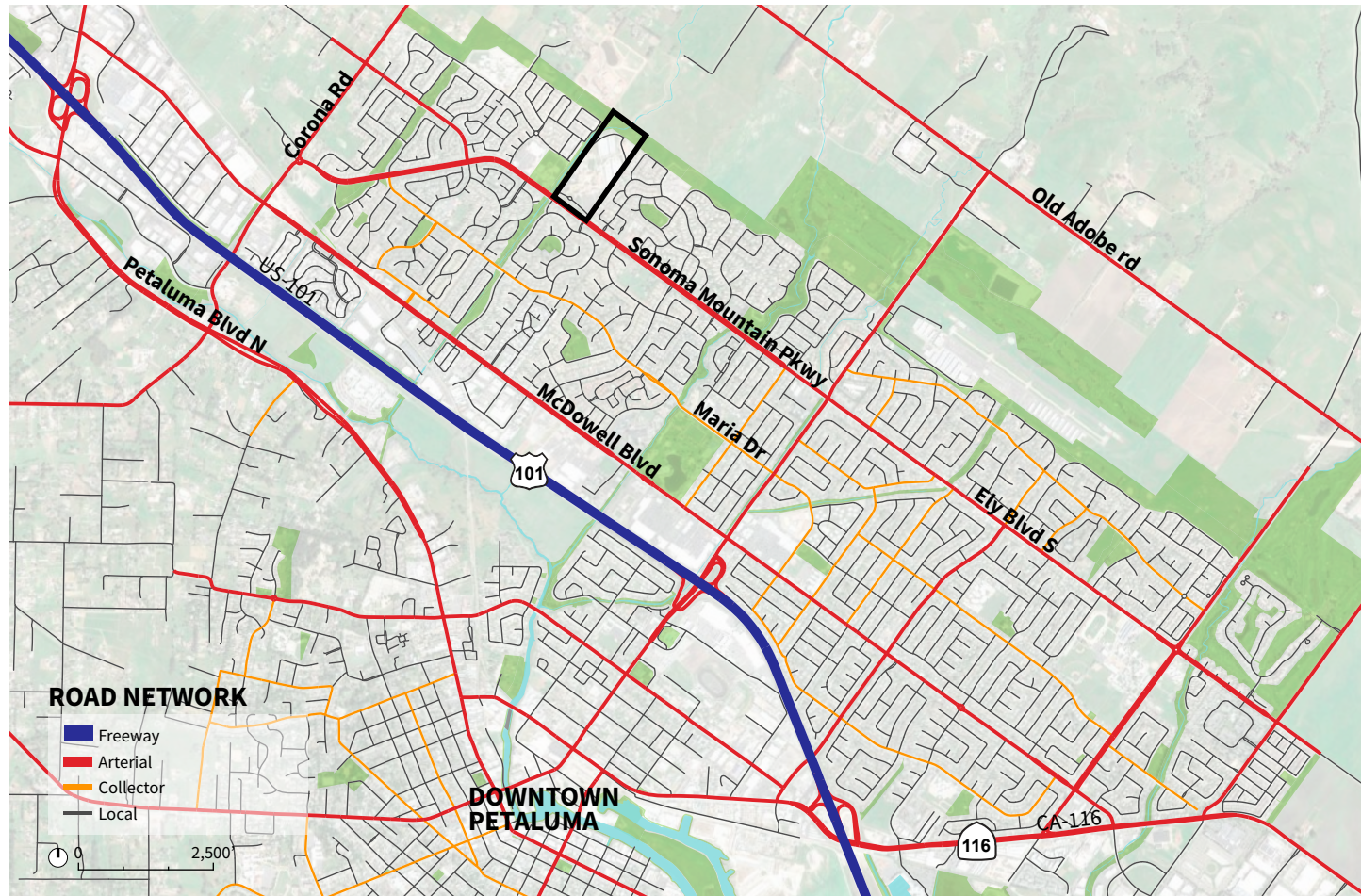
Currently, the Petaluma Campus is served by Petaluma Transit Routes 3 and 33, Sonoma County Transit Route 44, and Golden Gate Transit Route 76. Petaluma Transit Routes 3 and 33 serve East Petaluma, connecting at the Eastside Transit Center with Routes 2 and 11. Sonoma County Transit Route 44 serves Santa Rosa, Rohnert Park, Sonoma State University, and Petaluma, connecting to Routes 40 and 48 in Downtown Petaluma, extending east to Sonoma and north to Cotati, Rohnert Park and Santa Rosa respectively. Golden Gate Transit Route 76 provides weekday commute service between Petaluma and San Francisco.

The campus is served by three transit stops, all on Sonoma Mountain Parkway and all off-line stops. There exists one westbound stop west of Campus Circle (West), one eastbound stop east of Campus Circle (West), and another eastbound stop east of Campus Circle (East). Facilities at the transit stops are adequate with the exception of the stop east of Campus Circle (East), which does not have a bench. Crosswalks at the intersections of Sonoma Mountain Parkway/Campus Circle (East) and Sonoma Mountain Parkway/Campus Circle (West) provide safe access between the transit stops and campus.

Additionally, the Sonoma-Marín Area Rail Transit (SMART), a passenger rail service and bicycle-pedestrian pathway project, is currently under construction, with the first phase to open in late 2016. The first phase of SMART will serve a 70-mile corridor from northern Santa Rosa to Downtown San Rafael, eventually extending north to Cloverdale and south to Larkspur Landing. The Petaluma-Downtown Station is two miles southeast of the Petaluma campus, and the planned Petaluma-Corona Station will be one mile west of campus. Sonoma County Transit Route 44 will connect both of these SMART Stations to campus.

BIKE ACCESS

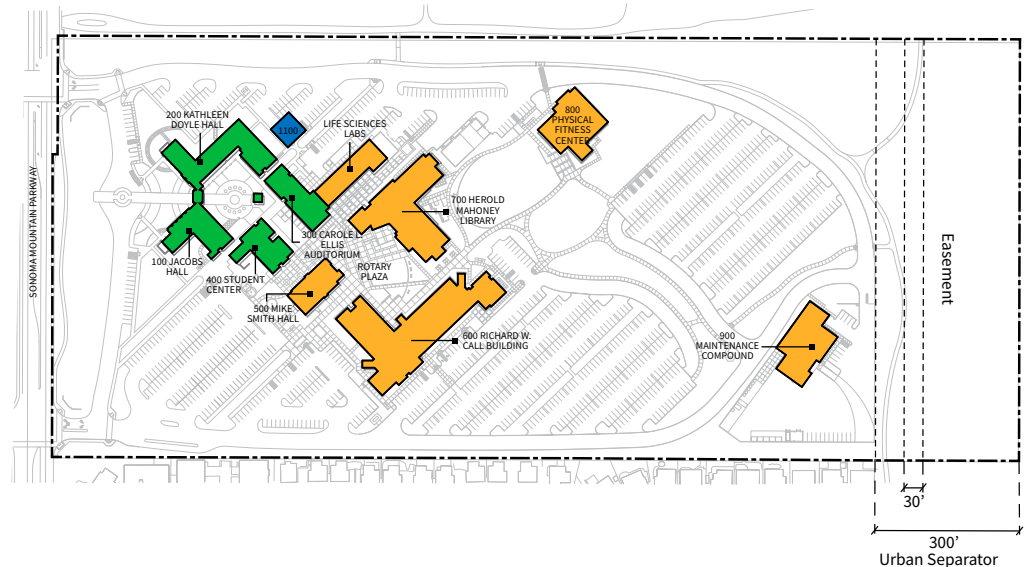
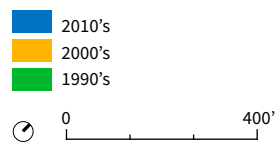
A comprehensive bicycle system of existing and proposed routes in the City of Petaluma connect the campus to Downtown Petaluma, the city at large, and the greater Sonoma County. Main bike routes that provide access to campus are along Sonoma Mountain Parkway, Old Redwood Highway, and East Washington Street.



ANALYSIS

Existing Campus and Campus Evolution

CAMPUS EVOLUTION



Campus Evolution

SITE HISTORY

Though classes have been offered by SRJC in Petaluma since 1964, the current site was not acquired until two decades later. The 40.2-acre site in East Petaluma was purchased by the Board of Trustees in 1985, and the first phase of construction was completed by 1995.

1990's FACILITIES

The initial phase of construction on the Petaluma Campus consisted of John M. Jacobs Hall (Building 100), Kathleen Doyle Hall (Building 200), the Ellis Auditorium (Building 300), the Student Center (Building 400), and the clock tower. These facilities opened in 1994.

2000's FACILITIES

Phase 2 of campus construction consisted of Facilities Operations (Building 900), Central Plant Phase 1 (Building 1200), Mike Smith Bookstore (Building 500), Richard W. Call Building (600), Harold Mahoney Library (Building 700), the Physical Fitness Center (Building 800), and the Life Science / Arts Lab Wing (Building 300 Expansion). These facilities opened between 2007 and 2008.

2010's FACILITIES

The newest instructional facility, Capri Creek, a modular classroom north of Doyle Hall, was added to campus in 2011. Phase 2 of the Central Plan was built in 2014.

Existing Campus

RICHARD W. CALL BUILDING
(BUILDING 600)

With 56,000 square feet and named for the current President of the Board of Trustees, Richard W. Call, this complex serves as a faculty office building and administrative center with additional space allocated for 18 classrooms and laboratories supporting a spectrum of educational disciplines. The building features both wired and wireless computer labs, administrative offices, and the Student Health Services and Student Affairs offices.

KATHLEEN DOYLE HALL
(BUILDING 200)

Extensive renovations to Kathleen Doyle Hall significantly expanded Student Services areas, including Counseling and Financial Aid. The second floor features a 3,700 square foot Tutorial and College Skills Center and a Digital Medial Lab with

Note: For more detail on site constraints, refer to Open Space and Public Easements text in Land Use Adjacencies.

adjacent production suites. Remodeled chemistry/physics and physical sciences laboratories are located on the first floor.

CAROLE L. ELLIS AUDITORIUM (BUILDING 300)

The Carole L. Ellis Auditorium includes 5,100 square feet of space converted from the former campus library into a spectacular 257-seat lecture hall and cultural venue with extensive technological capabilities, including active distance learning and teleconferencing, cinema, small theater, and musical performance space with superb acoustics. The hall also has a green room, storage, dressing areas, and a ticket office.

JOHN M. JACOBS HALL (BUILDING 100)

Student Services are located in Jacobs Hall, including expanded space for Admissions and Records, Cashiers/Accounting and Assessment, a Career/Transfer Resource Center, the Disability Resources Office, and Work Experience. Jacobs Hall also houses an art studio, general purpose classrooms, and faculty offices.

HEROLD MAHONEY LIBRARY (BUILDING 700)

This magnificent 35,000 square foot building with a capacity of up to 60,000 titles, is located at the heart of the campus and is the centerpiece of the new eastern quadrangle incorporating the latest in information resources, learning environments, and technology. Facing Rotary Plaza is a Reading Room that provides a venue for expanded cultural and civic events that have become a hallmark of the library.

MIKE SMITH HALL/SRJC BOOKSTORE (BUILDING 500)

The 6,000 square foot permanent home for the SRJC Bookstore on the Petaluma Campus was named for former Board Trustee Mike Smith. He was Board Secretary and Chair of the Legislative Committee for part of his tenure on the Board. Students and faculty may easily access the

expanded Bookstore for curricular materials, supplies for the arts programs, and for essential items required by various disciplines.

PETALUMA CAMPUS STUDENT CENTER (BUILDING 400)

The Petaluma Student Center and Courtyard Cafe, formerly called the East Hall, was the former bookstore. Phase III expansion of the Petaluma campus added 2,300 square feet of expanded dining and multipurpose space adjacent to food service areas.

PHYSICAL FITNESS CENTER (BUILDING 800)

This complex includes a spacious gymnasium, a fully equipped state-of-the-art weight room, and locker room facilities for men and women. This 11,000 sq. ft. facility allows an expanded list of health and physical education classes to be offered on the Petaluma Campus.

ART/SCIENCE WING (BUILDING 300 EXPANSION)

This 8,000 square feet addition was added to a Phase I building to house two new Life Science Labs, prep rooms, an Art Studio as well as an outdoor courtyard.

MAINTENANCE COMPOUND (BUILDINGS 900, 1200 + 1300)

The Maintenance Compound consists of Facilities Operations, a 12,000 square foot facility. The Central Plant, Phase 1 and Phase 2 is also located in the Maintenance Compound.

CAPRI CREEK (BUILDING 1100)

Capri Creek is the newest instructional facility on the Petaluma Campus. An 1,800 square foot modular facility, it is a large classroom facility for general instruction.

source: <http://maps.santarosa.edu/petaluma-campus-buildings>

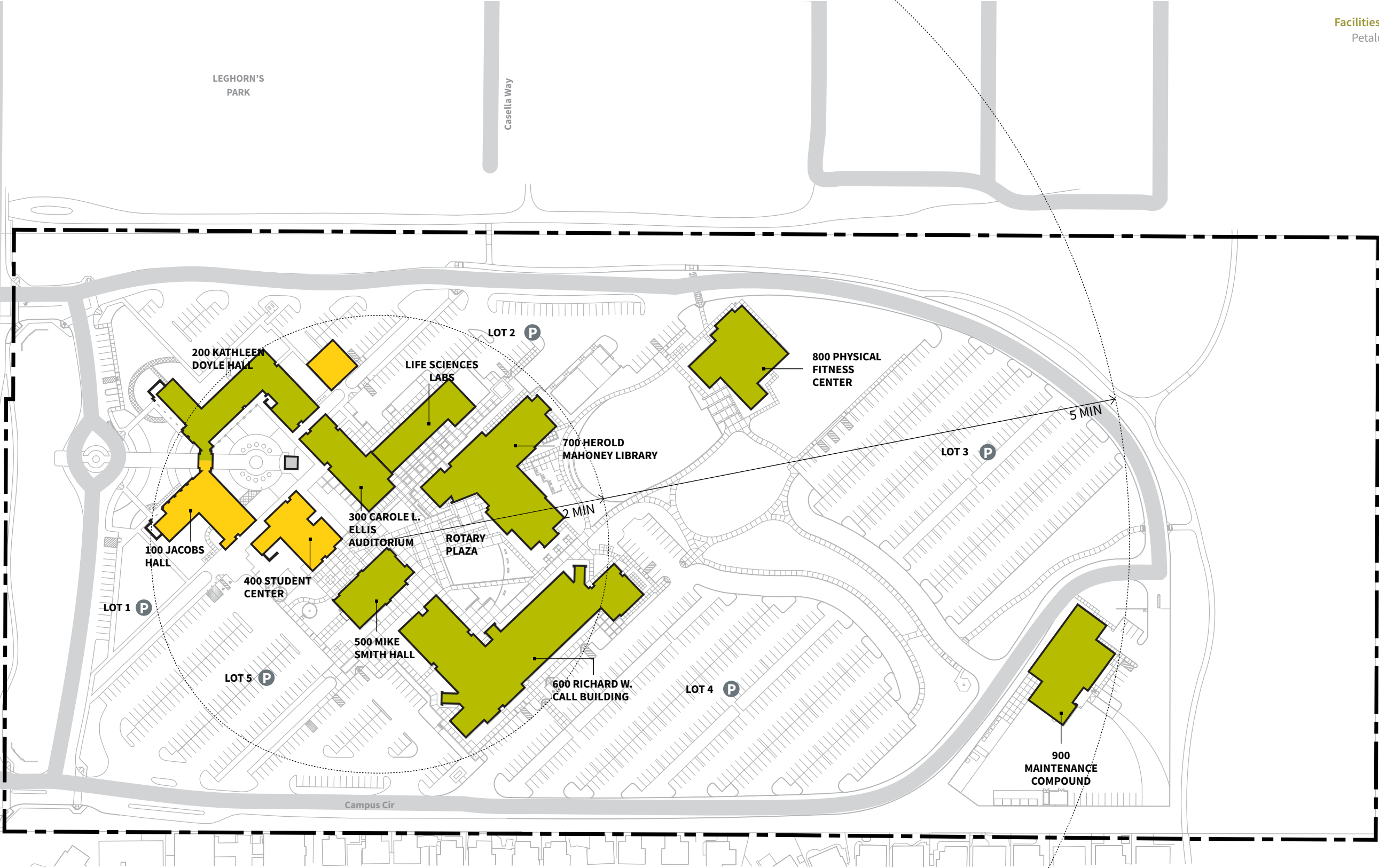
ANALYSIS

Facility Condition Plan



Petaluma Campus
Photo By: Gensler

Bldg #	Building	Architectural	Structural	Fire	Plumbing	Mechanical	Overall
1100	Capri Creek Classroom	3	4		3	3	3
300	Carol L. Ellis Auditorium & E-Wing	4	3	3	3	3	4
400	Student Center	3	4	3	3	3	3
900	Facilities Operations	4	4		3	3	4
700	Harold Mahoney Library	4	4	3	3	3	4
100	Jacobs Hall	3	4	3	3	3	3
200	Kathleen Doyle Hall	4	4	3	3	4	4
300	Life Sciences/Art Hall		4				
500	Mike Smith Bookstore	4	4	3	4	4	4
800	Physical Fitness Center	4	4	4	4	4	4
600	Richard W. Call Hall	4	3	3	3	3	4



FACILITY CONDITION PLAN

- Excellent
- Fair
- Poor
- Remove & Replace
- Not Assessed

0 150'

ANALYSIS

Campus Zoning and Building Use



Petaluma Campus
Photo By: SCJCD

CAMPUS ZONING

The Campus Zoning is relatively simple, with most instructional facilities clustered close together, near the campus gateways. The instructional zone is surrounded by parking on the periphery. The Fitness Center is somewhat removed from the core grouping of instructional facilities, separated from the Library by a campus open space. The Maintenance Compound is appropriately located - on campus, but removed from instructional spaces - at the northeast corner of campus.

BUILDING USE

Buildings are zoned by the following uses: Student Services and Activities; Administration; Instructional; Library and Tutorial; Kinesiology, Athletics and Dance (KAD); and Service and Support. These zoning categories are useful to clarify the function(s) of each facility at a glance.

Most buildings have more than one use. Both Jacobs Hall (Building 100) and Doyle Hall (Building 200) are a mix of Instructional and Student Services and Activities. Ellis Hall (Building 300) is almost exclusively zoned Instructional, with

the exception of the District Police Station on the ground floor. The Call Building (600) is a faculty office building and administrative center with additional space allocated for classrooms and laboratories. The building also features computer labs, administrative offices, and the Student Health Services and Student Affairs offices. In addition to being a modern Learning Resource Center, the Library (Building 700) also has functional instructional space.

Buildings that are single use include the Fitness Center, Building 800 (KAD); Mike Smith Bookstore, Building 500 (Student Services and Activities); Student Center, Building 400 (Student Services and Activities); Capri Creek, Building 1100 (Instructional); and Facilities and Operations, Building 900 (Service and Support).

BUILDING ORGANIZATION

The buildings on the Petaluma Campus are organized along an axial grid, rotated forty-five degrees to Sonoma Mountain Parkway. Buildings are clustered around open space, forming and framing three main quads.



- CAMPUS ZONING & BUILDING USE**
- Student Services + Activities
 - Administration
 - Instructional
 - Student Services / Instructional Mix
 - Athletics + Physical Education
 - Library + Study
 - Service + Support
 - Parking

0 150'

ANALYSIS

Campus Access and Parking



Petaluma Campus
Photo By: SCJCD

CAMPUS CIRCULATION

Campus circulation is via a loop road, Campus Circle, a two-way loop with two intersections at Sonoma Mountain Parkway. Campus Circle provides access to Lots 2, 3, 4, and 5. Additionally, Academic Circle runs parallel to Sonoma Mountain Parkway just north of both campus gateways, providing access to Lot 1.

CAMPUS PARKING

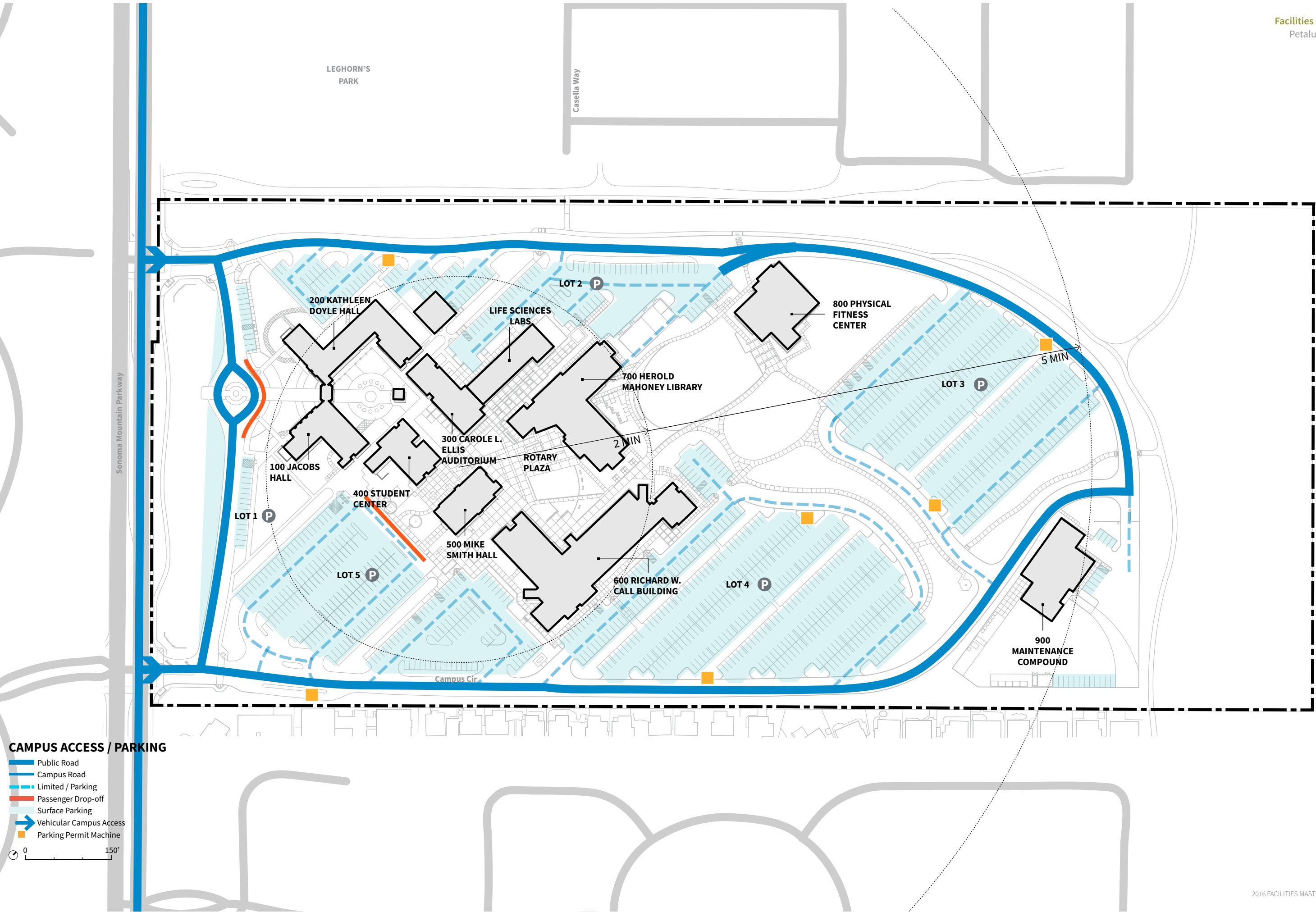
Most parking on campus is requires a valid permit. A limited number of short-term and visitor parking spaces are available in Lots 1 and 5. Metered parking spaces for short-term visitors are also located in Lot 1. Though most students and staff purchase parking permits, which are valid on any SRJC property, many elect to utilize the daily permit. Daily permits are dispensed via machines located in Lots 2, 3, and 4, and on Campus Circle, east of Lot 5, north of the entrance.

OBSERVATIONS

Field observations indicate that campus circulation and wayfinding is functioning acceptably as Campus Circle runs on the perimeter of the parking lots and has few conflict points. However, pedestrians accessing campus from the transit stops on Sonoma Mountain Parkway are forced to cross Academic Drive to access the campus core. Traffic congestion is an issue at the Main Gateway, due to a confluence of multiple traffic flows: in and out of campus via Campus Circle, entering and exiting Academic Drive, entering and exiting Lot 5, and stopping at the parking permit machine on Campus Drive.

Parking Count

Lot Name	Number of Parking Spaces		
	Standard	Accessible	Total
Lot 1	51	3	54
Lot 2	114	8	122
Lot 3	324	5	329
Lot 4	330	12	342
Lot 5	185	20	205
Maintenance	19	1	20
Grand Total	1,023	49	1,072



ANALYSIS

Pedestrian Network and Bike Parking



Petaluma Campus
Photo By: SCJCD

PEDESTRIAN NETWORK

Primary Pedestrian Entries are between Buildings 100 and 200; between Buildings 100 and 400; between Buildings 500 and 600; between Buildings 200 and 300, and the bridge crossing Capri Creek from Leghorns Park.

A majority of the academic buildings exist within a 2-minute walk of each other, and the entire length of the campus can be traversed in a 10-minute walk, creating a very walkable environment. The Pedestrian Network on the Petaluma Campus follows the axial organization of campus, rotated forty-five degrees from Sonoma Mountain Parkway. From the Pedestrian Entries, pathways traverse campus alongside the buildings. There are several covered pathways throughout campus.

OBSERVATIONS

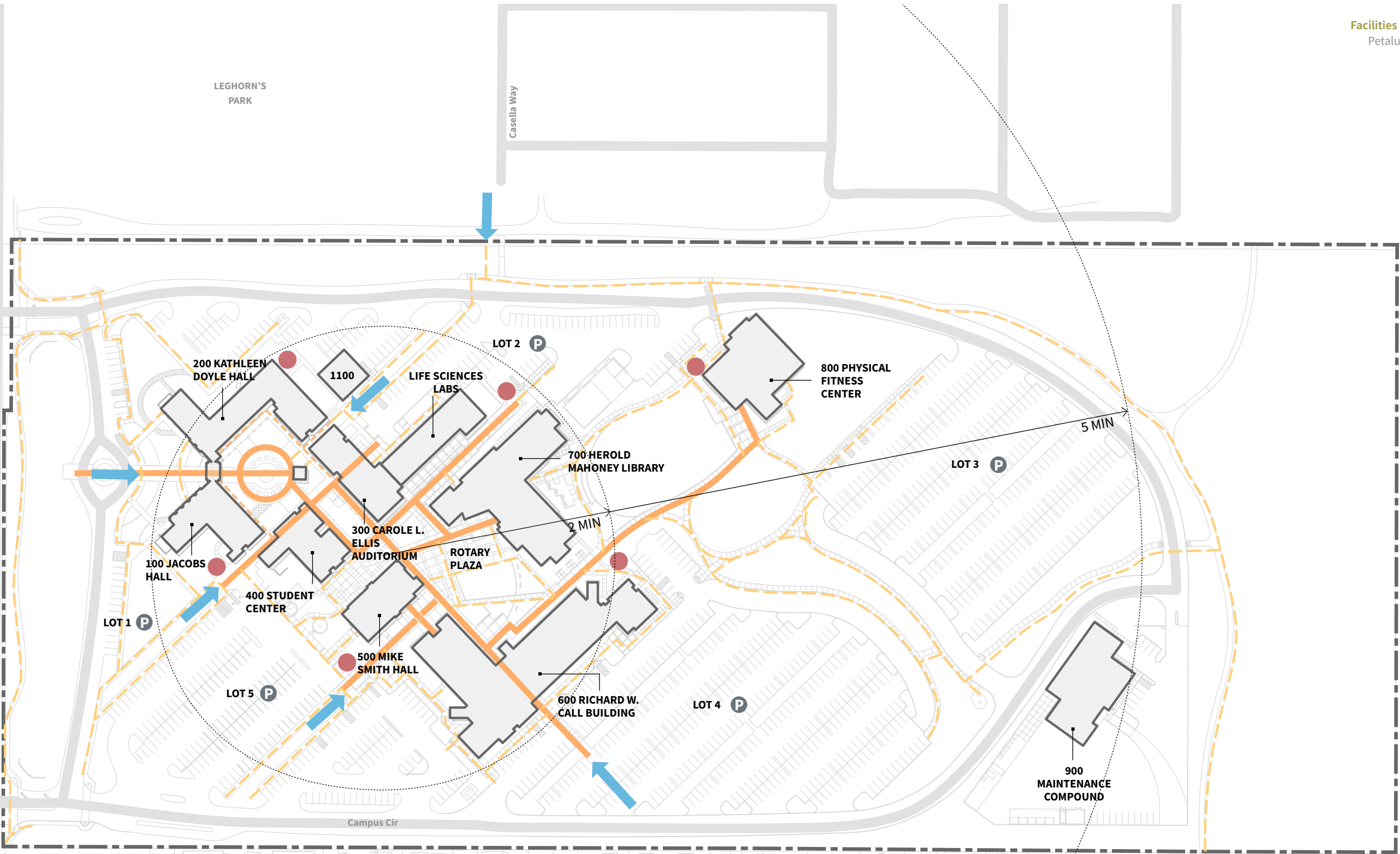
From the siting and building organization, the main entry intended to be between Buildings 100 and 200; however, from a usage perspective, very few students enter campus through this entry. Most students access campus via the entries associated

with the larger parking lots. Shifting the main entry to campus between Buildings 500 and 600 may make more sense for a first-time visitor or student.

BICYCLE PARKING

Bicycles are not currently permitted inside campus quads; however they are allowed as a means of transportation to campus. Six groupings of bicycle racks are provided near most major pedestrian thoroughfares, along the periphery of Buildings 100, 200, 300, 500, 600, and 800. Field observations show that the existing bicycle parking supply is adequate for the demand; however, the planned Corona Road SMART station is located approximately one mile northwest of campus and has the potential to increase the number of students accessing campus via bicycle, especially in light of a planned future US-101 crossing.

Any additional bike parking provided in the future should be in the form of racks, lockers, and bike barns/pavilions and should be placed directly adjacent to bicycle approved routes and within close proximity to academic buildings.

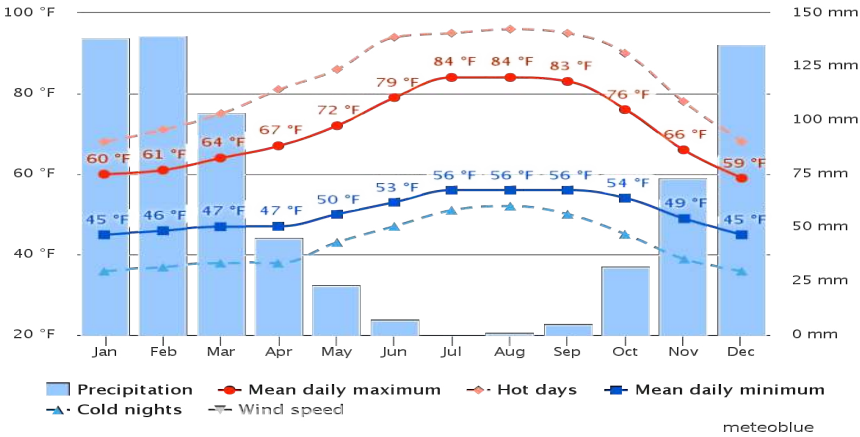


ANALYSIS

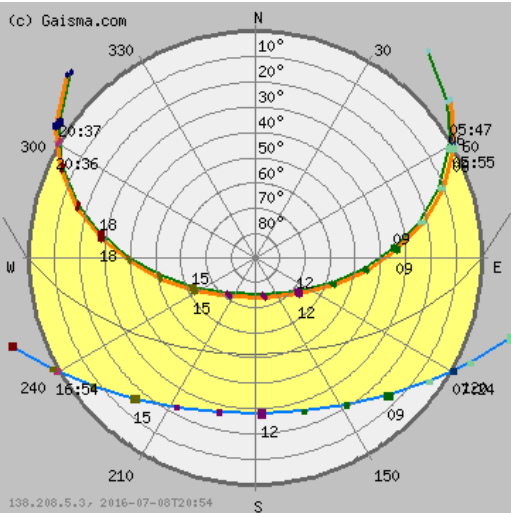
Environmental Conditions

LOCATION: 38.23°N 122.63°W

AVERAGE PRECIPITATION
AND TEMPERATURE



SUN PATH



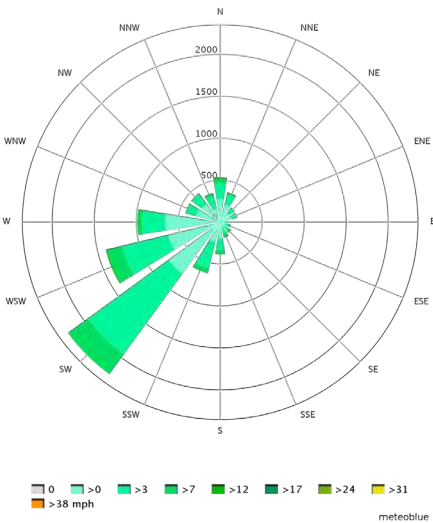
CLIMATE

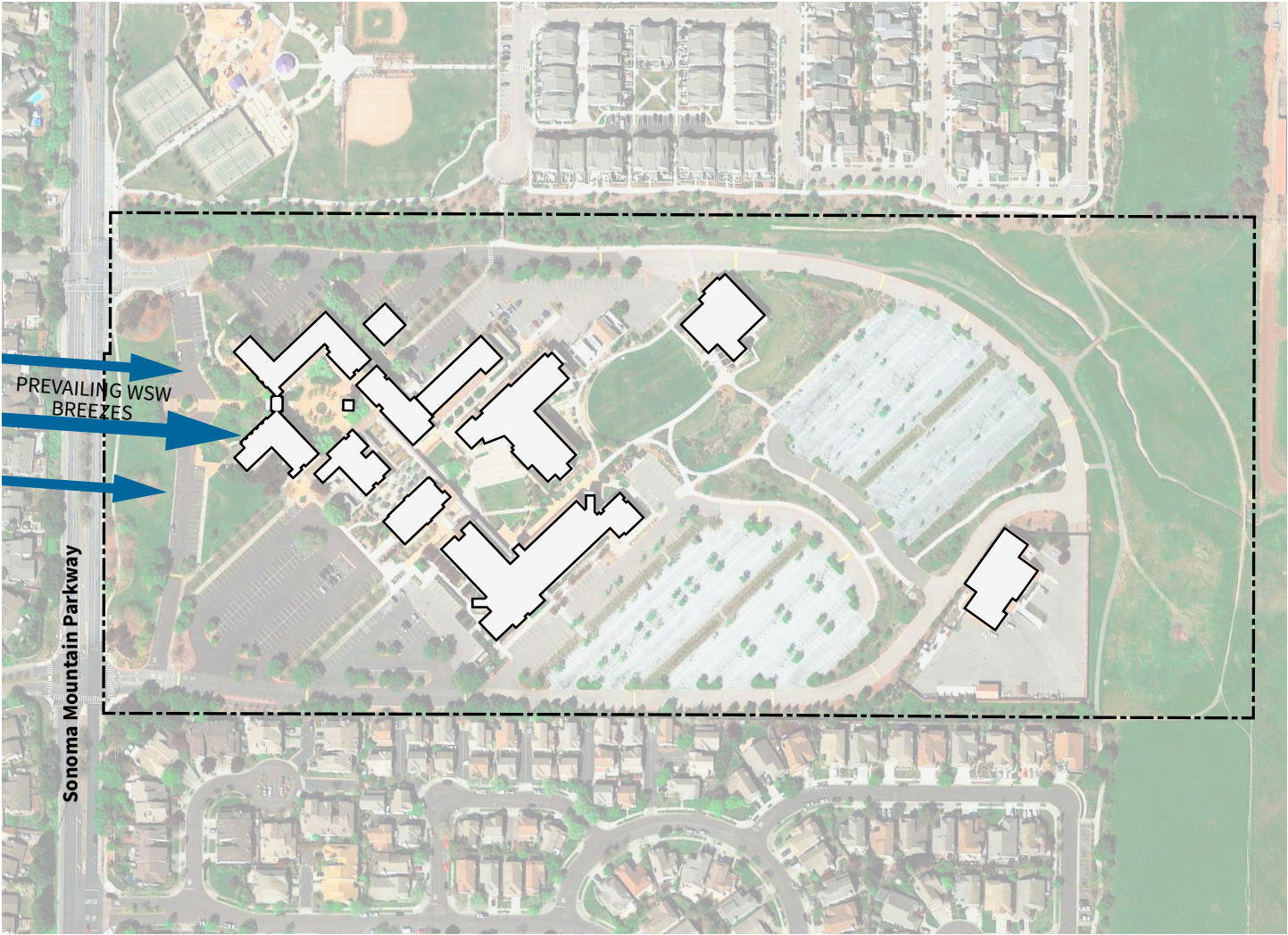
The overall climate of the campus is fairly typical for interior coastal northern California. The annual average temperature is 58F degrees, with approximately 26 inches of rain, mostly falling between November and March. In the spring and fall months, daytime temperatures can reach the 75F to 85F range. The campus receives prevailing breezes from the west-southwest.

SOLAR

Proper solar orientation and sun shading on buildings should be considered to reduce energy consumption; outdoor spaces should be designed to maximize year-round use; and appropriate landscape materials should be used to respect the climatic conditions and minimize water demand.

PETALUMA WIND ROSE





ANALYSIS

Open Space and Landscape

Petaluma Campus
Photo By: Gensler



ARRIVAL

Landscapes affiliated with the intended visitor arrival, drop-off, and “front door” to the campus.



NATURAL

Landscapes that require minimal human management and intervention. These areas contain meadows, streams, and young forests.



COURTYARD

Landscapes that are varied and unique to their architectural setting, and rich in detail and sensory appeal. Courtyards are public living spaces.



CONNECTIVE

Multi-functional spaces that usually occur between buildings and function as pedestrian corridors, passive open space, service areas, and small visual landscapes.



EVENT / RECREATION

Landscapes that experience medium to high levels of use and are typically large continuous spaces that allow for flexibility of activities in its design.



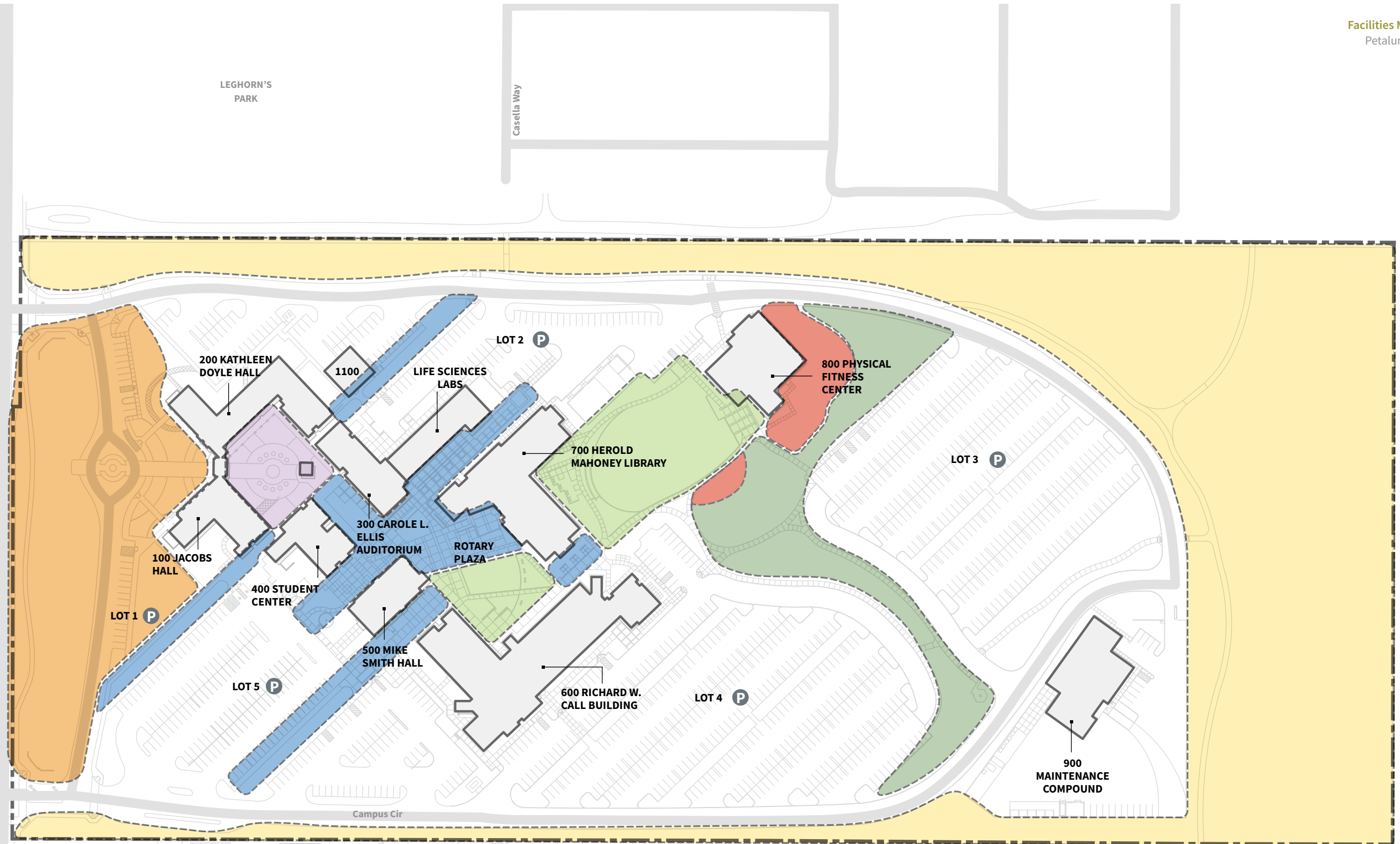
STORM WATER GARDENS

Working landscapes that collect and clean storm water through a deliberate design and plant material palette.



UNIQUE / SPECIAL

Landscapes that serve a specific function or role on the campus and should be designed and maintained accordingly.



OPEN SPACE & LANDSCAPE

- Arrival
- Natural
- Courtyard
- Connective
- Event/Recreation
- Storm Water Gardens
- Unique/Special



ANALYSIS

MEP Campus Systems

Electrical Campus Infrastructure



FEEDER SCHEDULE PLAN

- PHASE 1 CENTRAL PLANT
- PHASE 2 CENTRAL PLANT

**EXISTING
FEEDER RATING**

277/480V	1600A
277/480V	3000A

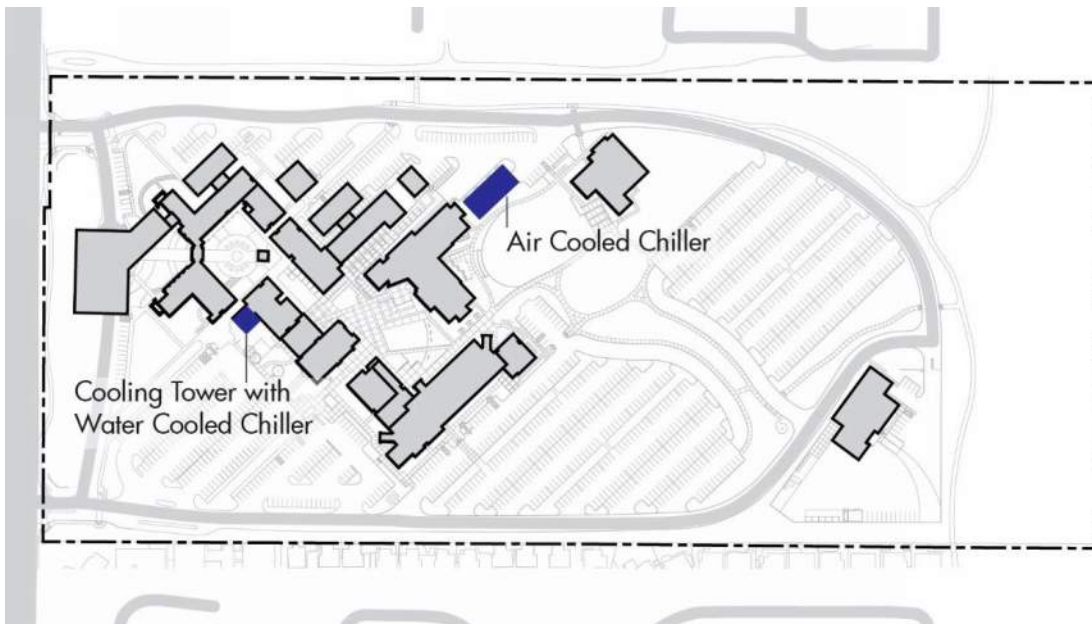
**DISTRIBUTED
POWER CAPACITY**

320A	265KW
600A	498KW

The Petaluma Campus buildings are fed from two central plants, Phase 1 Central Plant (CP1) and Phase 2 Central Plant (CP2) at 277/480V. CP1 is protected by a 1600 amp circuit breaker and the CP2 is protected by a 3000 amp circuit breaker. Under CEC 2013, CP1 is able to support 265 kW of distributed power and CP2 is able to support 498 kW of distributed power. Similar to the Santa Rosa Campus, utility data was provided for the whole site but sub-metering at each building was not available. The same energy models that have been created for each program

type for Santa Rosa have been used to approximate the energy profile of the Petaluma Campus. System capacity noted here is based on available as-built documentation and in-effect code cycle. Further investigation of existing system conditions and new code requirements is required. Renewable energy sources interconnection shall follow PG&E requirements.

Mechanical Campus Infrastructure



The Petaluma SRJC campus has two main clusters of common MEP infrastructure, each cluster feeding parts of the campus developed at different time periods. The campus was developed in two Phases, Phase 1 was built in 1994 with a total of about 67,000 SF which runs off one central plant. Phase 2 built in 1997 with a total of 47,000 SF runs off a separate central plant. The location of the two plants are indicated above.

PETALUMA CAMPUS

RECOMMENDATIONS

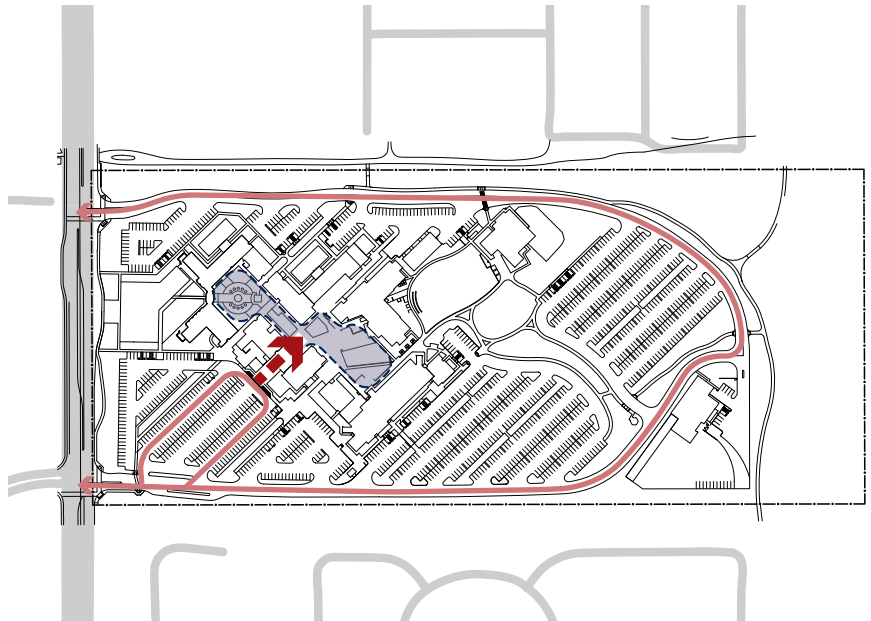
RECOMMENDATIONS

Campus Planning Principles

Unify the Campus

ORGANIZE THE CAMPUS WITH A CLEAR FRONT GATEWAY AND CIRCULATION SPINE.

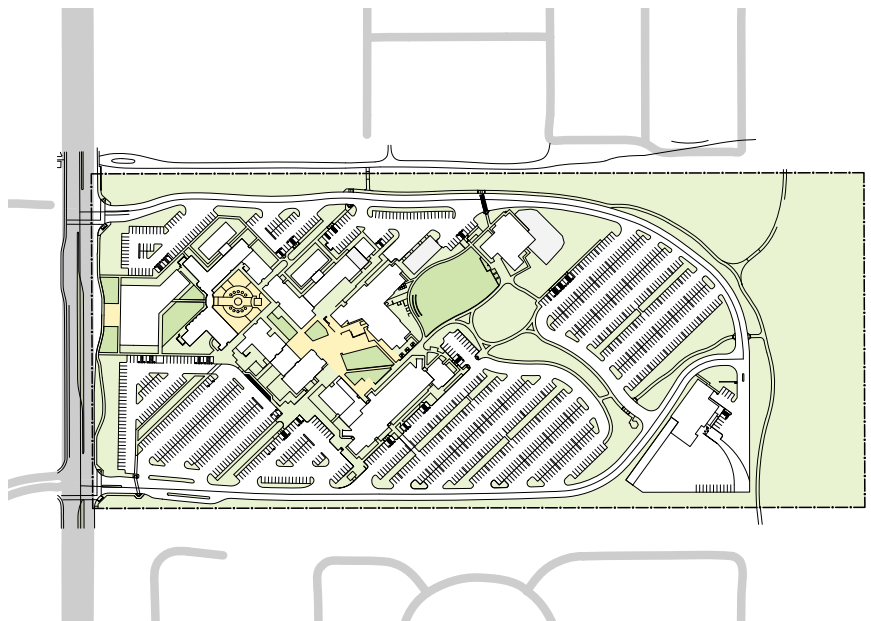
Providing hierarchy to the Campus Gateways and Pathways creates stronger visual continuity and connectivity, establishing cohesiveness amongst diversity.

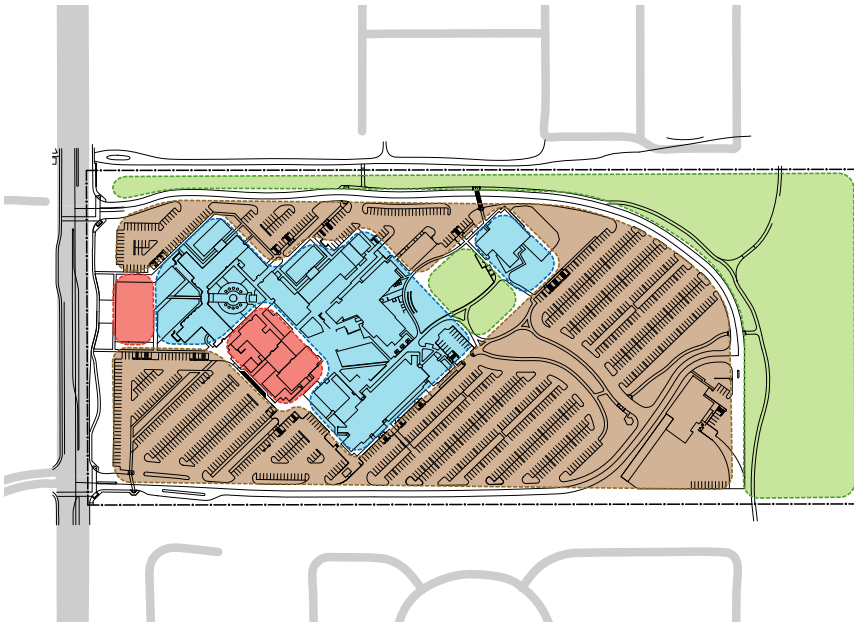


Strengthen Campus Identity

INTEGRATE OUTDOOR TEACHING AND EDUCATIONAL PROGRAMS IN OPEN SPACES.

Capitalizing on the historic campus character and introducing components that provide learning opportunities for both students and the broader community.

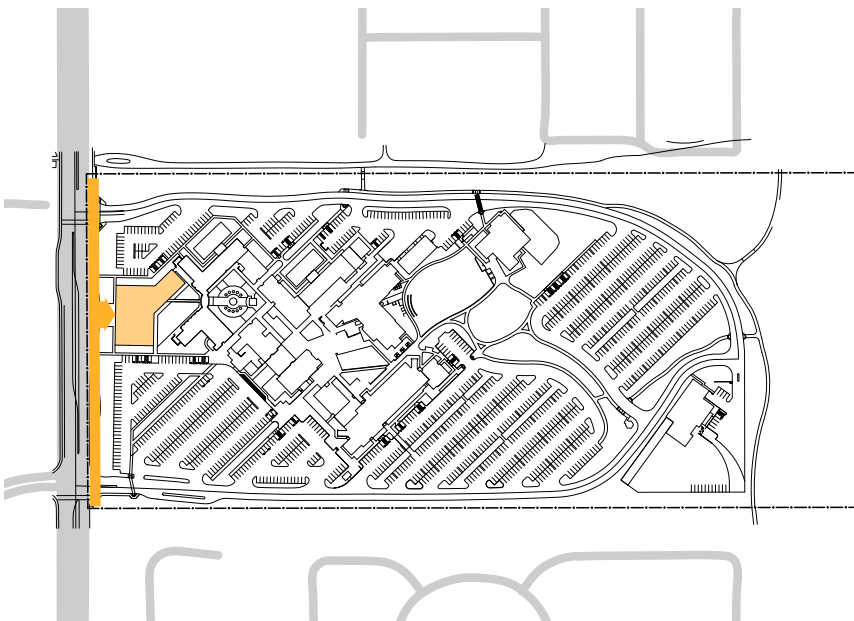




Advance Learning and Discovery

CREATE CLEAR STUDENT SERVICES AND ACADEMIC ZONES IN SUPPORT OF THE EDUCATIONAL MISSION.

Re-organizing the functional zoning of the campus and buildings.



Community Connection

STRENGTHEN VISUAL AND PHYSICAL CONNECTIONS BETWEEN THE CAMPUS AND THE NEIGHBORING COMMUNITY.

Establishing a strong physical and functional student center at the front of campus extends the campus into the community and invites the community into the campus.

RECOMMENDATIONS

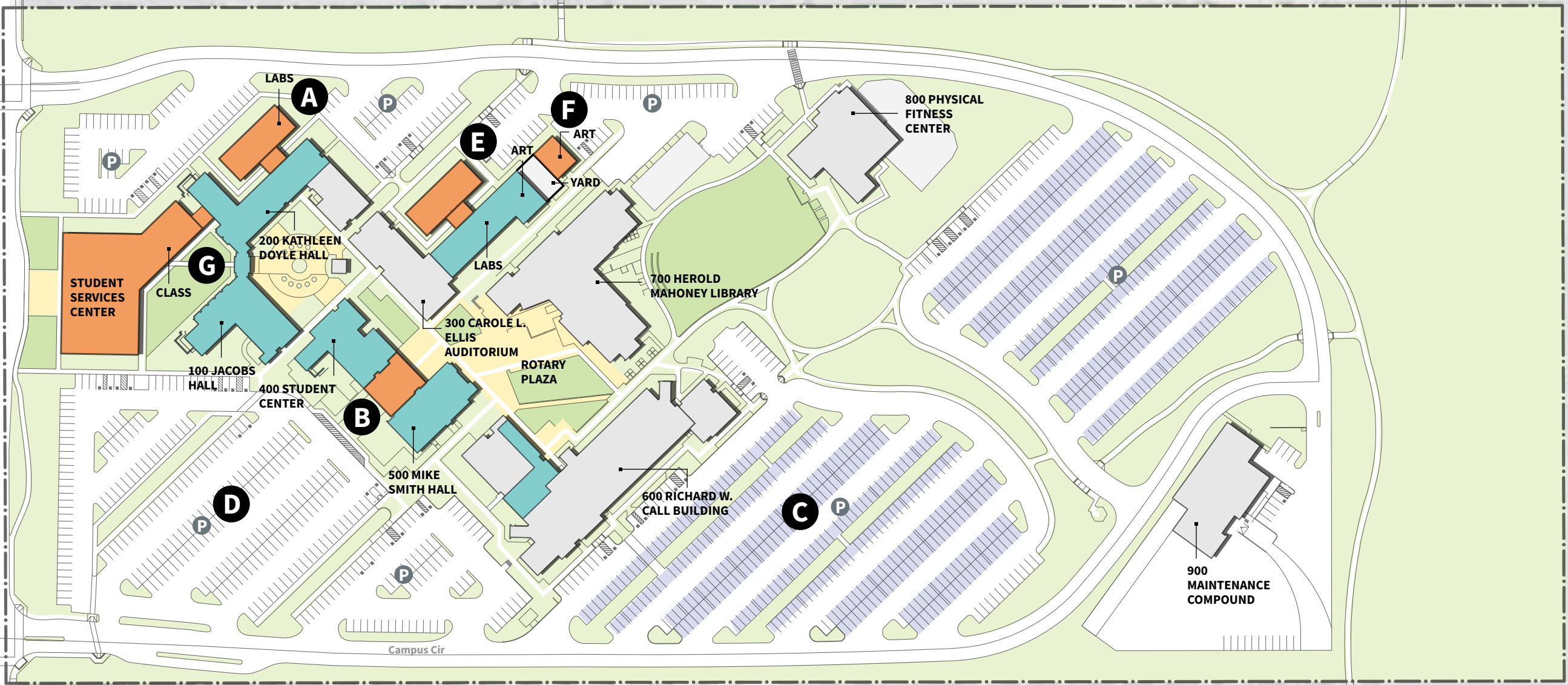
Vision Plan

Overview

Following the Planning Principles, the Vision Plan recommends concepts and projects that Unify the Campus, Create Campus Identity, Advance Learning and Discovering, and adopt an Outward Focus. Most importantly, the Vision Plan supports the educational goals of the Petaluma Campus, and in doing so, the success of students within the Sonoma County Junior College District.

PROJECT LIST

Proj.	Concepts
A	Construct new lab / classroom facility
B	Expand Student Cafe and Bookstore to create a new campus gateway + Student Activities Center. Options include: <ul style="list-style-type: none">Connect Buildings 400 + 500Construct a New facility over the existing footprints of Buildings 400 + 500
C	Develop potential solar array over Lots 3 + 4
D	Reconfigure Lots 1 + 5 to define the main entry for pedestrians and vehicles
E	Construct new facility for additional instructional needs
F	Consolidate Art Labs and outdoor Art Yard at Building 300 E Wing
G	Construct New Student Services Center with improved street frontage / visibility. Potential programs include: <ul style="list-style-type: none">Instructional SpaceStudent ServicesChild Care Consolidate student services in Building 100, 200, and 600 into the new facility. Re-purpose vacated space for instructional use.



VISION PLAN

- Existing Facility
- Re-purposed/Renovated Facility
- New Facility

0 150'

RECOMMENDATIONS

Facility Details Plan

PHOTOVOLTAIC ARRAY

Self-generated energy is one of the methods in which each teaching site can support the District's mission of Sustainability. To that end, the Vision Plan recommends solar canopies in Parking Lots 3 and 4. In addition to providing clean energy for the Campus, the solar canopies have the added benefit of allowing cars to park under shade.

DEFINE MAIN ENTRY

In order to clarify the Main Entry for both pedestrians and vehicles, the Vision Plan recommends that parking lots 1 + 5 be reconfigured. Academic Drive and its associated parking will be eliminated; a pedestrian path and emergency vehicle access will remain. Lot 5 will be expanded and re-stripped, and exits and entries to the lot will be limited, as to relieve congestion to the Main Entry.

EXPANDED STUDENT CENTER

In order to support student success, a college campus must make students feel welcome. Having multiple spaces to gather before, between, and after classes is an integral part of creating a welcoming campus community. Many have observed that the current Student Center (Building 400) is inadequate in terms of its gathering space and food service. An expanded Student Center can be created by creating an addition that connects Buildings 400 and 500 or a new, larger facility can be built over the footprints of Buildings 400 and 500.

CLASSROOM + LAB FACILITIES

The projected Master Plan Space Program shows a need for additional Laboratories. A Measure H-funded lab facility is recommended to be located to the east of Building 200. Additional instructional needs can be met at another facility to the north of Building 300. Both of these locations support existing classroom and laboratory spaces in the respective buildings, and can be physically connected to the existing spaces.

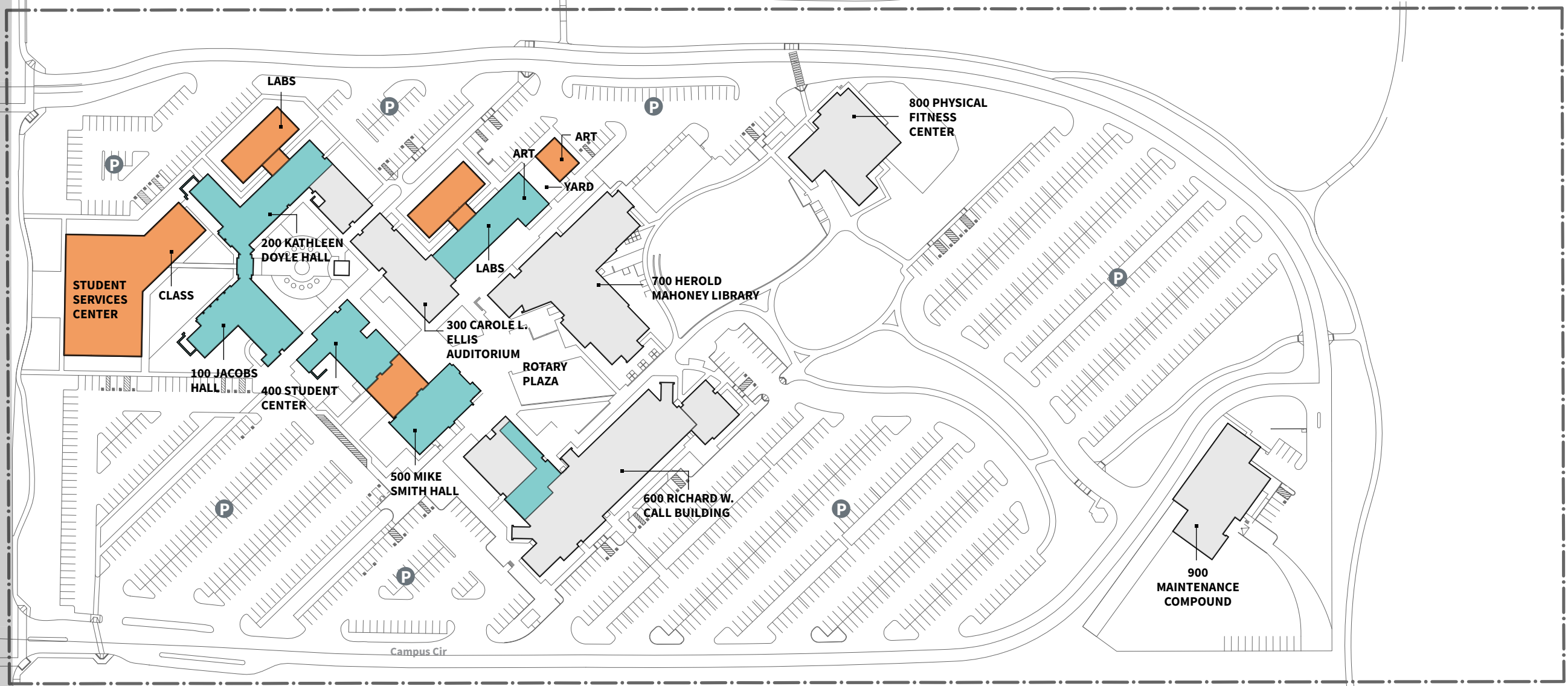
ART

Currently the Art program is spread throughout campus. The Vision Plan recommends consolidating Art Labs and outdoor Art Yard at Building 300 E Wing in creating a new home for Art to strengthen the Art community on campus and the ties within its program.

STUDENT SERVICES CENTER / OUTWARD-FOCUSED CAMPUS FACILITY

Thus far, the development at the Petaluma Campus has been inwardly focused. Many have observed that the large landscape setback to the campus has been detrimental to its visibility within the community. A new facility with more prominent street frontage welcomes the community and announces its presence along Sonoma Mountain Parkway. Among other uses, the facility may be programmed with instructional space, expanded student engagement and support, student services, and/or child care.

Having like or synergistic programs dispersed over campus can cause confusion and/or inefficiencies of space utilization. Hence, the Vision Plan recommends consolidating student services in Building 100, 200 and 600 into the new facility. The vacated space can be repurposed into instructional use, to address space need.



FACILITY DETAILS PLAN

- Existing Facility
- Re-purposed/Renovated Facility
- New Facility

0 150'

RECOMMENDATIONS

Building Use and Campus Zoning



Petaluma Campus
Photo By: Gensler

Outcomes

Following implementation of the Vision Plan recommendations, the Campus Zoning and Building Use diagrams illustrate the following outcomes:

- Consolidated Programs
- Improved Wayfinding
- Clear Main Entry
- Improved Street Frontage

CONSOLIDATED PROGRAMS

Student Services are consolidated into the new facility along Sonoma Mountain Parkway. The vacated space will be repurposed into classrooms and offices. Consolidation of like programs brings about improved space utilization and a greater degree of synergy within and across programs.

IMPROVED WAYFINDING

Improved wayfinding is an additional benefit of program consolidation. Centralized services are an asset to supporting student success.

CLEAR MAIN ENTRY

The Main Entry is defined in part by the architectural character of the buildings. The Student Center, with a larger footprint and an outward-focused facade, will be a clearly defined outpost for students and first-time visitors to the campus.

IMPROVED STREET FRONTAGE

The location of the new campus facility on Sonoma Mountain Parkway brings a visible presence of the Petaluma Campus to the public realm. This visual and physical positioning is a welcome invitation to the local community, fostering a deeper level of community engagement.



CAMPUS ZONING & BUILDING USE

- Student Services + Activities
- Administration
- Instructional
- Student Services / Instructional Mix
- Athletics + Physical Education
- Library + Study
- Service + Support
- Parking

0 150'

RECOMMENDATIONS

Open Space and Landscape

Outdoor classrooms are recommended to be studied in future site specific projects.

Farragut Outdoor Classroom
Photo By: McGill Associates



Existing landscape conditions and proposed Vision Plan recommendations suggest a series of distinct landscape areas and types characterized by its use, function, experience, and configuration in the campus. The open space and landscape diagram works in support of the Campus Planning Principles and illustrates the following outcomes:

- Improved Arrival Frontage
- Addition of Educational Gardens
- Improved Pedestrian Network

IMPROVED ARRIVAL FRONTAGE

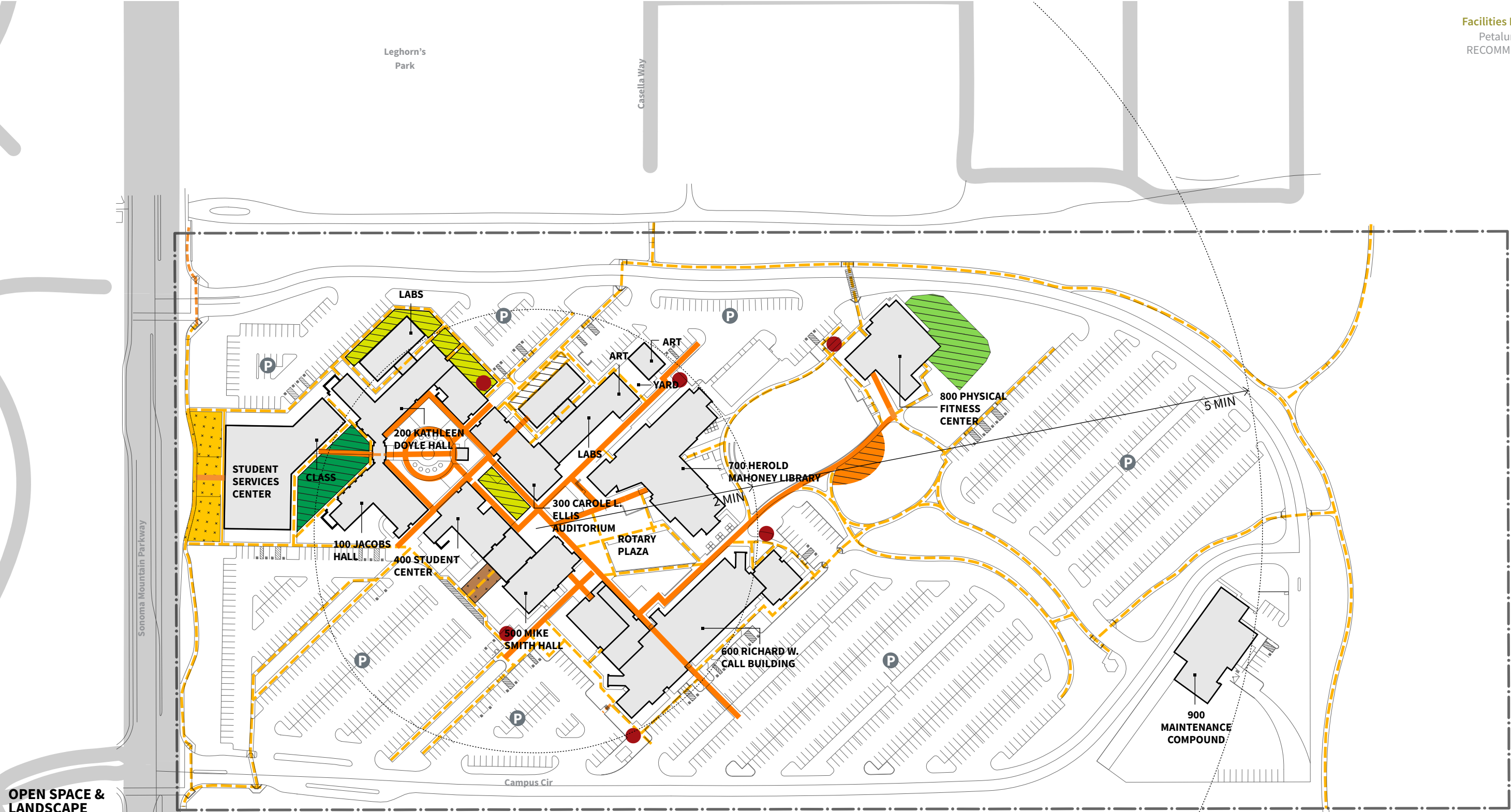
The larger and more prominent Student Services Center with an outward-focused facade brings a visible presence of the Petaluma Campus to the public realm. The addition of a drop-off area and plaza that frames the new building along Sonoma Mountain Parkway will be a clearly defined outpost for students and first-time visitors to the campus. A secondary entrance and drop-off further inside the campus drops students off close to the heart of the campus and activities in Rotary Plaza.

ADDITION OF EDUCATIONAL GARDENS

The addition and improvement of educational gardens by 400 Student Center and the Labs help leverage program adjacencies to foster the education environment by incorporating living laboratories that serve as functional landscapes for use by students, faculty, and staff. These easily accessible spaces could be stormwater gardens or demonstration gardens.

IMPROVED PEDESTRIAN NETWORK

The Vision Plan recommendations for the Pedestrian Network aim to respect the existing pathways, while upholding and reinforcing hierarchy for improved wayfinding. The new Student Center and additional drop-off area maintains the primary existing pedestrian entry while allowing for a plaza and new Student Center Courtyard.



OPEN SPACE & LANDSCAPE

- Arrival Plaza
- Student Center Courtyard
- Education Garden + Courtyard
- Drop-off Plaza
- Existing Student Education Garden
- Existing Living Learning Lab / Permaculture Garden
- Primary Pedestrian Path
- Secondary Pedestrian Path
- Bike Parking

0 150'

RECOMMENDATIONS

Campus Access



Petaluma Campus
Photo By: Gensler

Following implementation of the Vision Plan recommendations, the Vehicular Access / Circulation / Parking diagrams illustrate the following outcomes:

- Easing Congestion
- Clearly Defined Main Entry
- Improved Street Frontage

EASING CONGESTION

Access points at the southern end of Campus Circle are now limited with the elimination of Academic Drive and the reconfiguration of Lot 5. This will ease congestion along this part of Campus Circle and at the Main Entry.

CLEARLY DEFINED MAIN ENTRY

While there are still two entries to campus, the Main Entry will be emphasized with Campus Identification Sign.

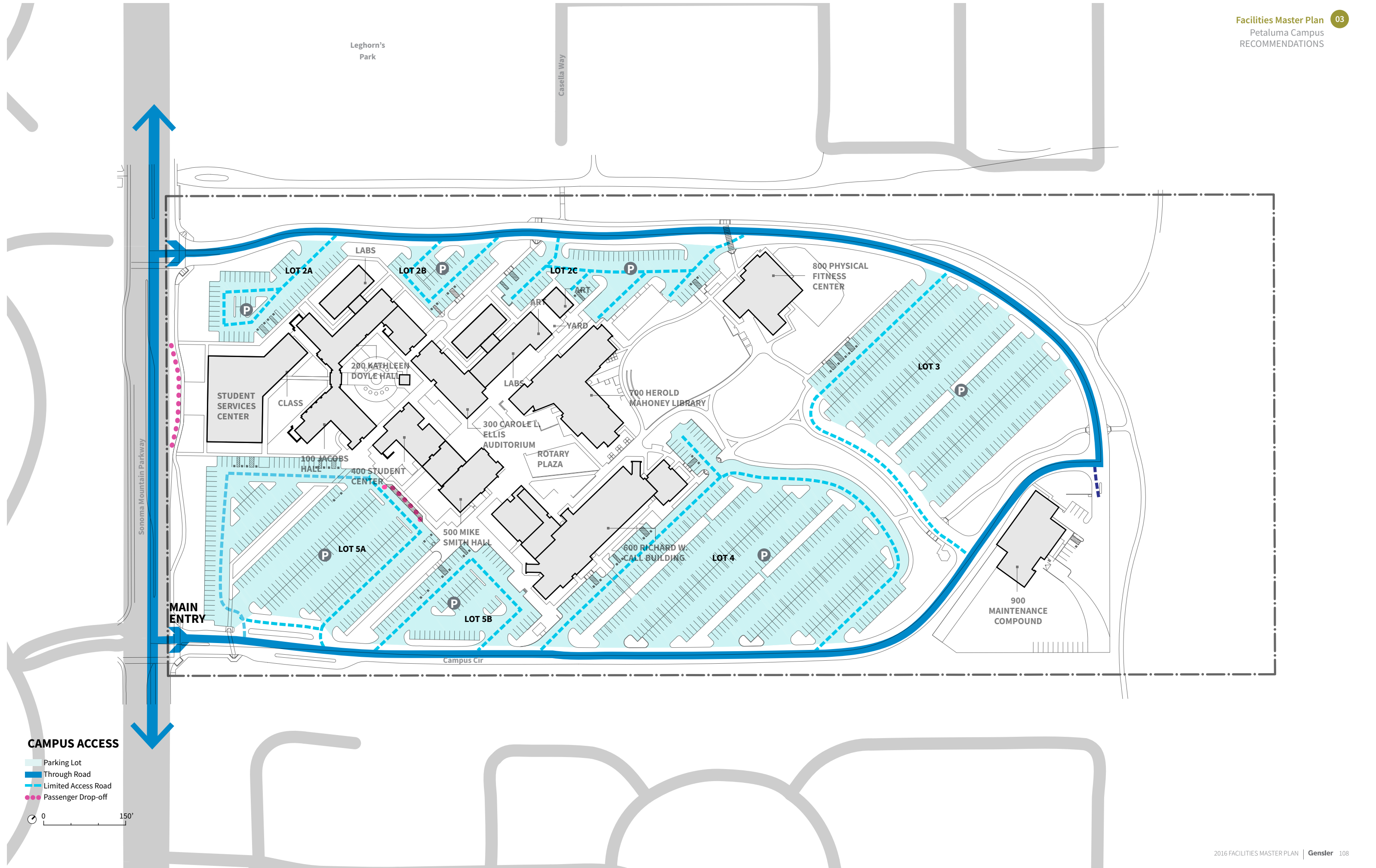
IMPROVED STREET FRONTAGE

The presence of the new Facility on Sonoma Mountain Parkway increases the visibility of the Petaluma Campus to the public realm. Additionally, this facility can be directly accessed from the public right of way.

Parking Count

Lot Name	Number of Parking Spaces		
	Standard	Accessible	Total
Lot 2A	57	4	61
Lot 2B	29	4	33
Lot 2C	48	8	56
Lot 3	324	5	329
Lot 4	330	12	342
Lot 5A	237	12	249
Lot 5B	67	6	73
Maintenance	19	1	20
Grand Total	1,111	50	1,163

* Parking lot names for parking count purpose only



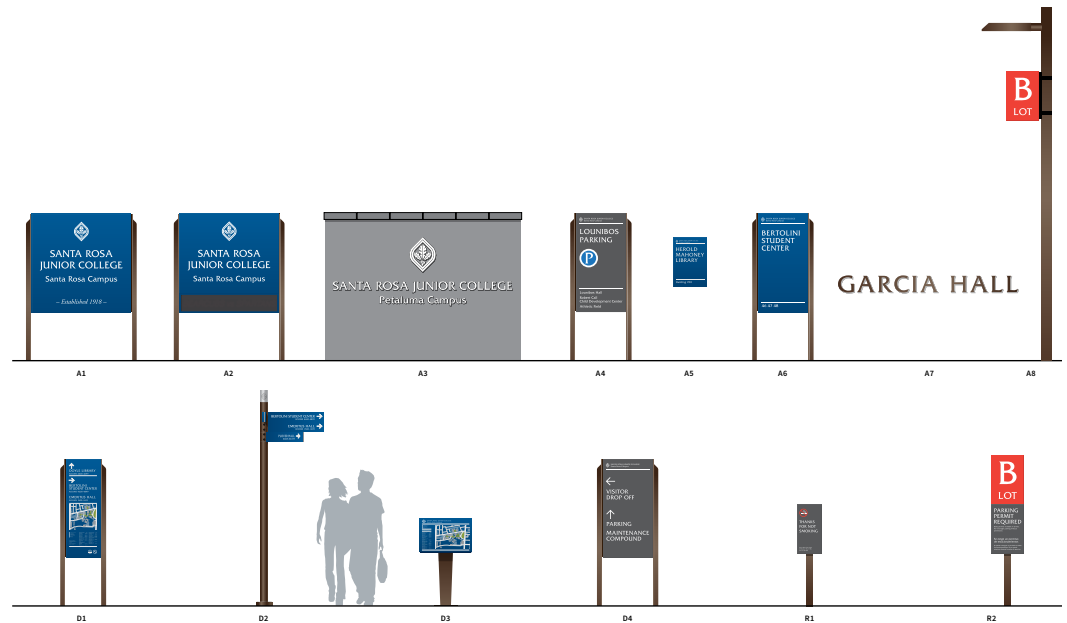
CAMPUS ACCESS

- Parking Lot
- Through Road
- Limited Access Road
- Passenger Drop-off



RECOMMENDATIONS

Signage and Wayfinding



Refer to signage design guidelines document for details and usage information.

SIGN TYPE LIST

IDENTIFICATION SIGNS

- A1** - Campus ID
- A2** - Campus ID (Dynamic)
- A3** - Campus ID (Landscape)
- A4** - Parking Lot ID
- A5** - Building ID (Wall-mounted) *Not shown on plan*
- A6** - Building ID (Freestanding) *Not shown on plan*
- A7** - Building ID (Dimensional Letters) *Not shown on plan*
- A8** - Parking Zone ID (Pole-Mounted) *Not shown on plan*

DIRECTIONAL SIGNS

- D1** - Campus Map + Directional
- D2** - Finger Post Directional
- D3** - Campus Map (Pedestal)
- D4** - Vehicular Directional

REGULATORY SIGNS

- R1** - Regulatory Sign *Not shown on plan*
- R2** - Parking Policy / Zone ID Sign *Not shown on plan*
- R3** - Emergency Evacuation Area ID Sign *Not shown on plan*



SYMBOL KEY

A4 Sign Type
01 Sign Number

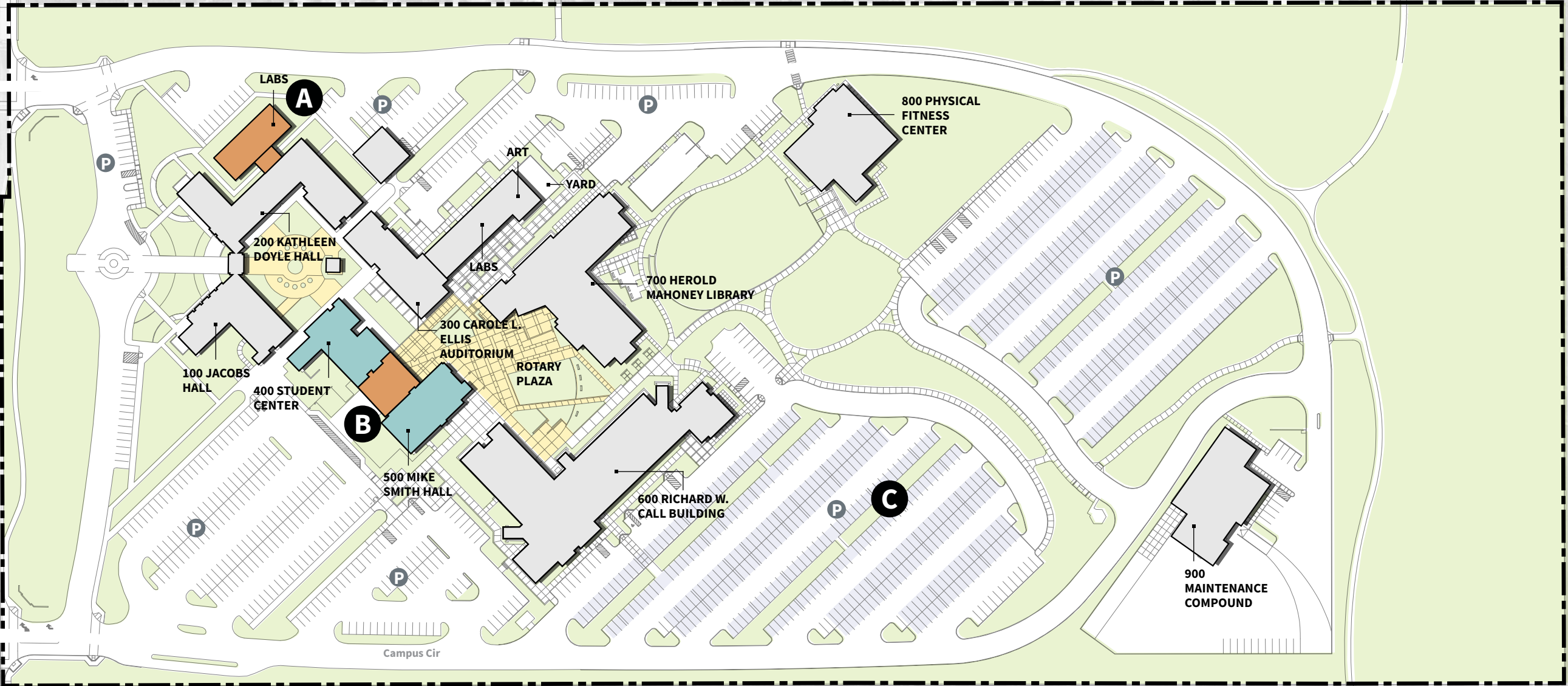
0 150'

RECOMMENDATIONS

Measure H Plans

PROJECT LIST

Proj.	Concepts
A	Construct new lab / classroom facility
B	Expand Student Cafe and Bookstore to create a new campus gateway + Student Activities Center. Options include: <ul style="list-style-type: none">Connect Buildings 400 + 500Construct a New facility over the existing footprints of Buildings 400 + 500
C	Develop potential solar array over Lots 3 + 4



MEASURE H PLAN

- Existing Facility
- Re-purposed/Renovated Facility
- New Facility
- PV Panels

0 150'

RECOMMENDATIONS

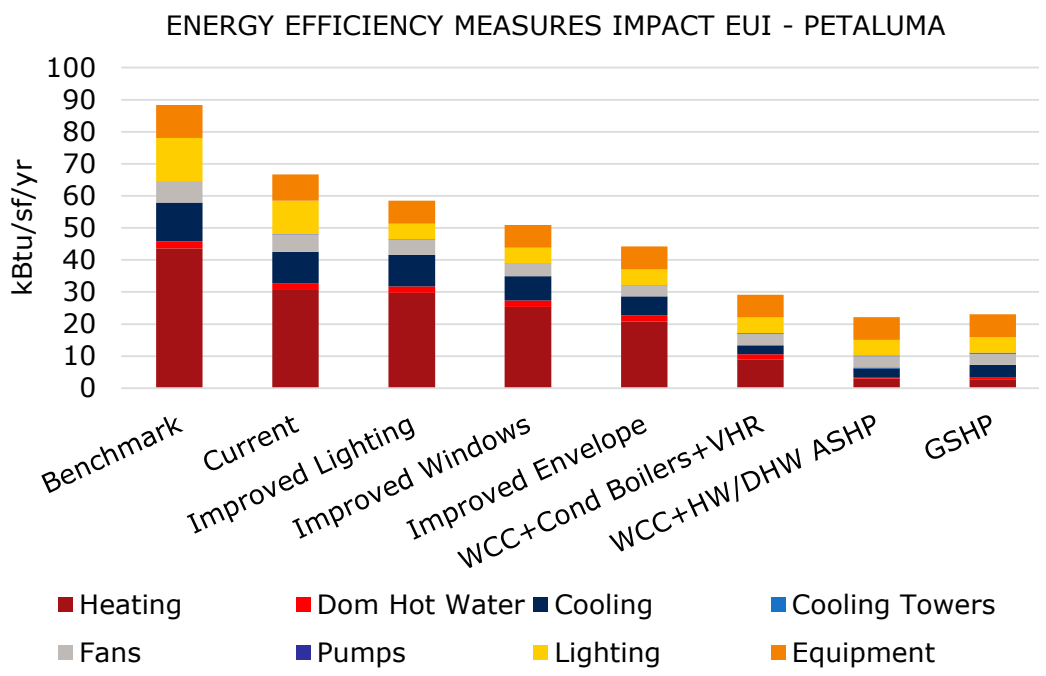
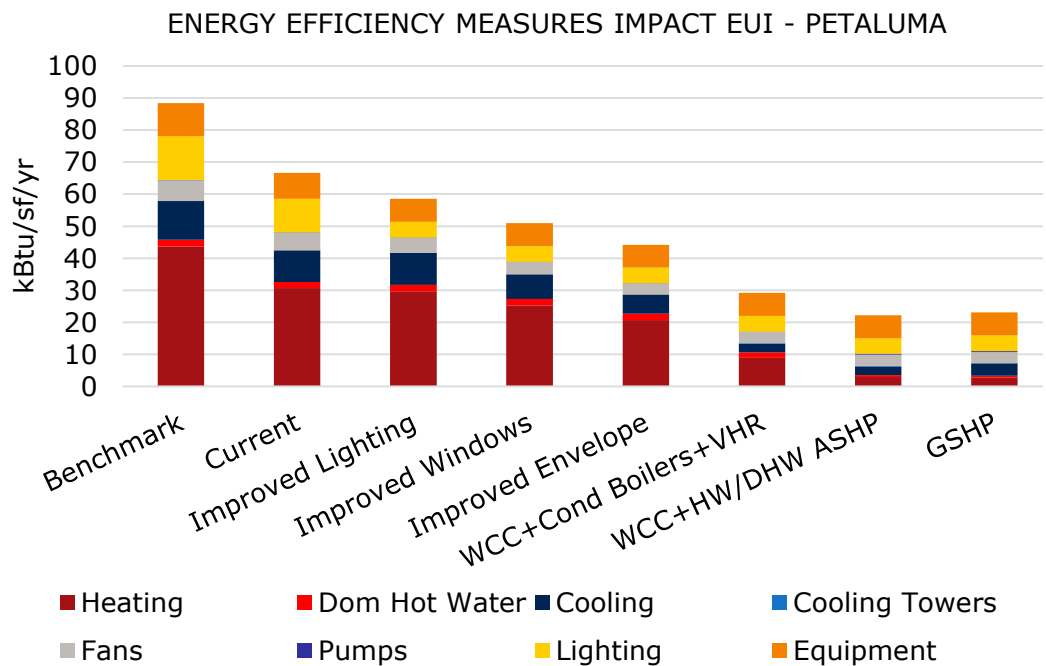
Recommended MEP Campus Systems

Energy and water analysis was done to reach the recommended systems and strategies below, that analysis is included in the MEP report included in the appendix of this document. Refer to that document for detailed information on the data that supports the following MEP recommendations.

Energy

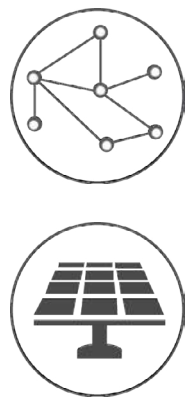
Similar to the Santa Rosa Campus, for all new construction or renovation projects we recommend that the efficiency measures described in the previous section be implemented. Once sub-metering data is available, specific buildings might be identified as candidates for energy upgrades.

Based on the estimated current EUI, the efficiency measures are applied to each of the program type. With all the measures applied to every building, the campus average EUI would be about 26 kBtu/sf (75% reduction) which would bring the campus within reach of being Net Zero Energy.



RECOMMENDATIONS

Recommended MEP Campus Systems



RECOMMENDED CAMPUS LEVEL ENERGY STRATEGIES

As suggested by the monthly energy profile in the Projected Monthly Energy Profile graph, even after the efficiency measures have been implemented, the campus will still have simultaneous demand for heating and cooling, representing opportunities for energy transfer using a campus central condenser water loop. We estimate that a 1,000 ton condenser water plant would be required to serve the whole campus

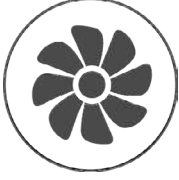
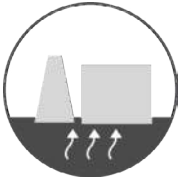
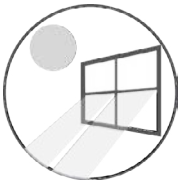
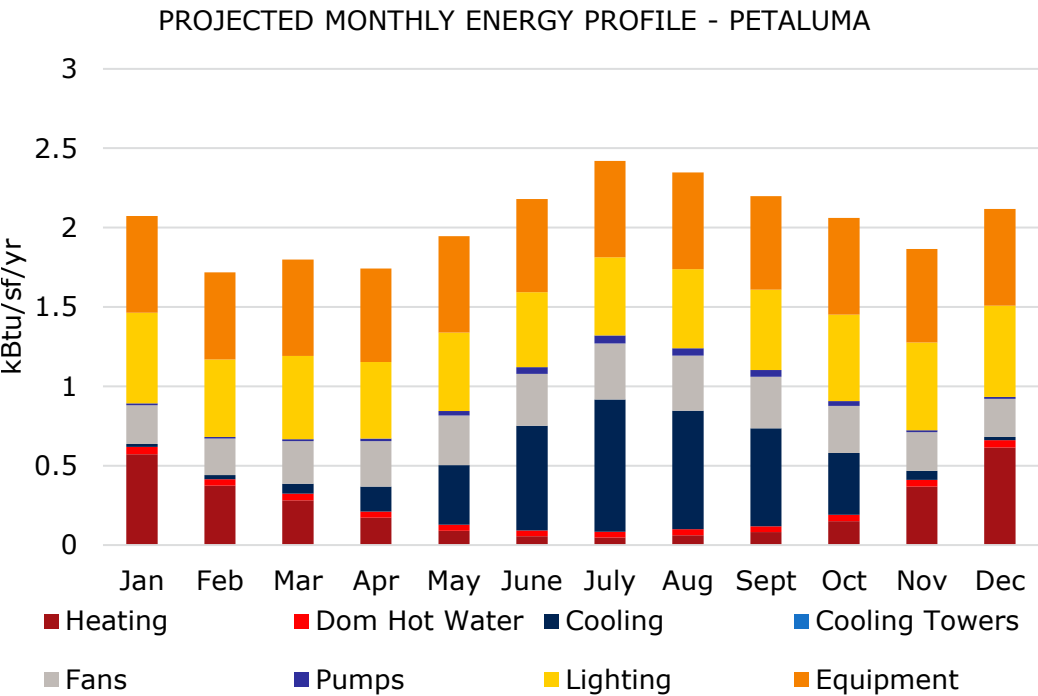
Currently, Santa Rosa has about 214 kW of PV installed on campus. Based on the actual and projected EUI at completion of Measure H and the Vision Plan, assuming that all the efficiency measures have been implemented, the amount of PV required to achieve Net Zero Energy is indicated in the table. These estimated areas have been calculated assuming a constant campus space square footage and program.

PV AREA REQUIRED

	Area (sf)	Cost (\$)
Current	115,000	5,900,000
Measure H	67,000	3,400,000
Vision Plan	40,000	2,000,000

RECOMMENDED BUILDING LEVEL
ENERGY STRATEGIES

The amount of PV required to achieve Net Zero Energy is directly related to the ability to reduce the campus’ energy consumption. Each of the building efficiency measures (energy efficient glazing, daylight harvesting, efficient lighting, heat recovery ventilation, laboratory low airflow minimum and ground source heat pumps) are recommended for new constructions and should be evaluated for building retrofits through LCCA analysis.



RECOMMENDATIONS

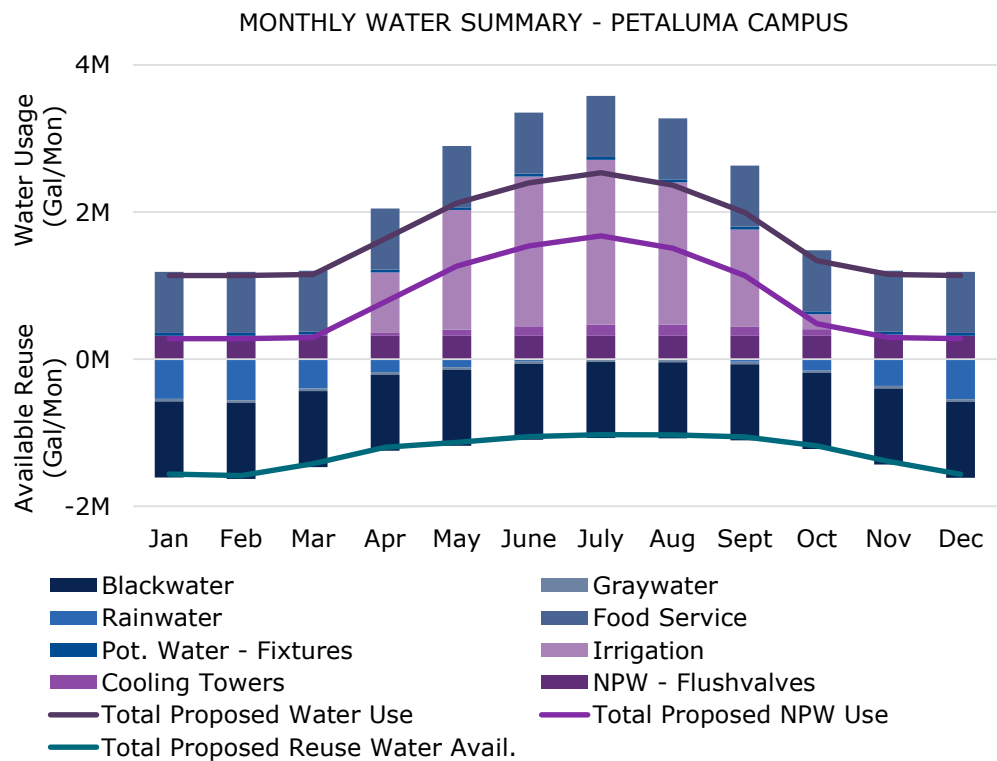
Recommended MEP Campus Systems

Water

Similar to the [Existing Monthly Water Use graph in the appendix](#), the Monthly Water Summary graph shows the monthly water use of meeting code minimum of CalGreen, by the bar graph. The lines through the graph depict the proposed case of implementing low flow fixtures, drought tolerant landscape and swimming pool covers. These strategies are evaluated in the section below.

There are some key water usage trends depicted in this graph, that show why certain water saving strategies are recommended or not. When reviewing this graph it is important to understand that treated reclaimed water from rainwater, greywater or blackwater can only be reused for non-potable water, indicated in a shade of purple. Treated water can't be reused for any potable water, indicated in a shade of blue.

The Monthly Water Use graph shows that with the proposed case rainwater and greywater treatment would not be able to meet the non-potable water demand (line in graph is above non-potable water use) for the campus in the summer months due to the irrigation load. It also shows that with the proposed case, if blackwater treatment and reuse was implemented the majority of campus' total non-potable water demand would be met, even in the summer months (line in graph is within non-potable water use bars). However, the entire irrigation demand would not be met.



RECOMMENDATIONS

Recommended MEP Campus Systems



Recommended Water Strategies

The following strategies are recommended because they offer significant water savings with relatively low to medium cost and because they are critical to achieving the Vision Plan goals.

LOW FLOW PLUMBING FIXTURES

Replacing all the existing fixtures with the efficient low flow plumbing fixtures is outlined in Section 6.16 “Low Flow Plumbing Fixtures”. If low flow fixtures are installed estimated water savings is 40% from LEED and 14% savings from CalGreen. For new buildings the cost difference between the low flow fixtures and CalGreen fixtures is negligible.

An important item to note is that food service water usage has the highest indoor water demand. This water usage is based on process loads for equipment and fixtures. If the water usage was reduced by a significant factor, it would affect the fixture/equipment’s functionality. It is assumed that no water savings will be obtained from food service.

DROUGHT TOLERANT LANDSCAPE

Replacing all existing vegetation and irrigation systems with low water use plants and efficient subsurface irrigation, can have a large impact on water savings. This provides an estimated of 44% water savings from the assumed baseline of medium water use plants with an overhead spray irrigation system.

FUTURE RECLAIMED WATER UTILITY

The City of Petaluma is planning on installing a reclaimed water utility in the future. If this utility is installed. All future buildings and larger renovation projects are to provide non-potable piping to all

flush-valves and connect to the utility.

Providing connections to a future reclaimed water system could potentially offset the campus’ entire non-potable water demand. However, since it has not been installed yet, the campus was analyzed without this water savings. The future reclaimed water utility is not included in the “Proposed Case”.

GEOTHERMAL

Geothermal heat exchange technology can greatly reduce or eliminate the need for cooling towers and thus the make-up water demand for the cooling towers. A geothermal system has the potential to reduce the cooling tower water demand by 100%. The Santa Rosa campus already has one geothermal heat exchange system which provides all the heating and cooling for the Bertolini Student Center, and expanding this technology to the rest of the campus is encouraged. Geothermal heat exchange systems are evaluated on the Santa Rosa Campus energy section above.

BLACKWATER TREATMENT & REUSE

Providing a central modular blackwater treatment system for the campus is recommended. The treatment system will be in a central location, possibly in the same location as the modular condenser water central plant discussed in the energy section, which can expanded out to the new buildings and areas of the campus as they are remodeled. Central water treatment plants are more cost effective, offer ease of maintenance, and operate better due to balancing effect of fluctuating loads (diversity) within the campus.

For the Petaluma campus, it is estimated that blackwater available on campus can meet 83% of



the campus indoor and outdoor non-potable demand. The campus would be unable to reach the net-zero non-potable water use goal for 2030, unless more irrigation water saving measures are implemented. available on campus to meet the campus indoor and outdoor non-potable demand. Implementing a blackwater treatment system allows the campus to reach net-zero non-potable water use.

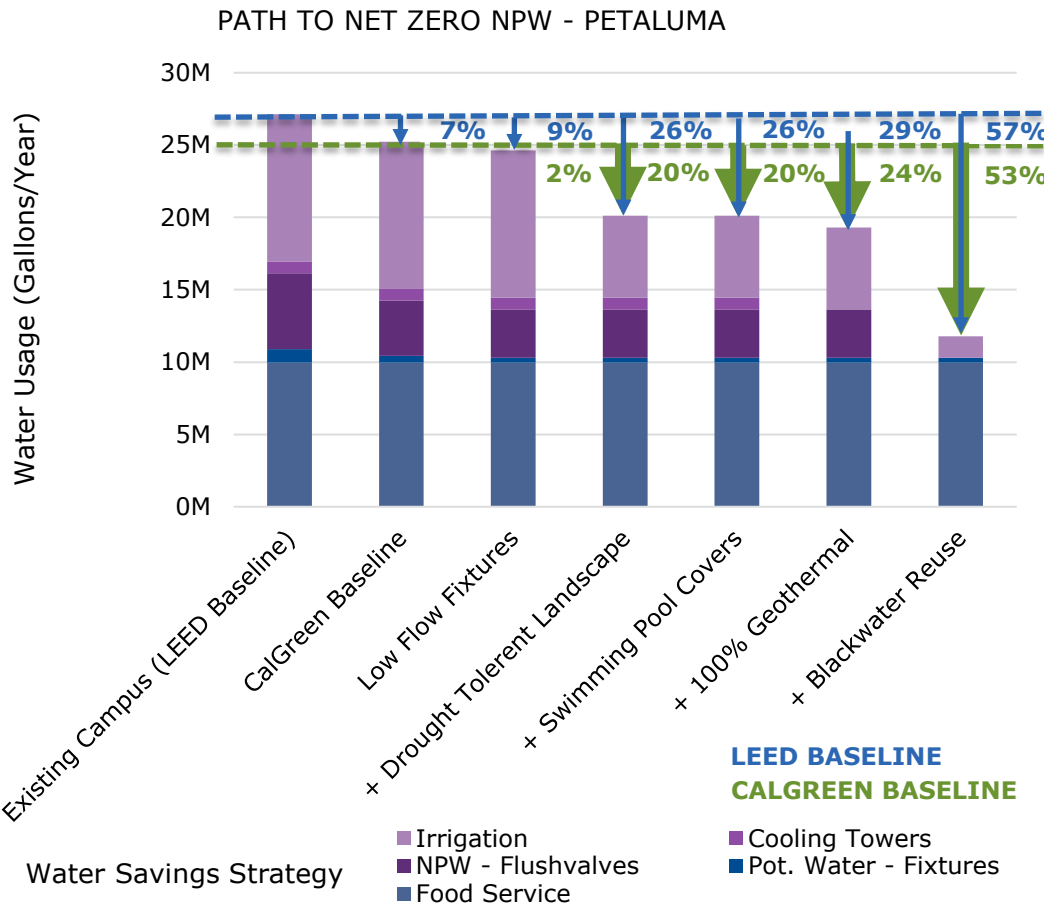
Another way to meet the 2030 net-zero

non-potable water goal would be to connect to the municipal reclaimed water utility, if it is installed. Or if desired sewer mining is a water treatment option that could be utilized to offset the remainder of the campus’ non-potable water demands. Just as the name implies, sewer mining involves tapping into a wastewater collection system, siphoning some of the sewage off to an on-site treatment facility, and then reusing the reclaimed water onsite for non-potable water uses, irrigation and flush-valves. This

treatment option was not analyzed due to the fact that it isn’t as feasible for the campus.

Path to 2030

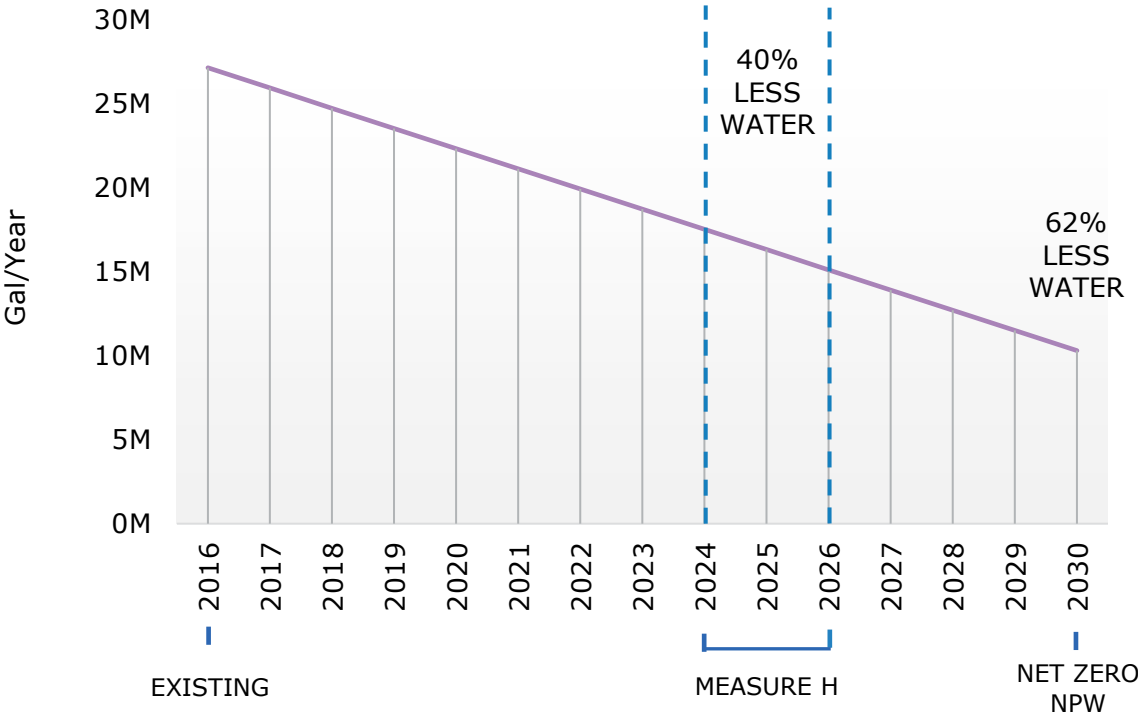
By incrementally implementing the campus water saving measures within the “Reuse Proposed Case”, the campus can achieve net zero-non-potable water. The Path to Net Zero graph shows the water savings achieved.



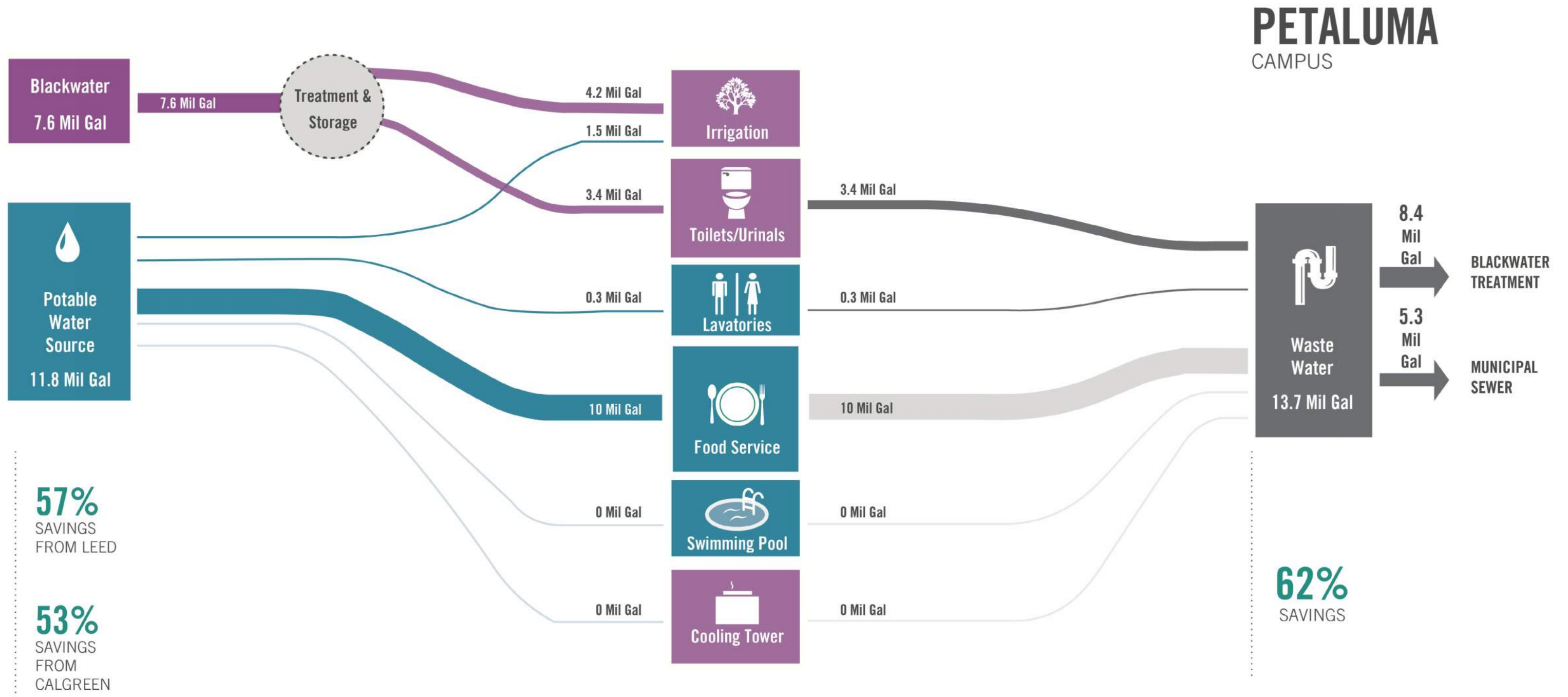
RECOMMENDATIONS

Recommended MEP Campus Systems

PROGRESS PATH TO NET ZERO NPW - PETALUMA



The Progress Path to Net Zero Non-Potable Water graph depicts the current campus water usage, along with the net-zero non-potable water goal in 2030. Measure H is tracking for years 2024 to 2026 and the percent water savings indicated should be achieved by Measure H, in order to be on track to reach the 2030 goal of net-zero non-potable water.



REUSE PROPOSED CASE:

LOW FLOW FIXTURES, DROUGHT TOLERANT LANDSCAPE,
SWIMMING POOL COVERS, GEOTHERMAL & BLACKWATER REUSE

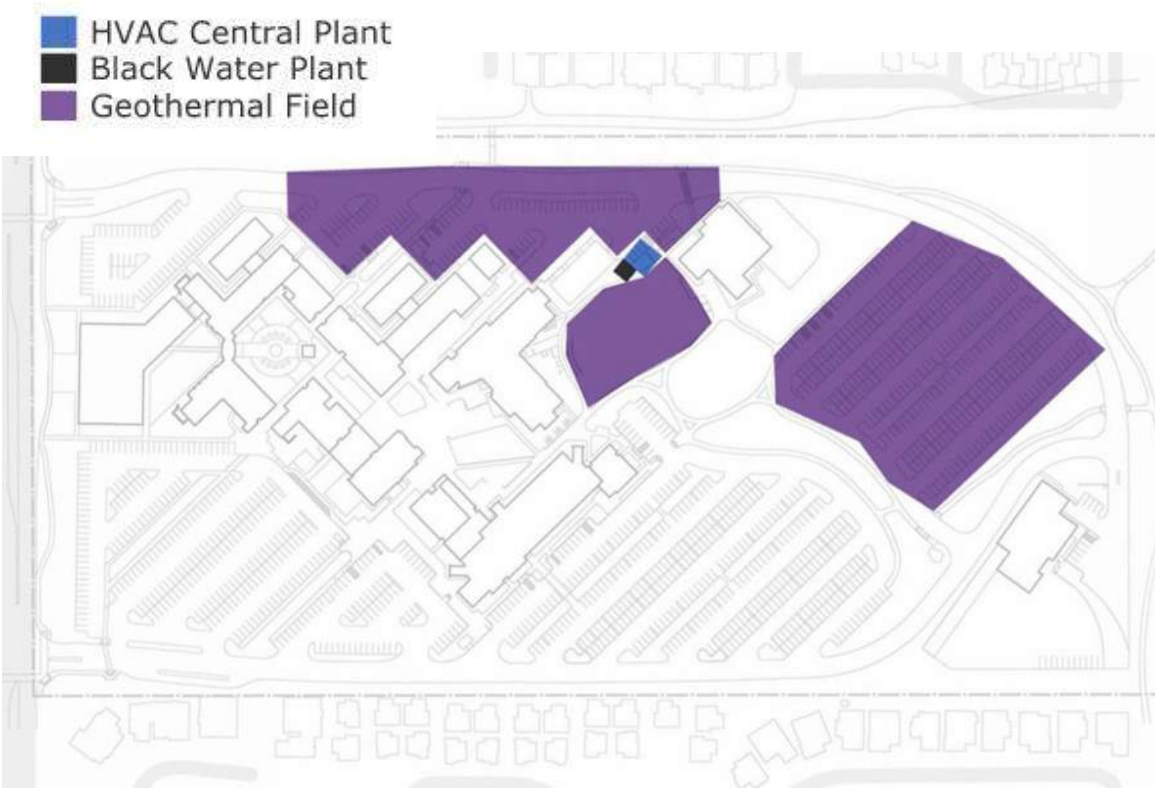
RECOMMENDATIONS

Recommended MEP Campus Systems

Proposed MEP Upgrades

Based on the campus energy efficiency measures and the water strategies presented above, the following map indicates the potential locations for the central condenser water and black water plants

PROPOSED MECHANICAL AND PLUMBING UPGRADES



3.3 Southwest Center

SOUTHWEST CENTER

ANALYSIS

ANALYSIS

Site Context



Southwest Santa Rosa Center
Photo By: Gensler

Context

LOCATION

The Southwest Santa Rosa Center is 9.5-acre site south of Sebastopol Road, on the east side of South Wright Road, in the Southwest Santa Rosa quadrant known as Roseland. It is 5 miles southwest of the Santa Rosa campus.

Land Use Adjacencies

RESIDENTIAL

Most of the land near the Southwest Center site is categorized as Residential, including the former Naval Auxiliary Landing Field, southeast of the site.

BUSINESS PARK / INDUSTRIAL

East of the site, there is a large Business Park along Corporate Center Parkway and an Industrial zone along Northpoint Parkway

PUBLIC / INSTITUTIONAL

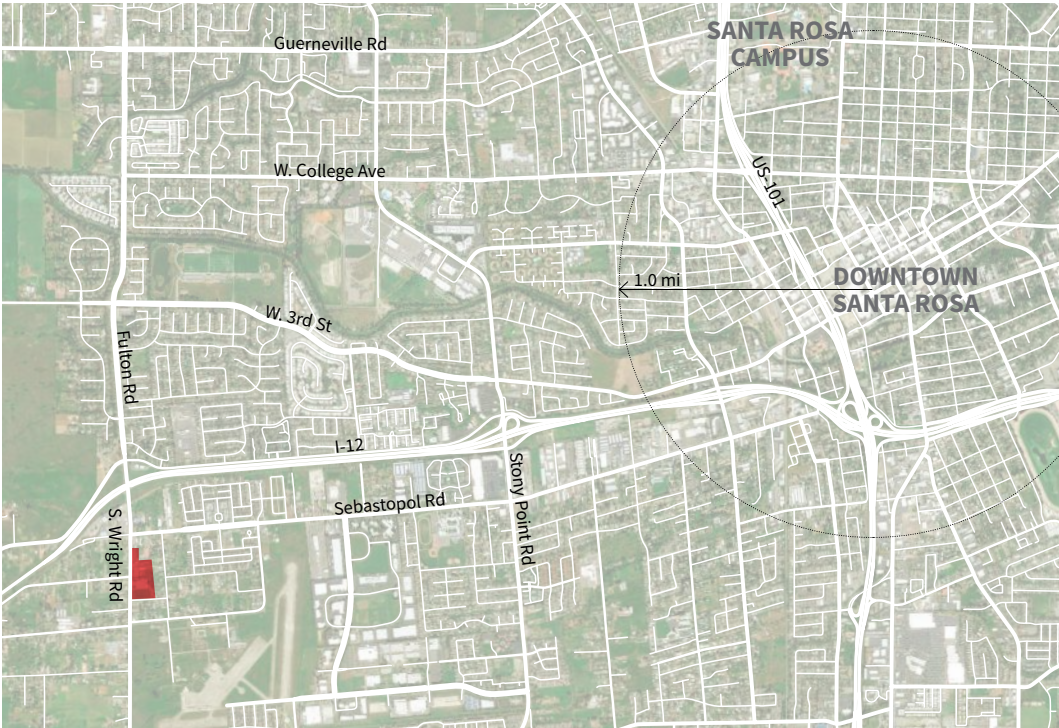
A large zone of various county uses is located north of the site, along West College Avenue.

COMMERCIAL

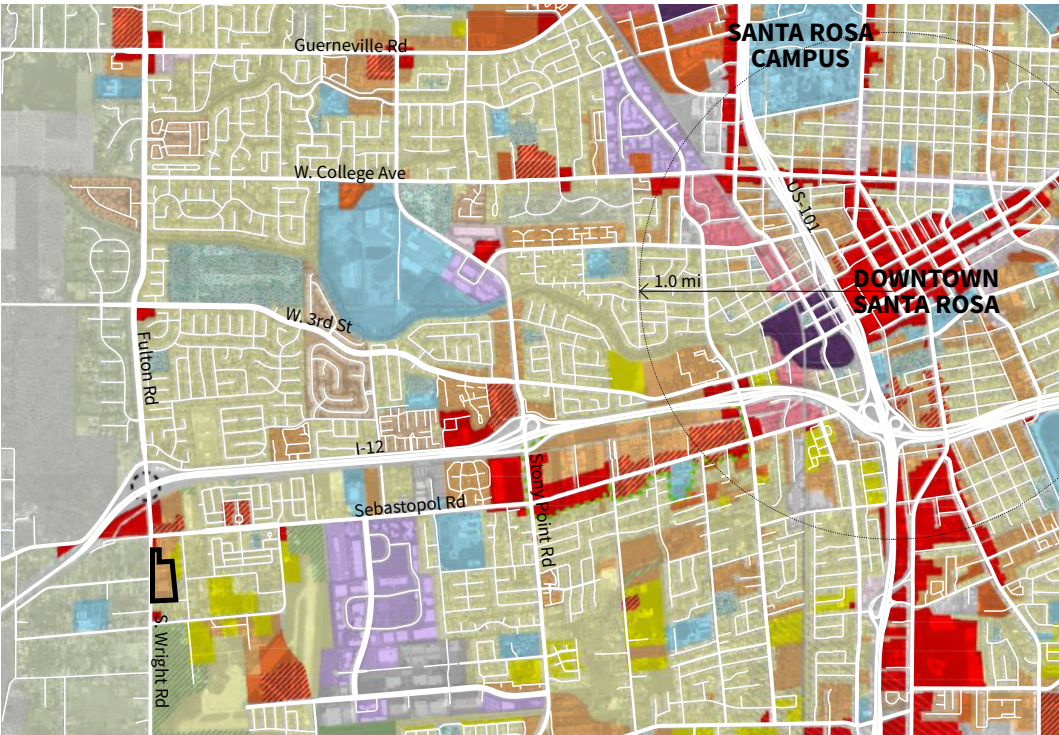
Both big-box and small-scale retail line Sebastopol Road from Wright Road to Highway 12.

OPEN SPACE

Because the site is located near the edge of incorporated Santa Rosa, there are large swaths of open space west and south of the site.



SITE CONTEXT



LAND USE ADJACENCIES

- Country Residential
- Very Low Residential
- Low Density/Open Space
- Low Residential
- Medium-low Residential
- Medium Residential
- Med-High Residential
- Transit Village Medium
- Mobile Homes
- Transit Village Mixed
- Retail + Business Services
- Office
- Business Park
- Industry
- Public/Institutional
- Parks + Recreation
- Open Space
- Agriculture
- Waterway



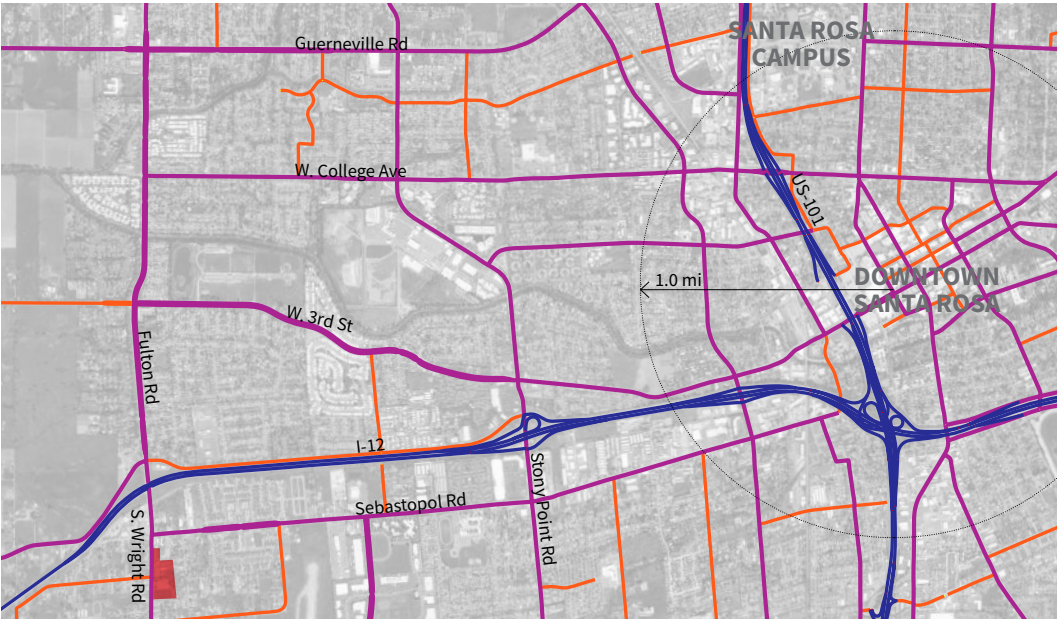
ANALYSIS

Site Access

VEHICULAR ACCESS

The site is easily accessed via the regional and local road networks. From Highway 101, visitors exit at Highway 12 towards Sebastopol, turn south onto Fulton Road and continue onto North Wright Road. The campus is located at South Wright Road, just south of Sebastopol Road.

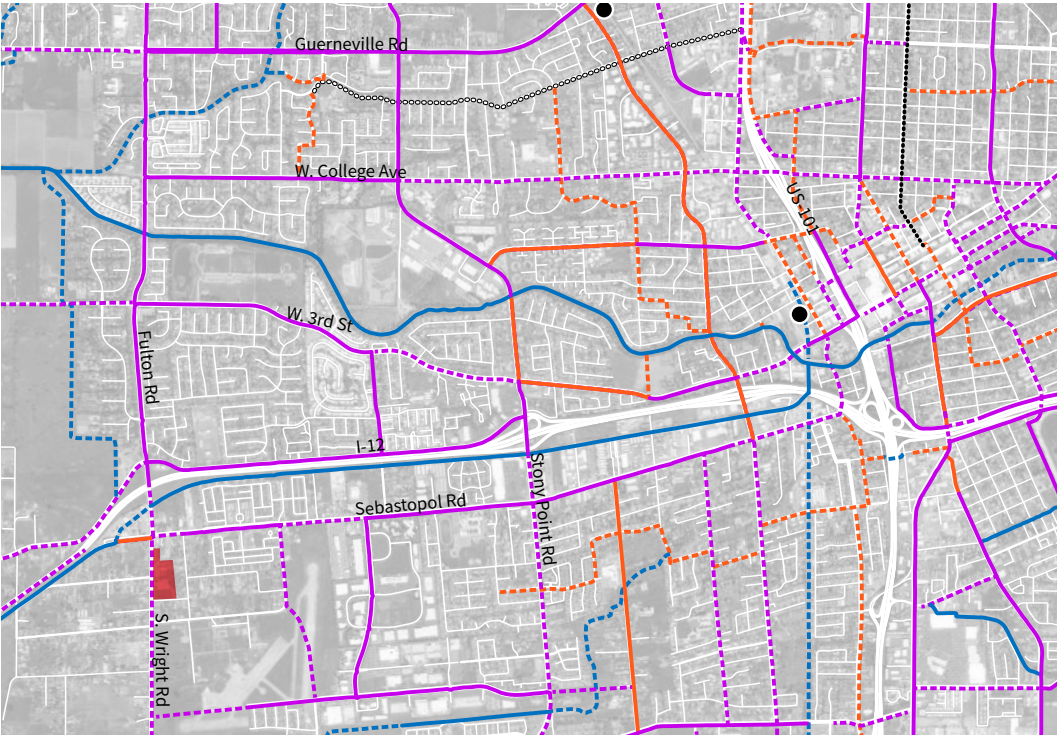
- Freeway
- Arterial
- Collector

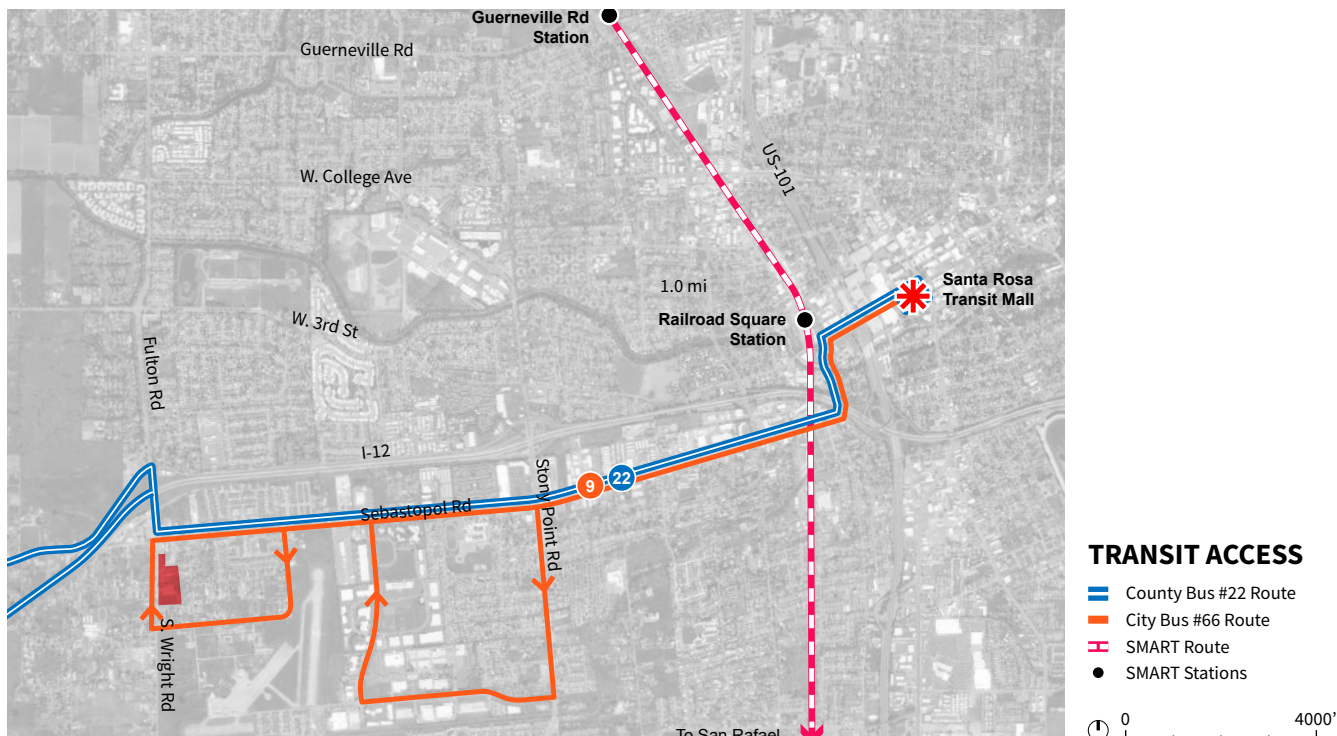


BIKE NETWORK / ACCESS

A comprehensive bicycle system of existing and proposed routes in the City of Santa Rosa connect the campus to downtown Santa Rosa and the Santa Rosa campus, as well as the city at large. Main bike routes that provide access to campus are along Sebastopol Road, Fulton Road / Wright Road, and the Joe Rodota Trail south of Highway 12.

- Class I - Bike Path
- Class II - Bike Lane
- Class III - Bike Route
- Bike Boulevard
- Proposed





TRANSIT ACCESS

Local transit access is available via Santa Rosa CityBus Route 9 or Sonoma County Transit Route 22. Both routes originate at the Santa Rosa Transit Mall in Downtown Santa Rosa and continue west along Sebastopol Road.

The Sonoma County Transit stop is located at the northwest corner of Sebastopol Road/North Wright Road and is lacking adequate facilities. The stop does not have a bench or shelter and is located such that it blocks the westbound right-turn lane. Additionally, the sidewalk on the east side of South Wright Road connecting the stop to campus is discontinuous and forces pedestrians to walk on the roadway shoulder. The CityBus transit stop is located directly adjacent to campus on northbound South Wright Road and is lacking a shelter. The stop is located on-line, but operates acceptably due to the relatively low volume of traffic on this section of South Wright Road.

Future improvements should include consideration for removing the existing Sonoma County Transit stop and creating a new off-line stop on northbound North Wright Road just north of Sebastopol Road. Furthermore, shelters and

benches should be provided at both stops for the use of waiting passengers.

In 2016, Santa Rosa CityBus completed a draft report entitled Re-imagining CityBus, summarizing the short and long-term plans for the transit system. The short-term plan includes splitting Route 9 into two routes, Route 9 Northpoint and Route 9 Wright which would serve campus. Headways would remain at 30 minutes, but a more direct service would be provided between campus and the Downtown Transit Center.

Additionally, the Sonoma-Marín Area Rail Transit (SMART), a passenger rail service and bicycle-pedestrian pathway project, is currently under construction, with the first phase to open in late 2016. The first phase of SMART will serve a 70-mile corridor from Northern Santa Rosa to Downtown San Rafael, eventually extending north to Cloverdale and south to Larkspur Landing. The Railroad Square Station, west of downtown Santa Rosa will be the closest station to the site. Transfer to CityBus Route 9 Wright or Sonoma County Transit Route 22 will connect the site to regional transit.

ANALYSIS

Existing Site and Facilities Conditions



Southwest Santa Rosa Center
Photo By: Gensler

EXISTING SITE

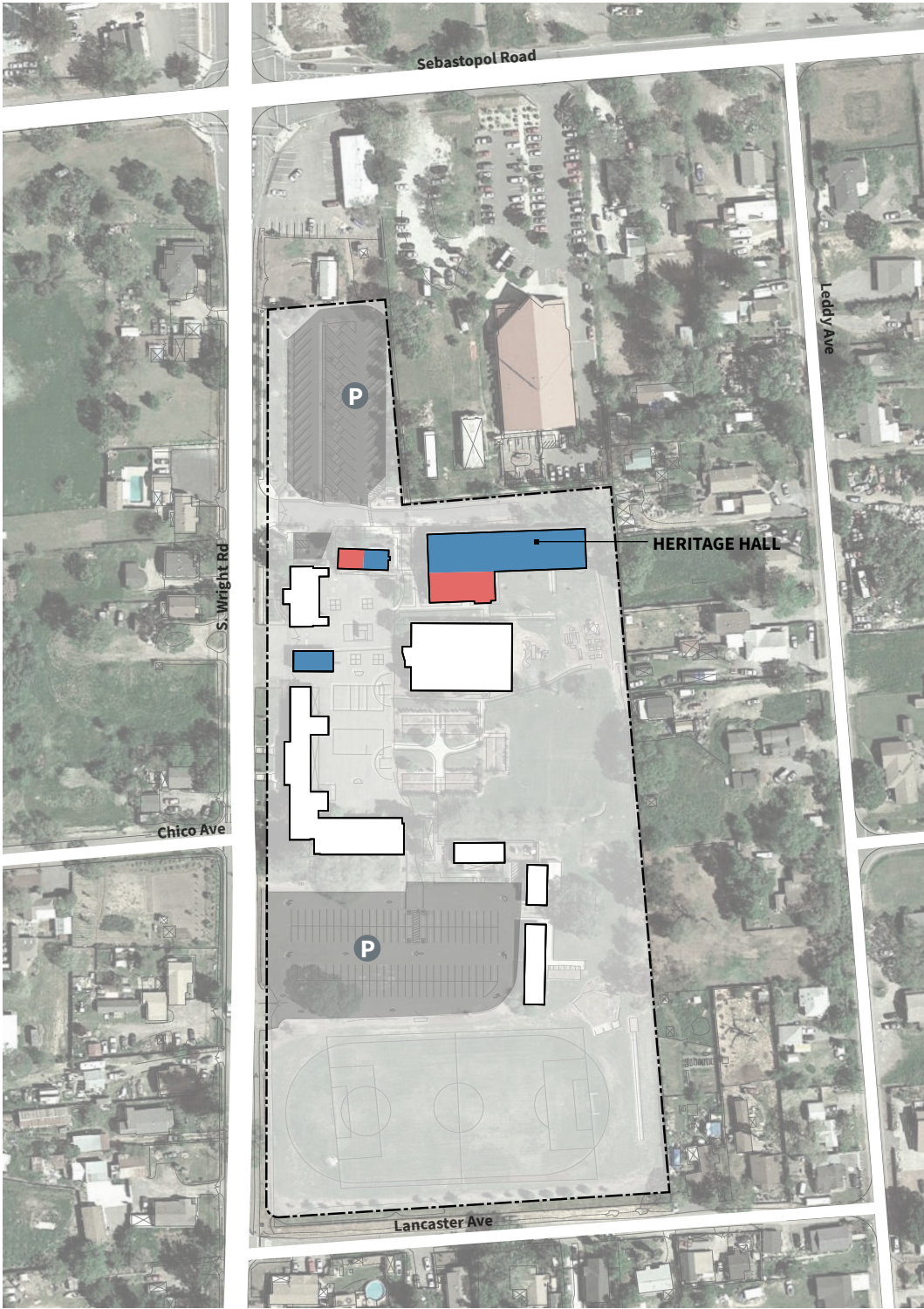
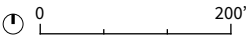
The Sonoma County Junior College District currently leases this 9.5-acre site and its associated facilities from the Wright School District of Sonoma County.

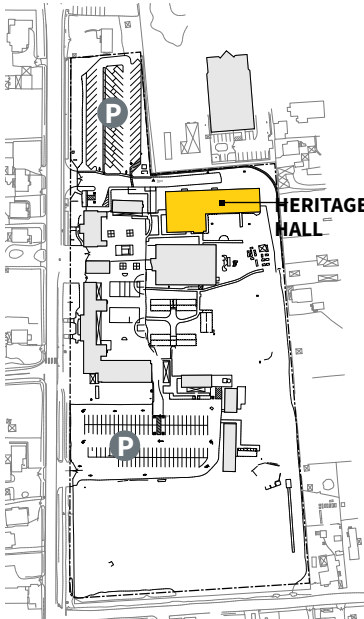
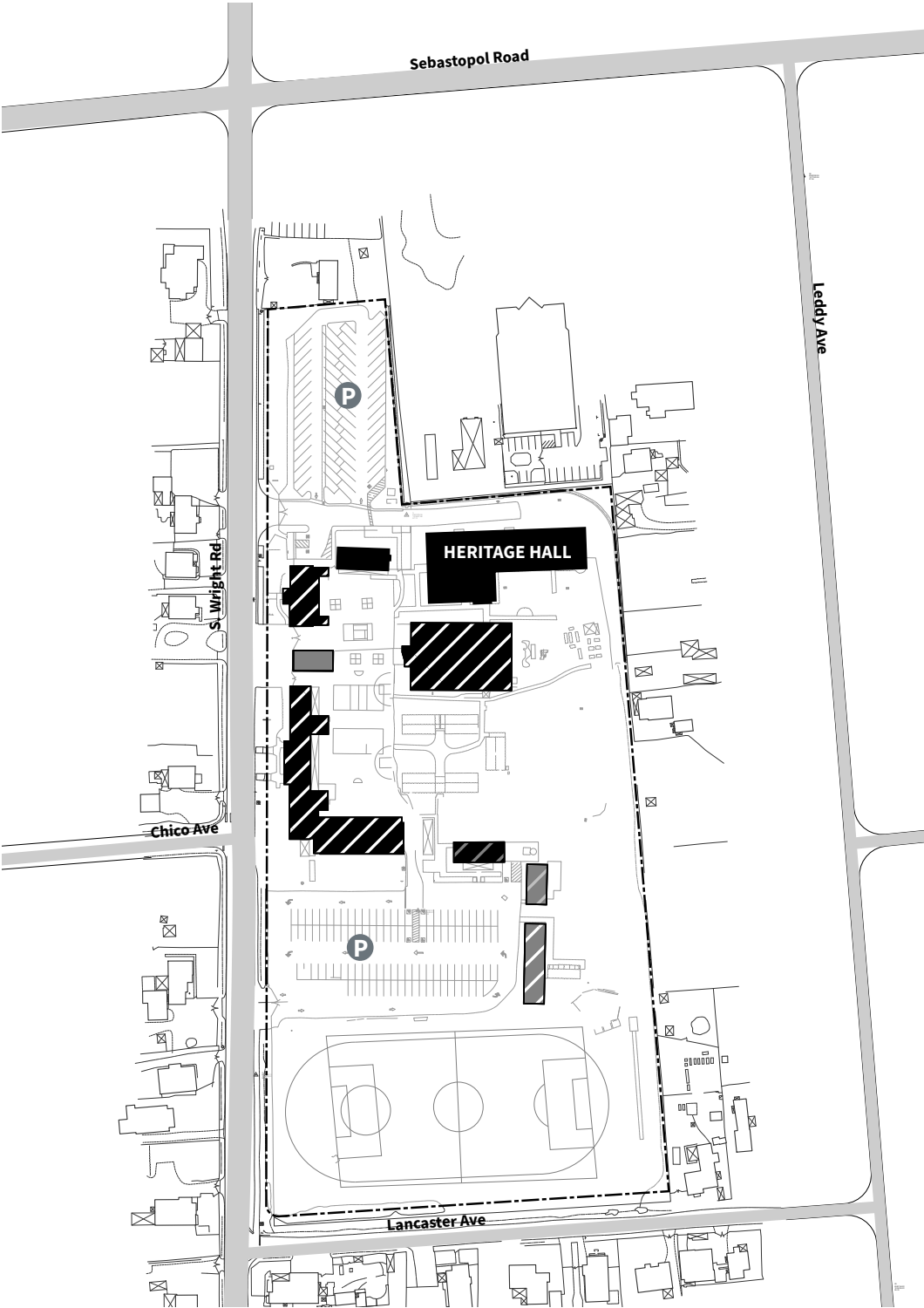
SITE FACILITIES

There are 10 Classrooms and Student Support / Administrative Offices in Heritage Hall. A Faculty Office and a Student Support Services Center are located in the modular facility to the west of Heritage Hall. A solar maintenance program is located in the modular southwest of Heritage Hall. All other facilities on the site are either not used, or used by others.

CAMPUS ZONING

- Instructional
- Student Services and Activities
- Parking





FACILITY CONDITION
- HERITAGE HALL

Architectural	3
Structural	3
Fire	3
Plumbing	3
Mechanical	3
Overall	3

- Excellent
- Fair
- Poor
- Remove & Replace
- Not Assessed

EXISTING CAMPUS

- Permanent Structure
- Temporary Structure
- Not Used
- Used by Others



ANALYSIS

Site Circulation



Southwest Santa Rosa Center
Photo By: Gensler

SITE ACCESS

There are two entries to the Southwest Center site on the east side of South Wright Road. The Main Entry is at the north side, accessing the north parking lot, and most proximate to the instructional facilities. An additional entry to the south accesses the southern parking lot. This entry is not signed.

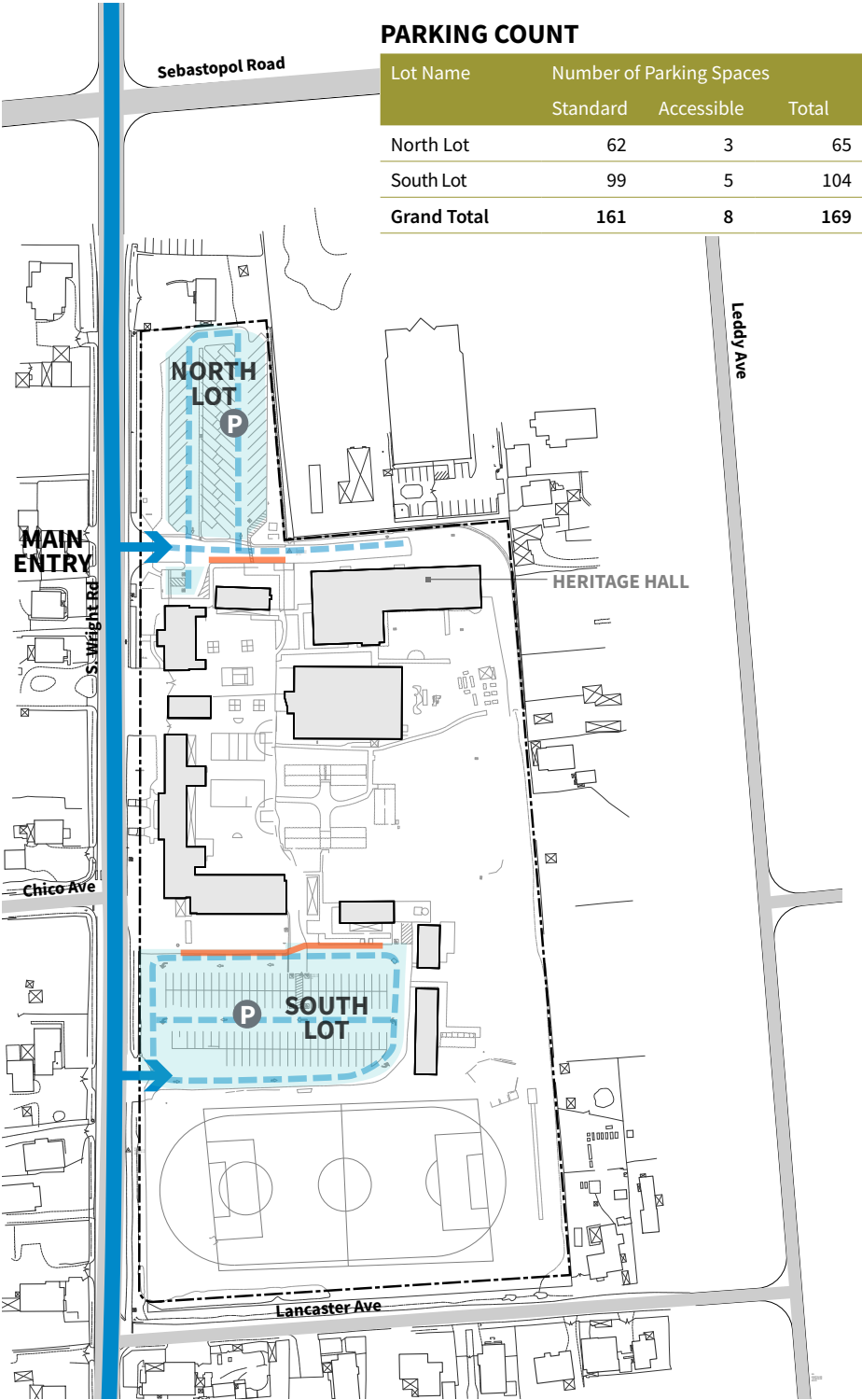
SITE PARKING

There are a total of 169 parking spaces available in the north and south parking lots.

Based on site observation, parking is sufficient for the current programs as occupancy rates never surpassed 85%.

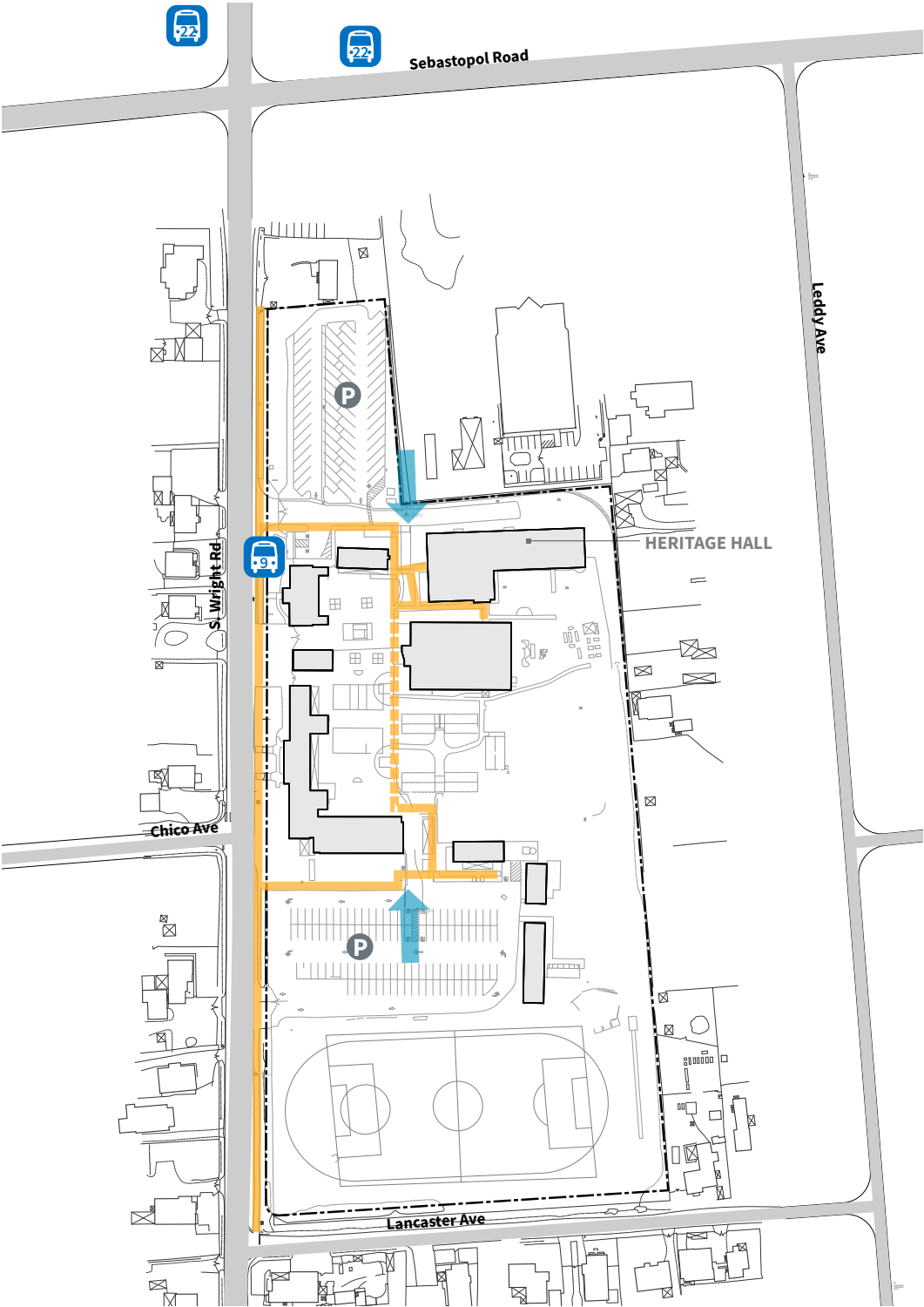
SITE CIRCULATION

- Public Road
- Parking Circulation
- Drop Off
- Surface Parking
- Campus Access



PARKING COUNT

Lot Name	Number of Parking Spaces		
	Standard	Accessible	Total
North Lot	62	3	65
South Lot	99	5	104
Grand Total	161	8	169



Southwest Santa Rosa Center
Gensler

PEDESTRIAN ACCESS

From the bus stops at the intersection of Sebastopol Road and South Wright Road, there is no continuous sidewalk to the site. The only existing public sidewalk is on the east side of South Wright Road, from the north boundary of the site, south to Lancaster Avenue.

Internal to the site, there are paths around Heritage Hall; but, no formal paths between the south parking lot and the instructional facilities exist.

PEDESTRIAN NETWORK

- Pedestrian Path
- Campus Access
- Bus Stop



SOUTHWEST CENTER

RECOMMENDATIONS

RECOMMENDATIONS

Vision Plan

Overview

The Vision Plan supports the educational goals of the Southwest Santa Rosa Center, and in doing so, the success of students within the Sonoma County Junior College District.

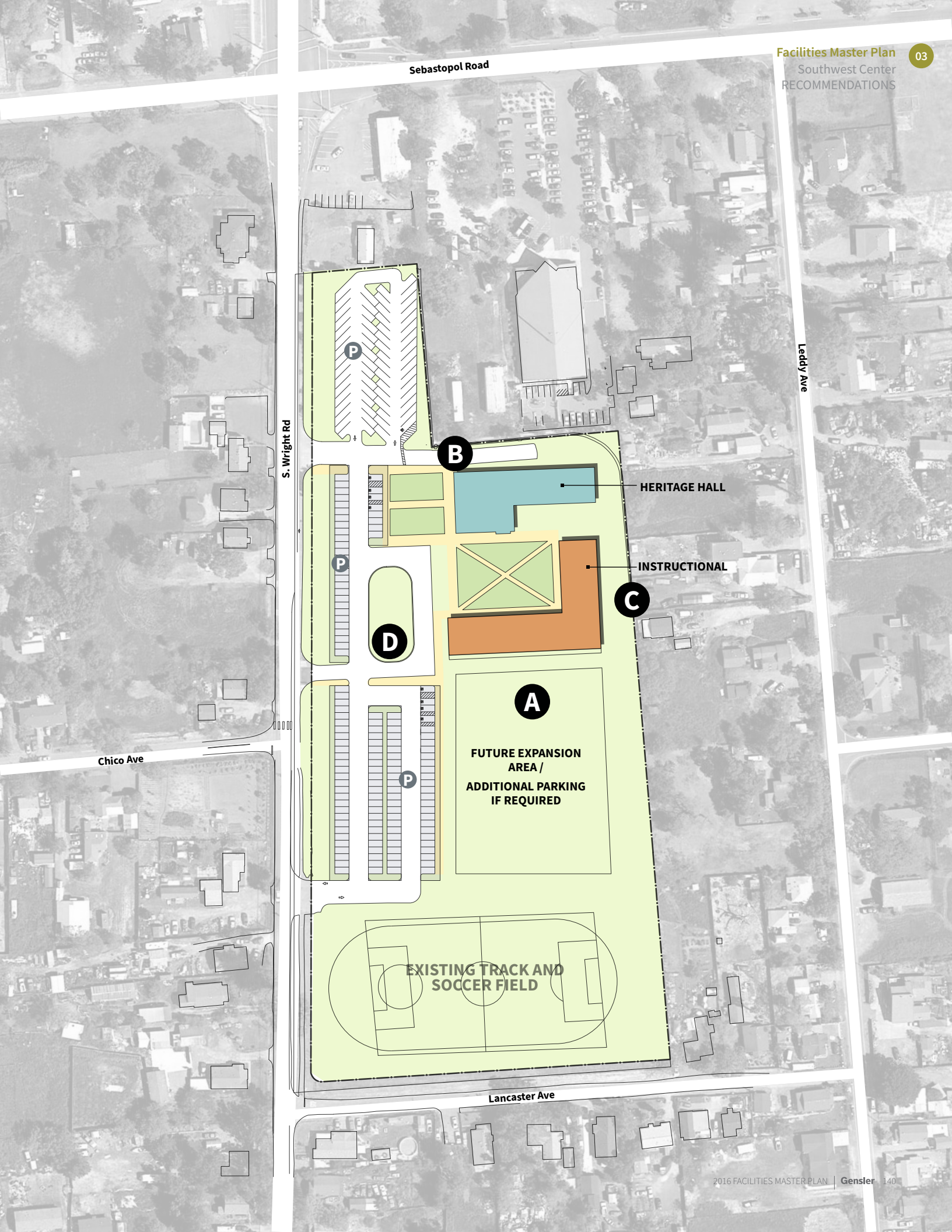
PROJECT LIST

Proj.	Concepts
A	Purchase Southwest Center property <ul style="list-style-type: none">9.5 acresDemo Existing facilities, except for Heritage Hall
B	Renovate existing Heritage Hall to DSA standards. Functions to include: <ul style="list-style-type: none">ClassroomsAdministrativeStudent servicesTotal 12,500 GSF
C	New Instructional Building: <ul style="list-style-type: none">ClassroomOfficeStudent supportTotal 15,000 GSF
D	New parking lots and drop-off with potential solar array

VISION PLAN

- Repurposed/Renovated Facility
- New Facility
- PV Panel





Sebastopol Road

Leddy Ave

S. Wright Rd

Chico Ave

Lancaster Ave

P

B

HERITAGE HALL

INSTRUCTIONAL

C

D

A

FUTURE EXPANSION
AREA /
ADDITIONAL PARKING
IF REQUIRED

EXISTING TRACK AND
SOCCER FIELD

P

P

RECOMMENDATIONS

Facilities Recommendations

PROPERTY ACQUISITION

The Vision Plan recommends that the District acquire the existing Santa Rosa Southwest Center 9.5-acre site from the Wright School District. This will enable the District to make improvements to the site and facilities, as befits its educational goals.

FACILITIES OVERVIEW

Because of their poor condition, it is recommended that all facilities, with the exception of Heritage Hall, be removed from or demolished on the site.

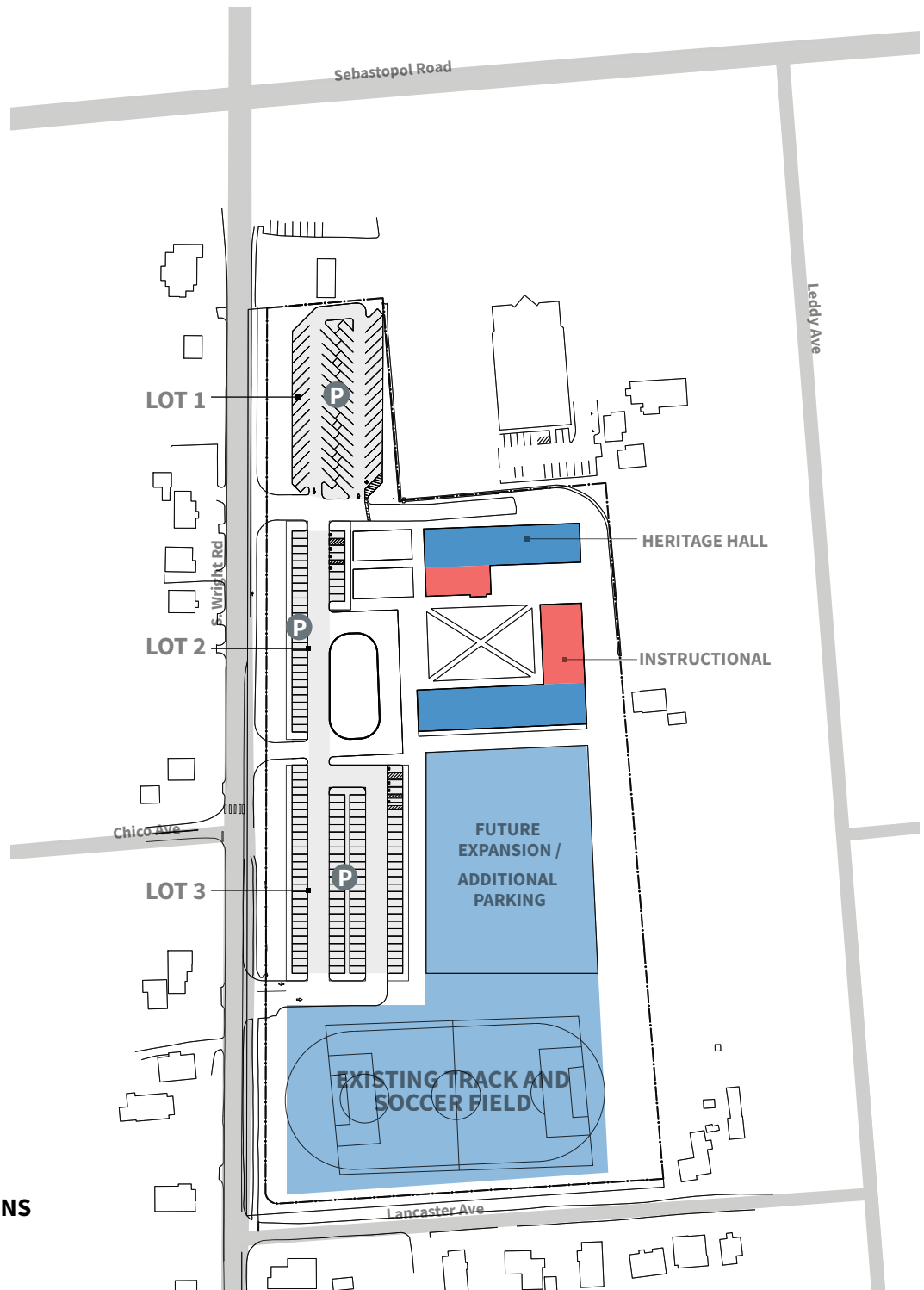
HERITAGE HALL

Heritage Hall is to be renovated to update it to the standards of a modern instructional facility. A total of 12,500 GSF, the functions are to include Classrooms, Administrative offices, and Student Services.

FACILITIES RECOMMENDATIONS

- Instructional
- Student Services and Activities
- Parking

0 200'



RECOMMENDATIONS

Site Recommendations



INSTRUCTIONAL FACILITY

A new Instructional facility is recommended on the Southwest Center site to expand its Instructional offerings. The new facility will be approximately 15,000 GSF and will include Classrooms, Office, and Student Support spaces.

FUTURE EXPANSION

It is recommended that the land east of Lot 3 and the existing track and soccer field remain vacant to allow for future expansion of development. It can be occupied for additional surface parking if required.

OPEN SPACE

Open Space and Landscape recommendations include a forecourt in front of Heritage Hall, consisting of planted areas and pathways. A courtyard between Heritage Hall and the new Instructional Facility is recommended for student gathering. Recommended hardscape includes the drop-off plaza and pathways.

SITE RECOMMENDATIONS

- Softscape
- Hardscape



RECOMMENDATIONS

Circulation and Parking

ACCESS

Vehicular access points 1 and 3 are to remain, and access Lots 1 and 3 respectively. The Vision Plan recommends Entry 2 to access Lot 2 and the student drop-off. All entry points should have appropriate signage and wayfinding.

BICYCLE PARKING

Currently very few students access campus via bicycle; however, as the area surrounding campus develops it is possible for more students to wish to bike. Any future bike parking should be in the form of racks and lockers and should be placed directly adjacent to bicycle approved routes and within close proximity to academic buildings.

PARKING

Additional parking spaces are needed to support the expanded instructional programs. Lot 1 (formerly north lot) is to remain as existing. Lot 3 will be a reconfiguration of the former south lot, and a new Lot 2 will be added. Using the ratio of 132 spaces needed for the current enrollment of 832, a total of 178 spaces will be needed for the projected enrollment of 1,120 students by 2030. The anticipated supply of 200 spaces is expected to be more than adequate.

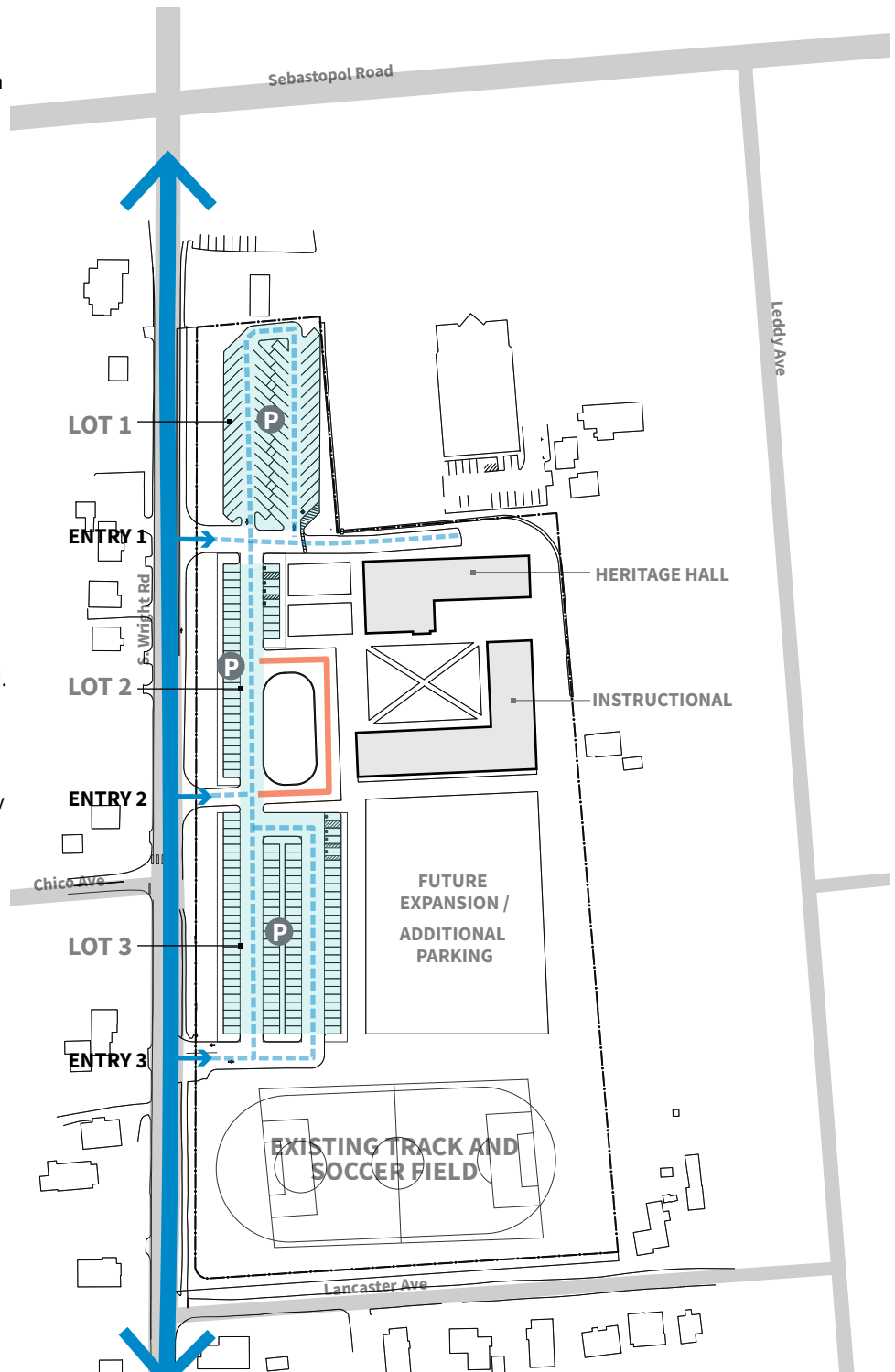
PARKING COUNT

Lot Name	Number of Parking Spaces		
	Standard	Accessible	Total
Lot 1	62	1	63
Lot 2	31	4	35
Lot 3	98	4	102
Grand Total	191	9	200

CIRCULATION & PARKING

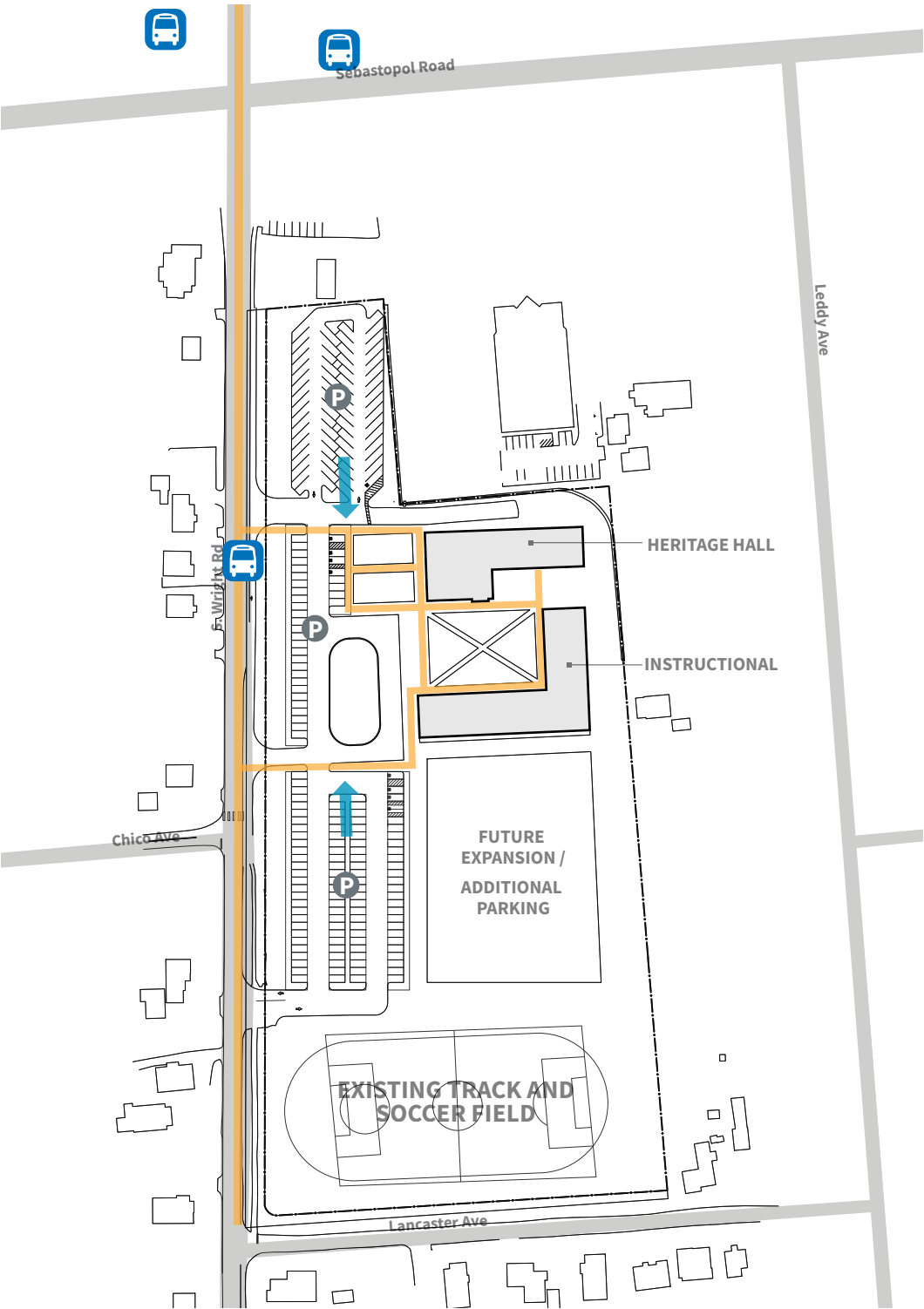
- Public Road
- - - Parking Circulation
- Drop Off
- Surface Parking
- ➔ Campus Access

0 200'



RECOMMENDATIONS

Pedestrian Network



PEDESTRIAN ACCESS

The Vision Plan recommends that the District work with the City of Santa Rosa to install public sidewalks alongside South Wright Road, to provide a continuous public walking path from the bus stops at the intersection of Sebastopol Road and South Wright Road to campus.

Additionally, it is recommended that there be a clear and well-defined pedestrian network on campus from the public right-of-way to access parking, instructional facilities, and open space.

PEDESTRIAN NETWORK

- Pedestrian Path
- Campus Access
- Bus Stop



RECOMMENDATIONS

Signage and Wayfinding

SIGN TYPE LIST

IDENTIFICATION SIGNS

- A1** - Campus ID
- A2** - Campus ID (Dynamic)
- A3** - Campus ID (Landscape)
- A4** - Parking Lot ID
- A5** - Building ID (Wall-mounted)
Not shown on plan
- A6** - Building ID (Freestanding)
Not shown on plan
- A7** - Building ID
(Dimensional Letters)
Not shown on plan
- A8** - Parking Zone ID
(Pole-Mounted)
Not shown on plan

DIRECTIONAL SIGNS

- D1** - Campus Map + Directional
- D2** - Finger Post Directional
- D3** - Campus Map (Pedestal)
- D4** - Vehicular Directional

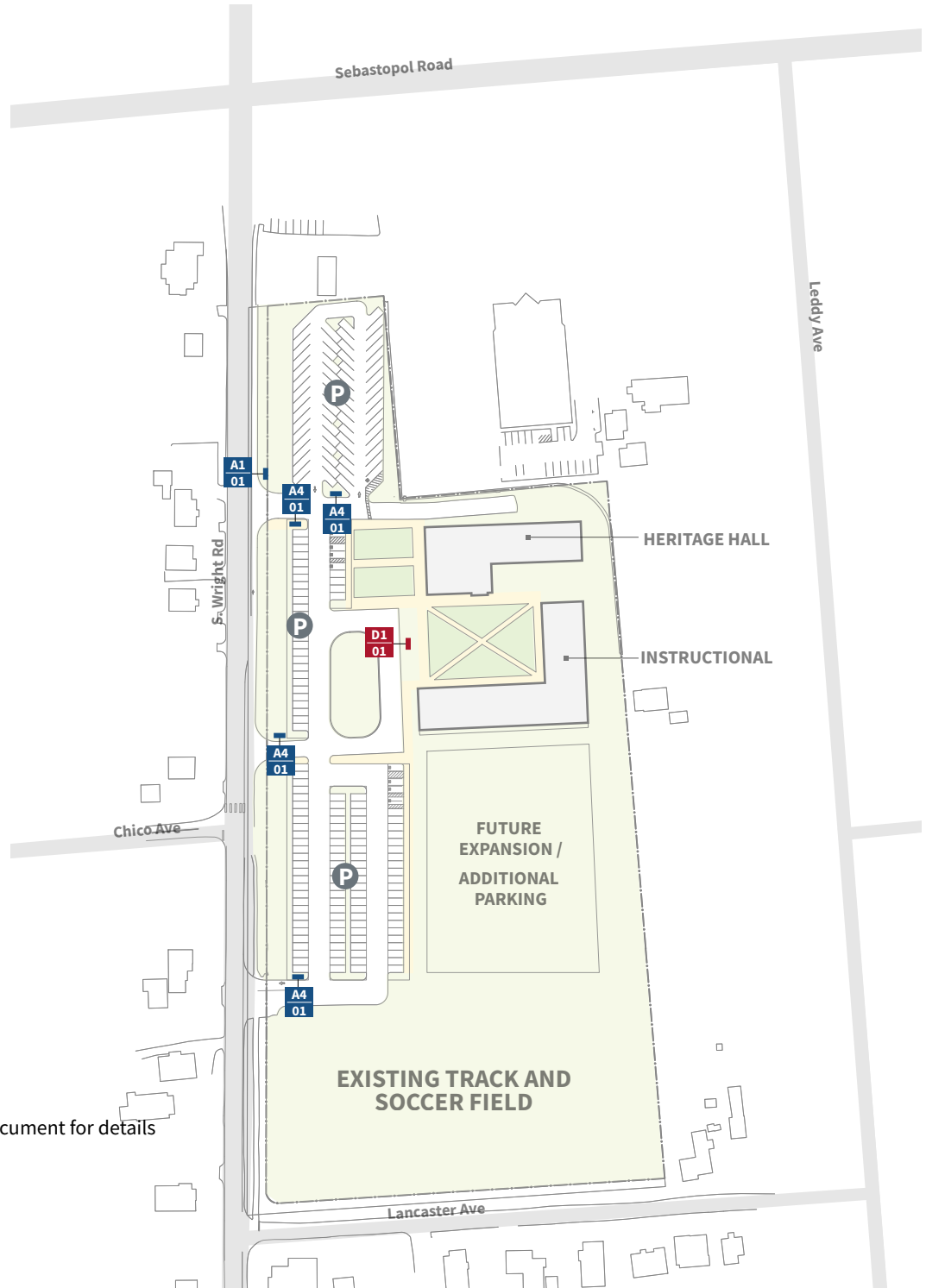
REGULATORY SIGNS

- R1** - Regulatory Sign
Not shown on plan
- R2** - Parking Policy / Zone ID Sign
Not shown on plan
- R3** - Emergency Evacuation Area
ID Sign
Not shown on plan

Refer to signage design guidelines document for details and usage information.

SYMBOL KEY

A4	Sign Type
01	Sign Number



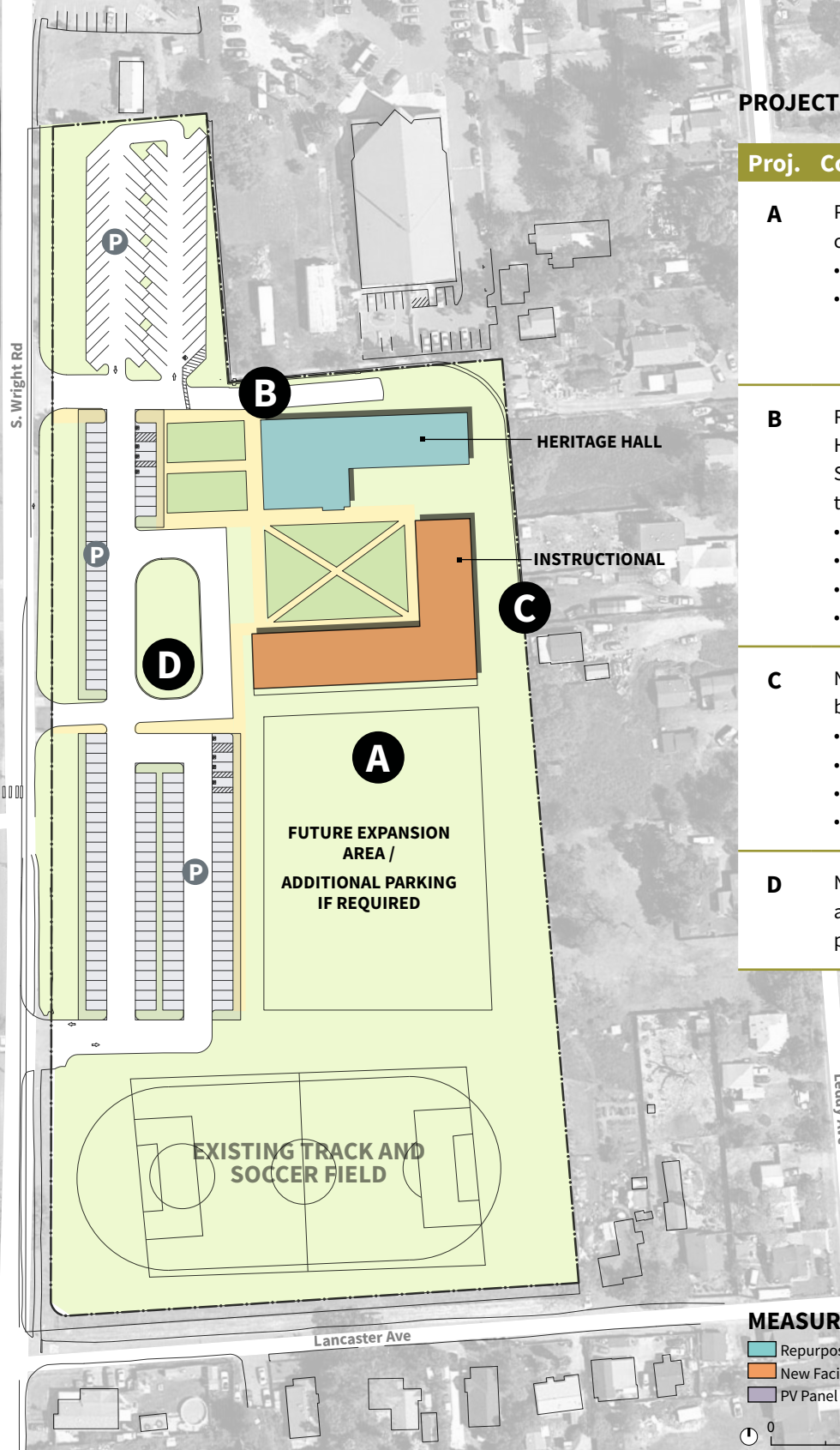
RECOMMENDATIONS

Measure H Plan

PROJECT LIST

Proj. Concepts

- A** Purchase Southwest center property
- 9.5 acres
 - Demo existing facilities, except for Heritage Hall
- B** Renovate existing Heritage Hall to DSA Standards. Function to include:
- Classrooms
 - Administrative
 - Student services
 - Total 12,500 GSF
- C** New Instructional building
- Classroom
 - Office
 - Student support
 - Total 15,000 GSF
- D** New parking lots and drop-off with potential solar array



MEASURE H PLAN

- Repurposed/Renovated Facility
- New Facility
- PV Panel

0 150'

RECOMMENDATIONS

Recommended MEP Campus Systems

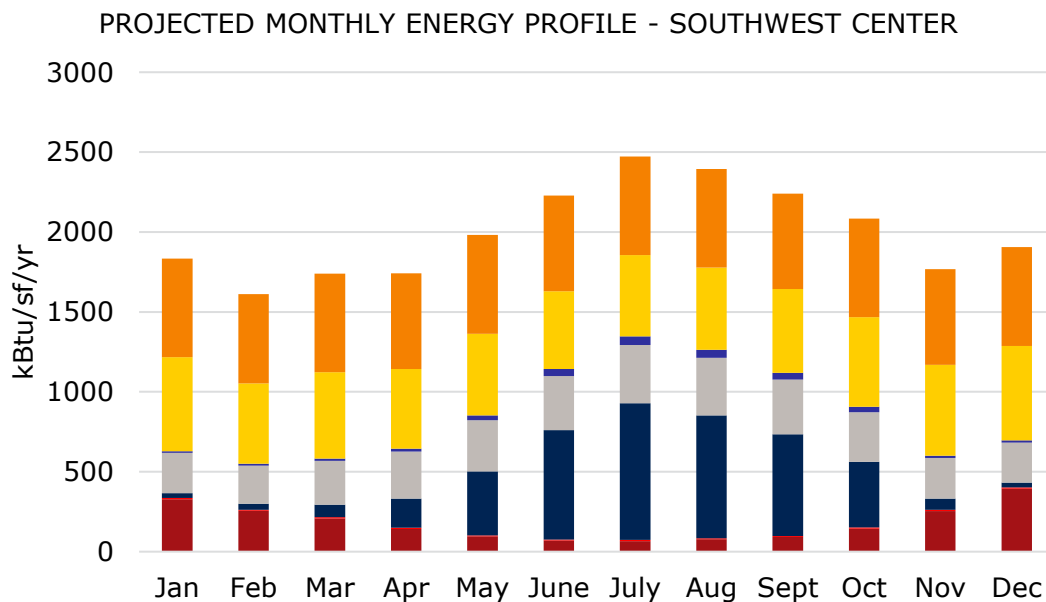
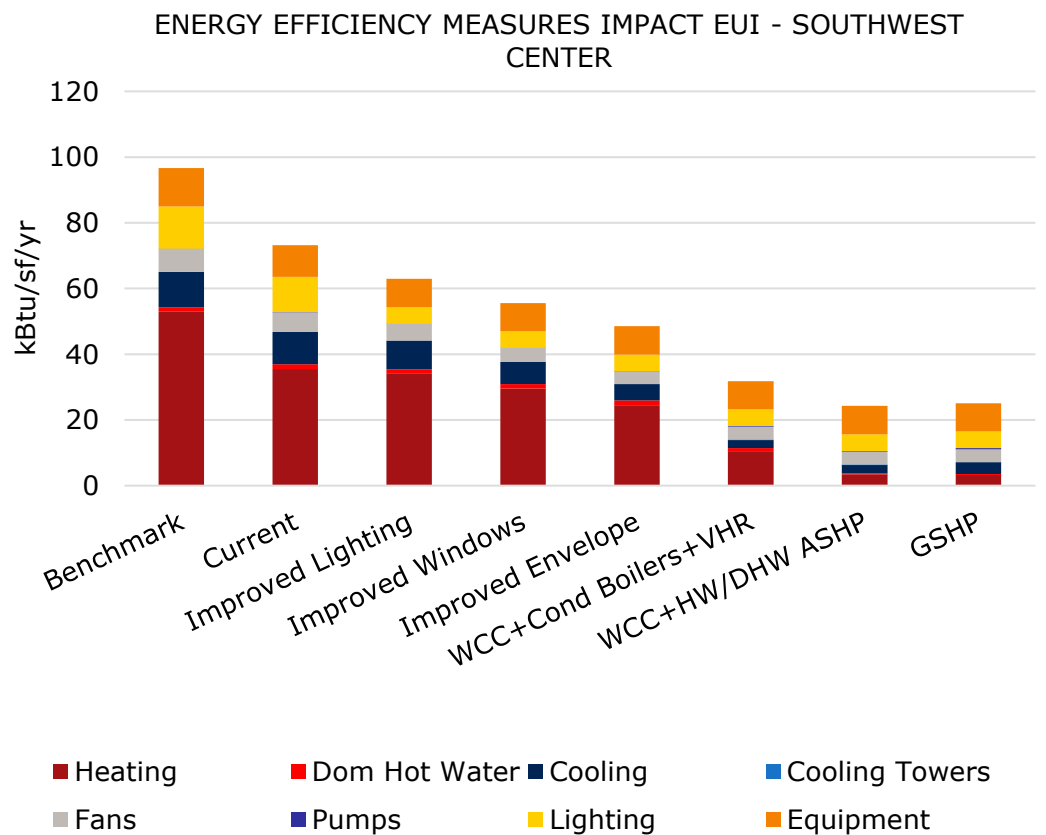
Energy and water analysis was done to reach the recommended systems and strategies below, that analysis is included in the MEP report included in the appendix of this document. Refer to that document for detailed information on the data that supports the following MEP recommendations.

Energy

The existing facilities at the Southwest Center are served by standalone MEP systems.

Similar to the other sites, for all new construction or renovation projects we recommend that the efficiency measures described in the previous section be implemented. Once sub-metering data is available, specific buildings might be identified as candidates for energy upgrades.

Based on the estimated current EUI, the efficiency measures are applied to each of the program type and the impact on the resulting weighted average for the campus EUI. With all the measures applied to every building, the campus average EUI would be about 25 kBtu/sf (66% reduction) which would bring the campus within reach of being Net Zero Energy.



RECOMMENDATIONS

Recommended MEP Campus Systems



**RECOMMENDED CAMPUS LEVEL
ENERGY STRATEGIES**

Given the size of the Southwest Center we do not recommend a central plant condenser water option. Instead, chillers and cooling towers could be shared between the different buildings.

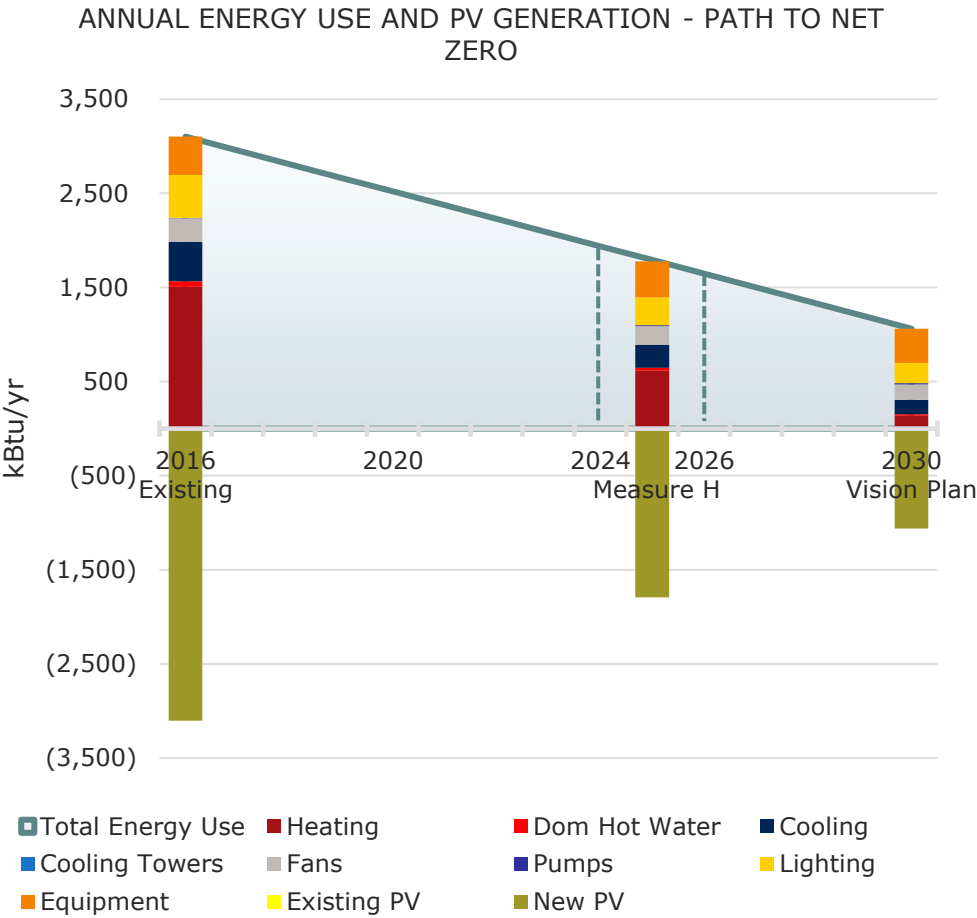
Currently, the Southwest Center has no PV installed on campus. Based on the actual and projected EUI at completion of Measure H and the Vision Plan, assuming that all the efficiency measures have been implemented, the amount of PV required to achieve net zero is indicated in the table. These estimated areas have been calculated assuming a constant campus space square footage and program.

PV AREA REQUIRED

	Area (sf)	Cost (\$)
Current	39,000	2,00,000
Measure H	22,000	1,100,000
Vision Plan	13,000	700,000

RECOMMENDED BUILDING LEVEL
ENERGY STRATEGIES

The amount of PV required to achieve Net Zero Energy is directly related to the ability to reduce the campus' energy consumption. Each of the building efficiency measures (energy efficient glazing, daylight harvesting, efficient lighting, heat recovery ventilation and laboratory low airflow minimum) are recommended for new constructions and should be evaluated for building retrofits through LCCA analysis.



RECOMMENDATIONS

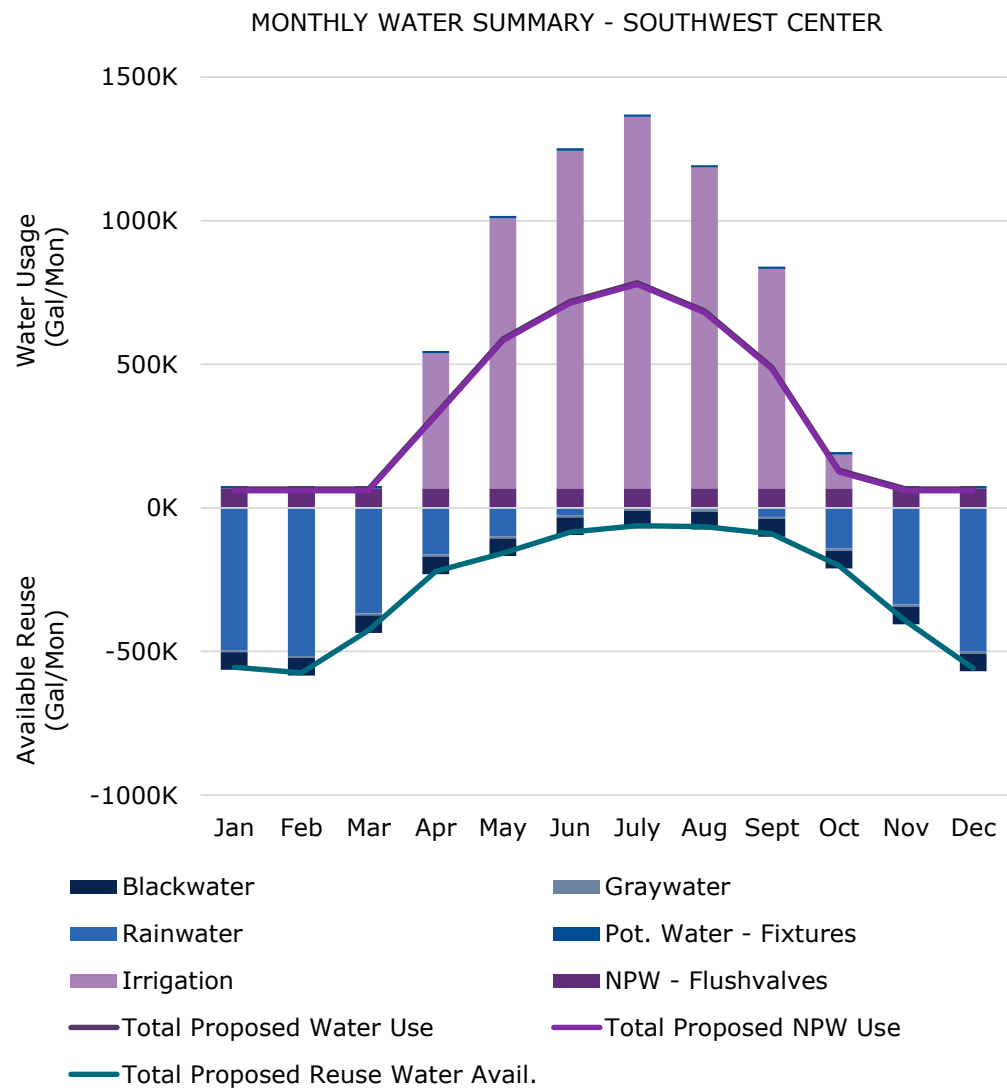
Recommended MEP Campus Systems

Water

Similar to the Existing Monthly Water Use graph in the appendix, the Monthly Water Summary graph shows the monthly water use of meeting code minimum of CalGreen, by the bar graph. The lines through the graph depict the proposed case of implementing low flow fixtures, drought tolerant landscape and swimming pool covers. These strategies are evaluated in the section below.

There are some key water usage trends depicted in this graph, that show why certain water saving strategies are recommended or not. When reviewing this graph it is important to understand that treated reclaimed water from rainwater, greywater or blackwater can only be reused for non-potable water, indicated in a shade of purple. Treated water can't be reused for any potable water, indicated in a shade of blue.

The Monthly Water Use graph shows that with the proposed case rainwater, greywater, and blackwater treatment would not be able to meet the non-potable water demand (line in graph is above non-potable water use) for the campus in the summer months due to the irrigation load.



RECOMMENDATIONS

Recommended MEP Campus Systems



Recommended Water Strategies

The following strategies are recommended because they offer significant water savings with relatively low to medium cost and because they are critical to achieving the Vision Plan goals

LOW FLOW PLUMBING FIXTURES

Replacing all the existing fixtures with the efficient low flow plumbing fixtures is outlined in Section 6.16 “Low Flow Plumbing Fixtures” of the appendix. If low flow fixtures are installed estimated water savings is 40% from LEED and 14% savings from CalGreen. For new buildings the cost difference between the low flow fixtures and CalGreen fixtures is negligible.

An important item to note is that food service water usage has the highest indoor water demand. This water usage is based on process loads for equipment and fixtures. If the water usage was reduced by a significant factor, it would affect the fixture/equipment’s functionality. It is assumed that no water savings will be obtained from food service.

DROUGHT TOLERANT LANDSCAPE

Replacing all existing vegetation and irrigation systems with low water use plants and efficient subsurface irrigation, can have a large impact on water savings. This provides an estimated of 44% water savings from the assumed baseline of medium water use plants with an overhead spray irrigation system



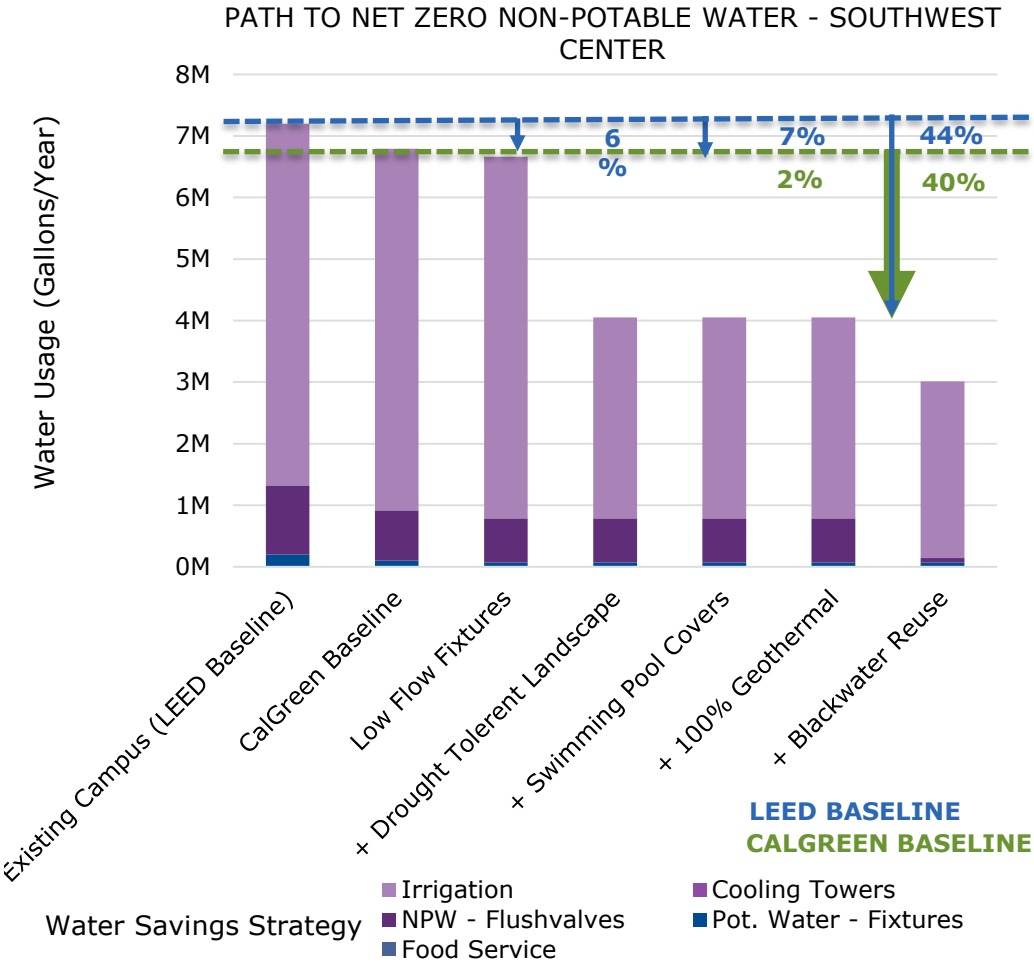
There are no additional strategies are recommended in order to achieve the 2030 goal of net zero non-potable water for the campus. If desired sewer mining is a water treatment option that could be utilized to offset the remainder of the campus’ non-potable water demands. Just as the name implies, sewer mining involves tapping into a wastewater collection system, siphoning some of the sewage off to an on-site treatment facility, and then reusing the reclaimed water on-site for non-potable water uses, irrigation and flush-valves. This treatment option was not analyzed due to the fact that it isn’t as feasible for the campus.

No additional strategies are recommended in order to achieve the 2030 goal of net zero non-potable water for the campus. There are no cooling towers on the project, so Geothermal isn’t required.

If desired sewer mining is a water treatment option that could be utilized to offset the remainder of the campus’ non-potable water demands. Just as the name implies, sewer mining involves tapping into a wastewater collection system, siphoning some of the sewage off to an on-site treatment facility, and then reusing the reclaimed water on-site for non-potable water uses, irrigation and flush-valves. This treatment option was not analyzed due to the fact that it isn’t as feasible for the campus

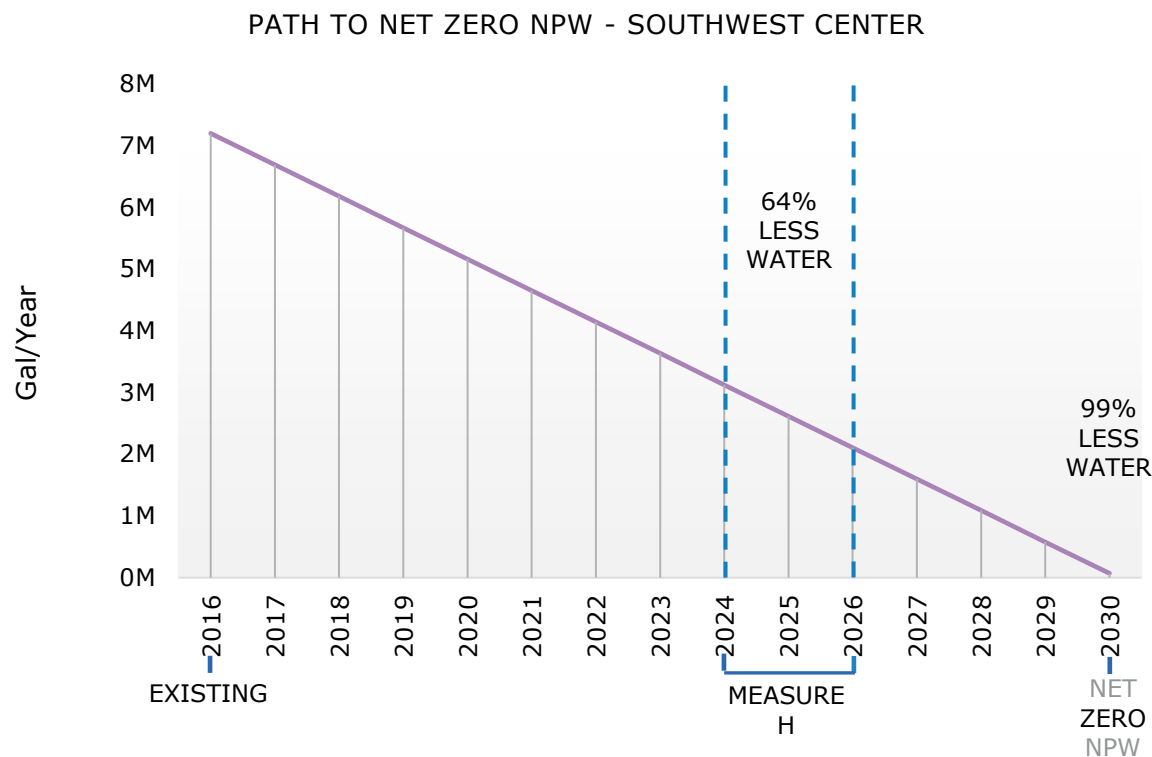
Path to 2030

By incrementally implementing the campus water saving measures within the “Reuse Proposed Case”, the campus can achieve net zero-non-potable water. The Path to Net Zero graph shows the water savings achieved.



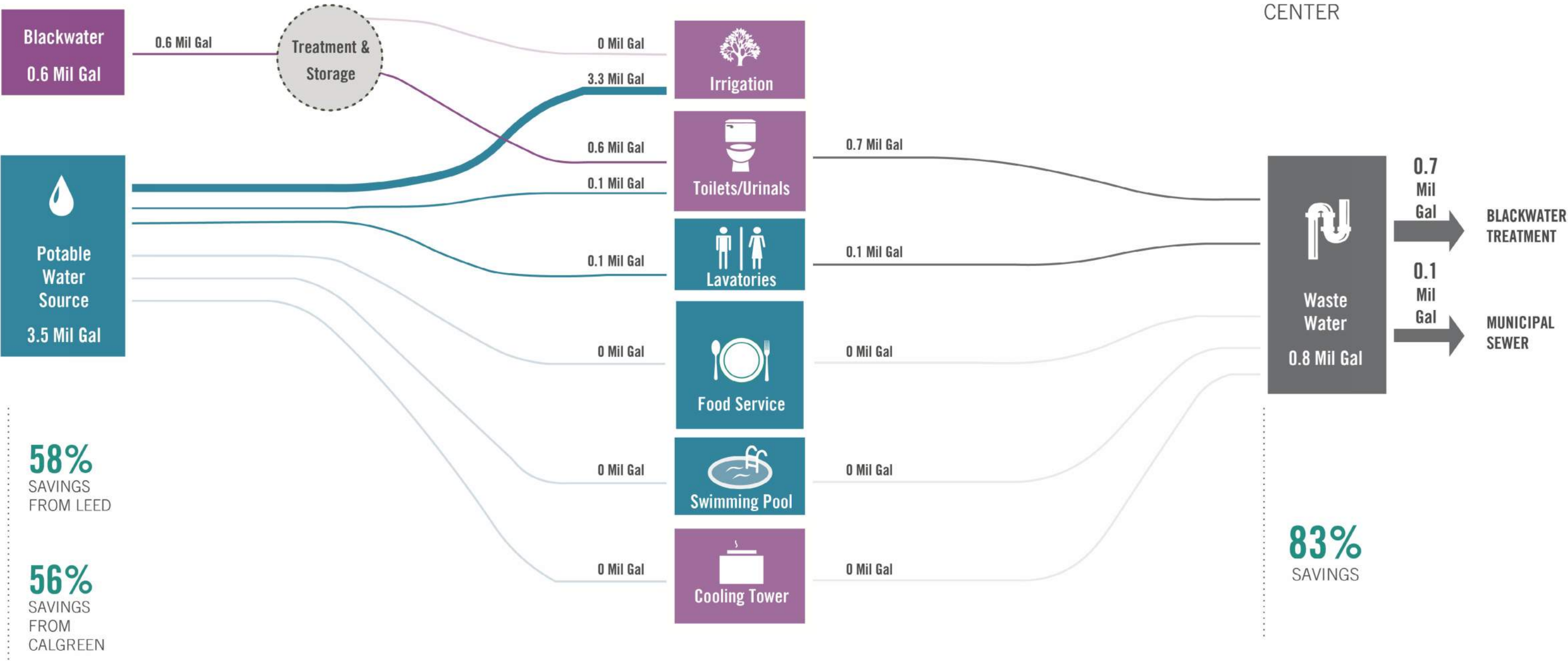
RECOMMENDATIONS

Recommended MEP Campus Systems



The Progress Path to Net Zero Non-Potable Water graph depicts the current campus water usage, along with the net-zero non-potable water goal in 2030. Measure H is tracking for years 2024 to 2026 and the percent water savings indicated should be achieved by Measure H, in order to be on track to reach the 2030 goal of net-zero non-potable water.

SOUTHWEST CENTER



REUSE PROPOSED CASE:
LOW FLOW FIXTURES, DROUGHT TOLERANT LANDSCAPE,
SWIMMING POOL COVERS, GEOTHERMAL & BLACKWATER REUSE

3.4

Public Safety Training Center

PUBLIC SAFETY TRAINING CENTER

ANALYSIS

ANALYSIS

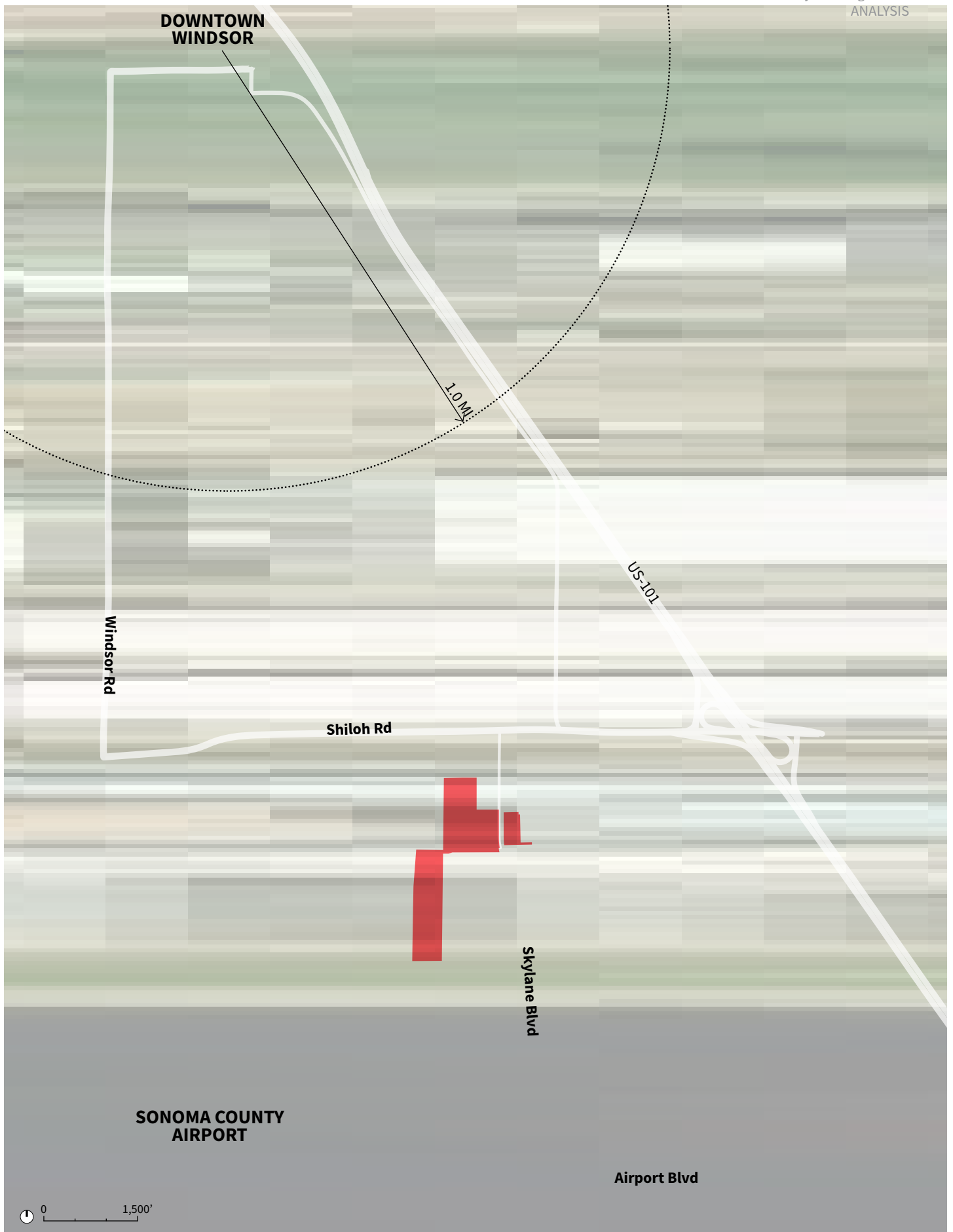
Context Map



Public Safety Training Center
Photo By: Gensler

LOCATION

The Public Safety Training Center (PSTC) is located at the southern edge of the Town of Windsor, California. This site is 7.5 miles north of the Santa Rosa Campus and two miles south of Downtown Windsor. It is the northernmost teaching site within the Sonoma County Junior College District.



ANALYSIS

Land Use Adjacencies



Public Safety Training Center
Google Earth

OVERVIEW

PSTC is bordered by the City of Santa Rosa to the west and south, and by the Town of Windsor to the east and north.

AGRICULTURAL + INDUSTRIAL

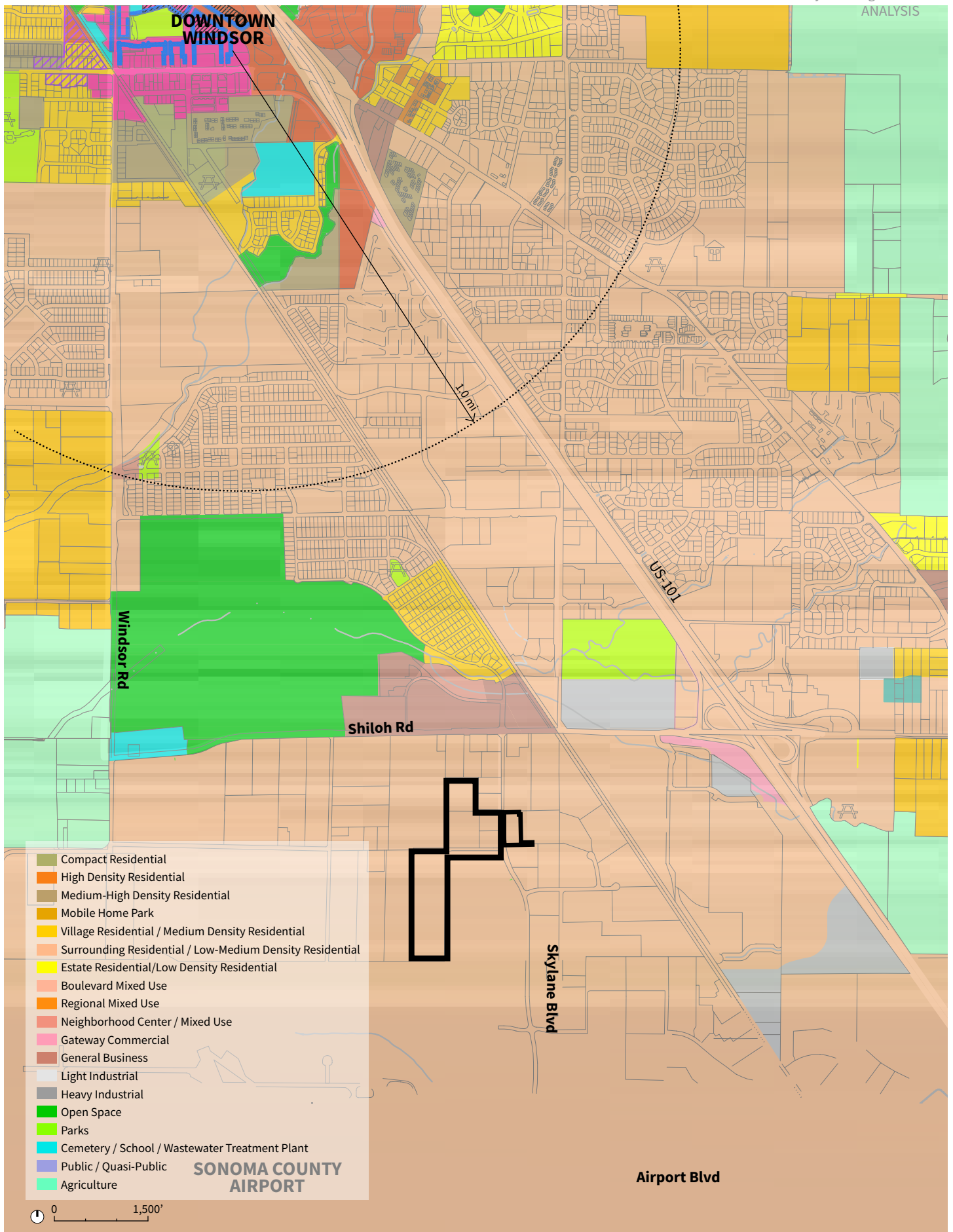
The site is sandwiched between agricultural to the west and industrial to the east.

PUBLIC + INSTITUTIONAL

Public and institutional uses, including a water treatment facility and the Sonoma County Airport are located to the south of the site.

RESIDENTIAL

In recent years, residential uses have been creeping south from Windsor. A condominium development is located at the northwest corner of Skylane Boulevard and Shiloh Road.



ANALYSIS

Campus Access



Public Safety Training Center
Photo By: Gensler

ROAD NETWORK + VEHICULAR ACCESS

The Public Safety Training Center (PSTC) site is bisected by Skylane Boulevard, with Shiloh Road to the north and Airport Boulevard to the south. Both Airport Boulevard and Shiloh Road connect east to Highway 101.

TRANSIT ACCESS

Currently, the PSTC is served by Sonoma County Transit Route 62, which provides service between Santa Rosa and Windsor and stops directly in front of the site along Skylane Boulevard.

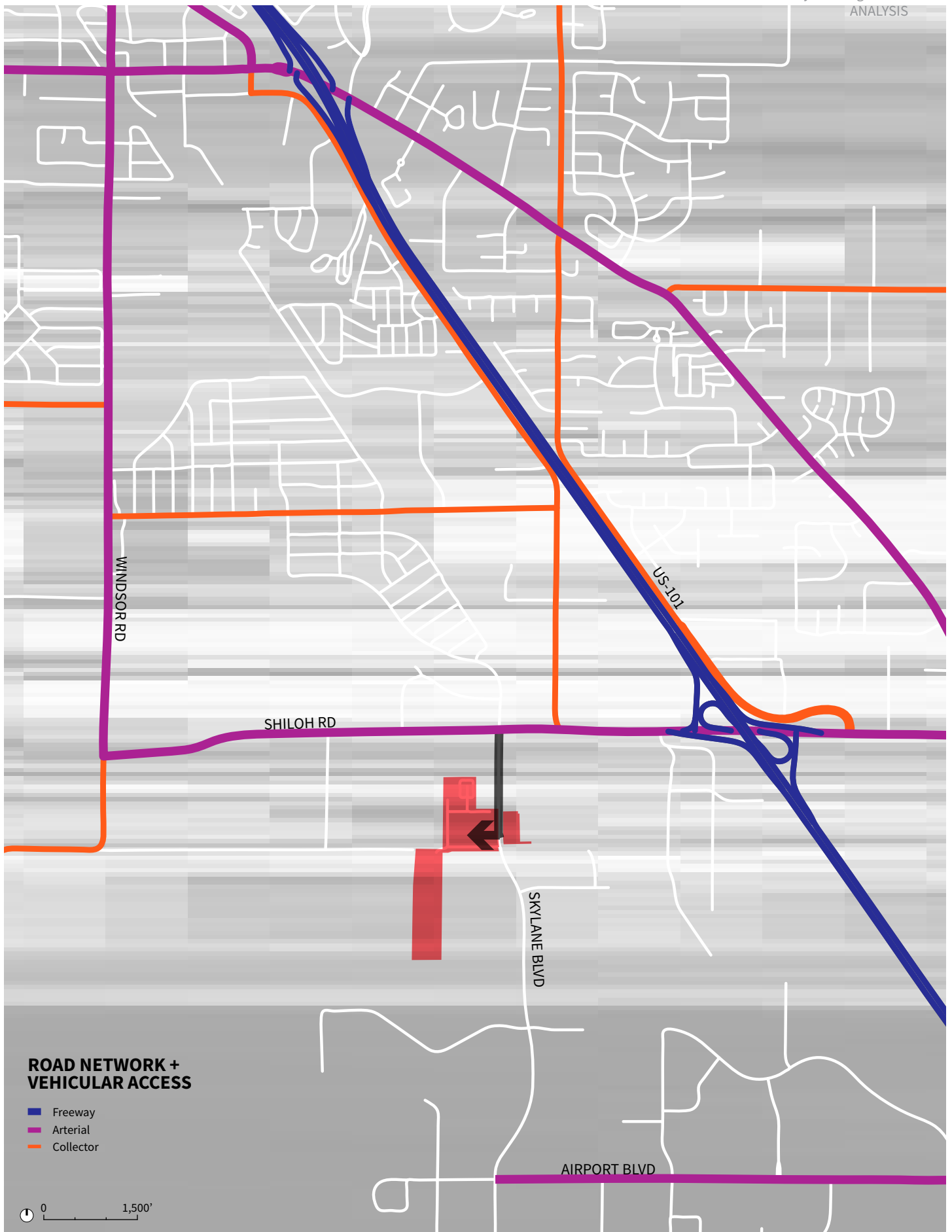
Additionally, the Sonoma-Marin Area Rail Transit (SMART), a passenger rail service and bicycle-pedestrian pathway project, is currently under construction, with the first phase to open in late 2016. The first phase of SMART will serve a 70-mile corridor from Northern Santa Rosa to Downtown San Rafael, eventually extending north to Cloverdale and south

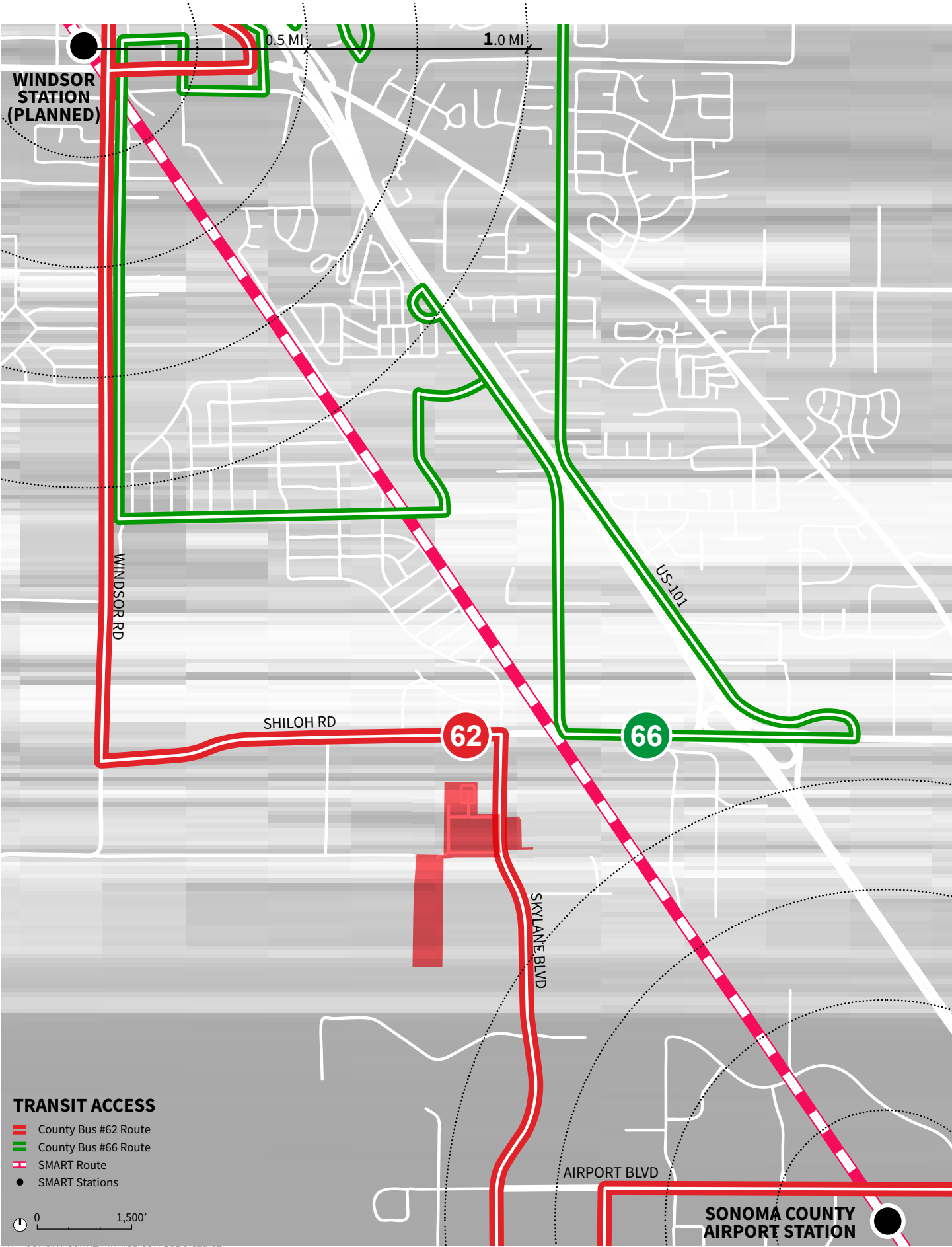
to Larkspur Landing. The Sonoma County Airport Station is just over 1 mile southeast of the PSTC, and the planned Windsor Station will be two miles northwest of campus. Sonoma County Transit Route 62 will connect both of these SMART Stations to the PSTC.

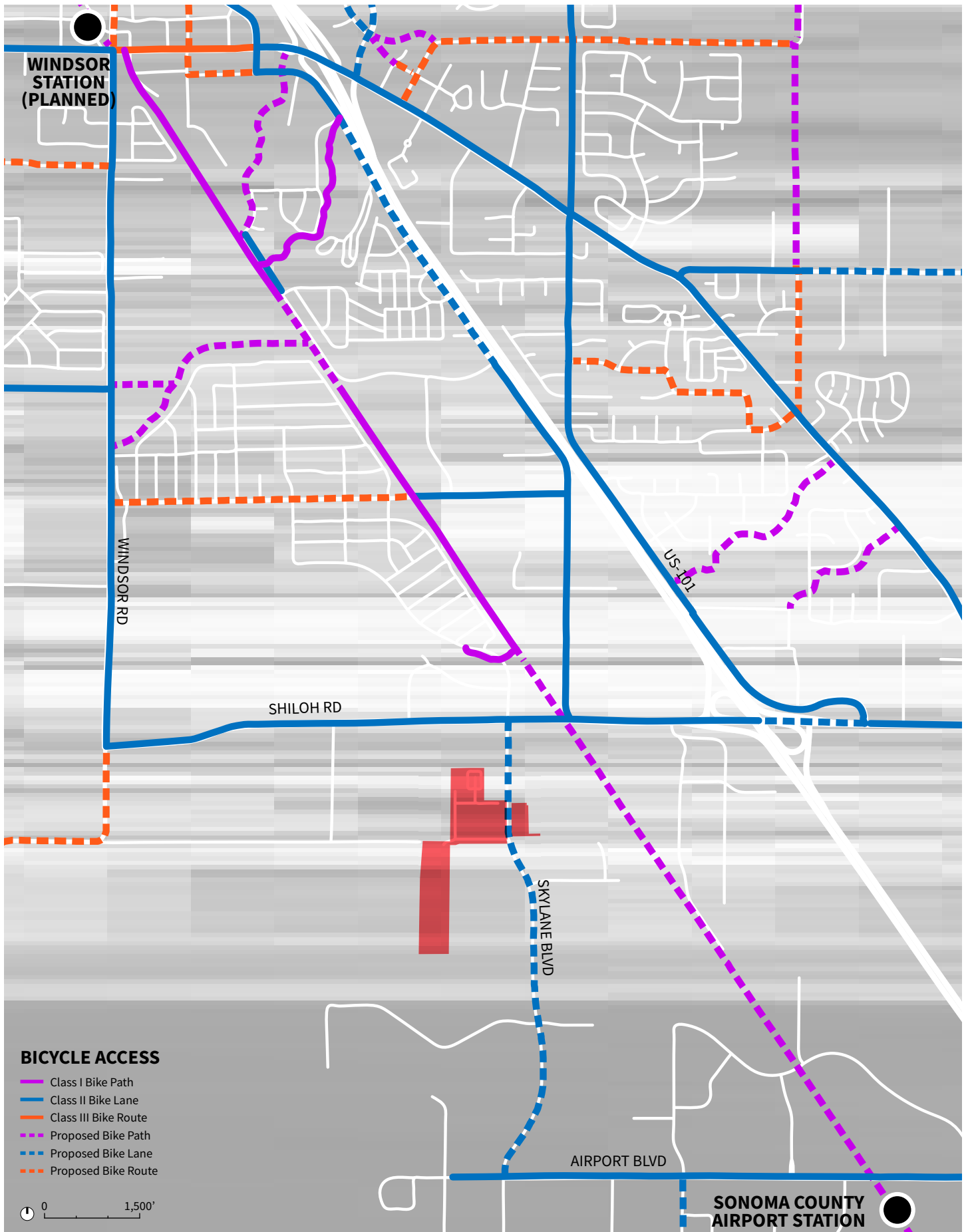
Future improvements at the PSTC should include installation of shelters and benches at the two stops on Skylane Boulevard adjacent to the site. Consideration should also be given to the need for a marked crosswalk on Skylane Boulevard to provide transit riders with safe access between the northbound stop and the PSTC.

BICYCLE ACCESS

A regional bicycle system of existing and proposed routes in the Town of Windsor and the City of Santa Rosa provide bicycle access from the campus to Downtown Windsor and along the SMART trail.







ANALYSIS

Existing Campus



Public Safety Training Center
Photo By: SCJCD

SITE HISTORY + EXISTING CAMPUS

The Public Safety Training Center was established in 1961, and currently provides coursework and field training for police officers, correctional officers, police dispatchers, seasonal park rangers, emergency medical technicians, paramedics, and firefighters. In spring 2002 the modern facility was completed on a 20-acre site in Windsor to provide in-service training for people working in public safety. The center is the largest provider of in-service training for law enforcement personnel north of the Golden Gate Bridge, offering traditional academic offerings, administration and classroom buildings, an emergency medical care laboratory facility, an indoor firing range, a large multipurpose building, a state-of-the-art scenario training village, and a driving instruction area with skid pad.

Source: <http://maps.santarosa.edu/directions-srjc-public-safety-training-center>



ANALYSIS

Campus Access



Public Safety Training Center
Photo By: Gensler

CAMPUS CIRCULATION

There are two Main Entries from Skylane Boulevard to the Public Safety Training Center: one, south of the main parking lot and two, east of the Administration Building (100).

Limited access for training purposes exists to the north and south ends of the site, for the Scenario Village and Driving Course with Skid Pad, respectively. Additionally, there are two access points to the Warehouse (Building 99) east of Skylane Boulevard.

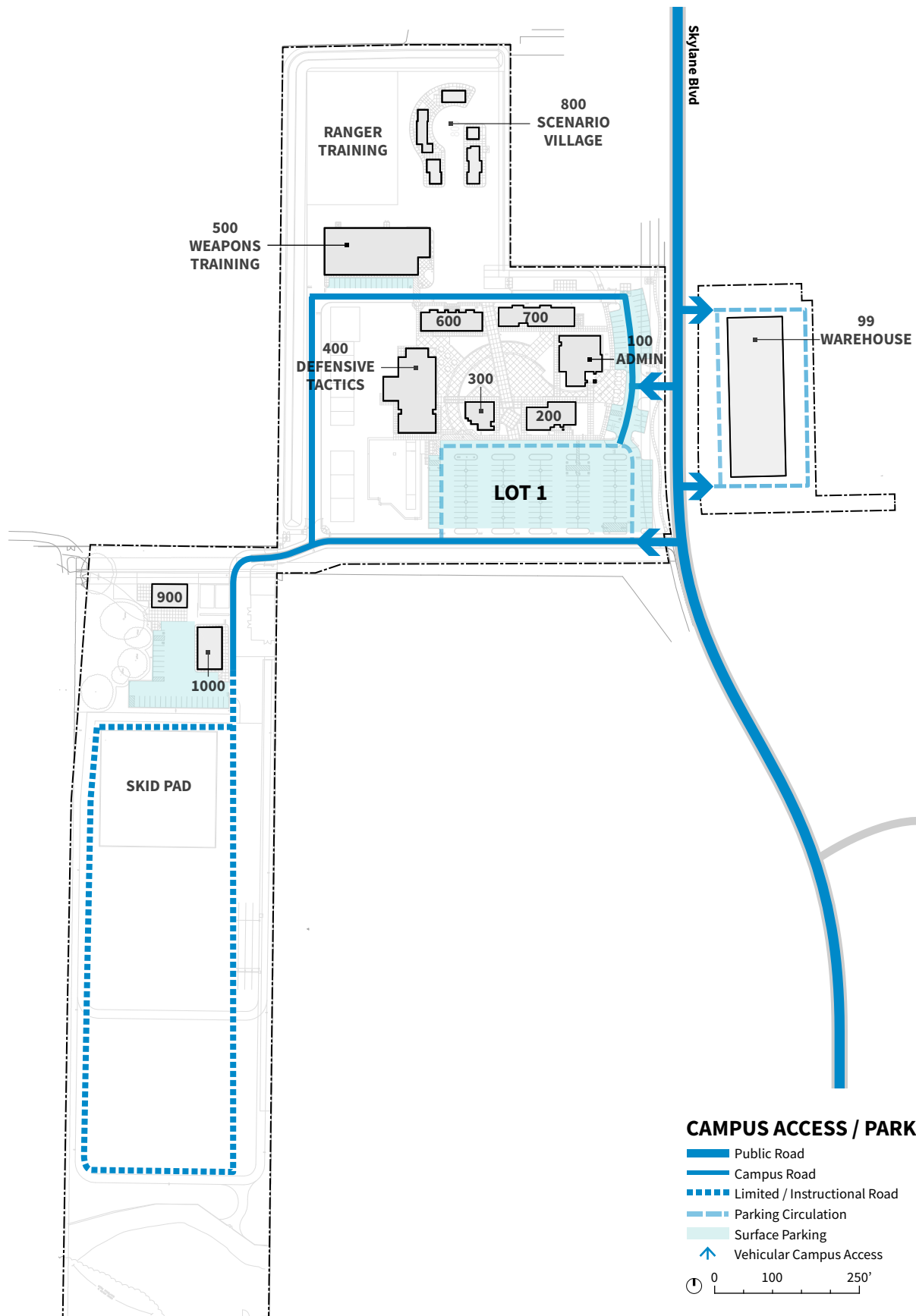
PARKING

Most parking is located in the main parking lot, which is covered by solar canopies that provide self-generated energy for the Center. There are also four visitor spaces, three maintenance spaces, and 21 spaces reserved for staff located east of the Administration Building.

Based on parking occupancy counts taken on Tuesday, August 30 through Thursday, September 1, 2016, the peak occupancy rate was measured at 77 percent at 3:00 p.m.

Parking Count

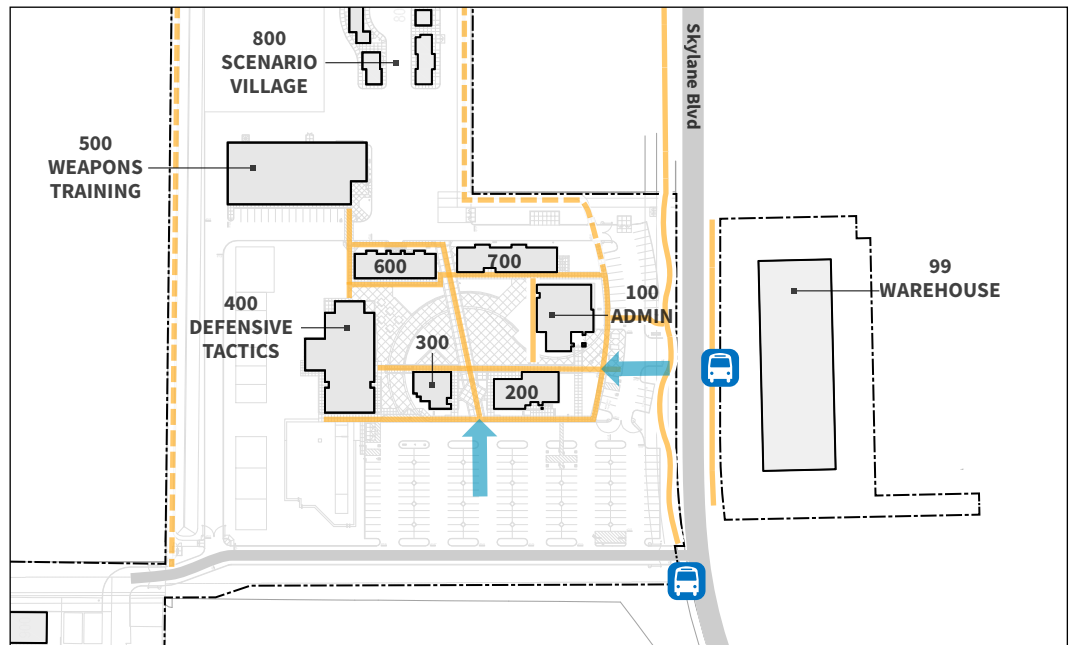
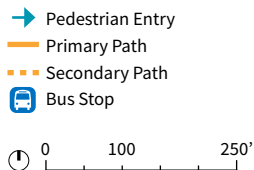
Lot Name	Number of Parking Spaces		
	Standard	Accessible	Total
Lot 1	172	10	182
Grand Total	172	10	183



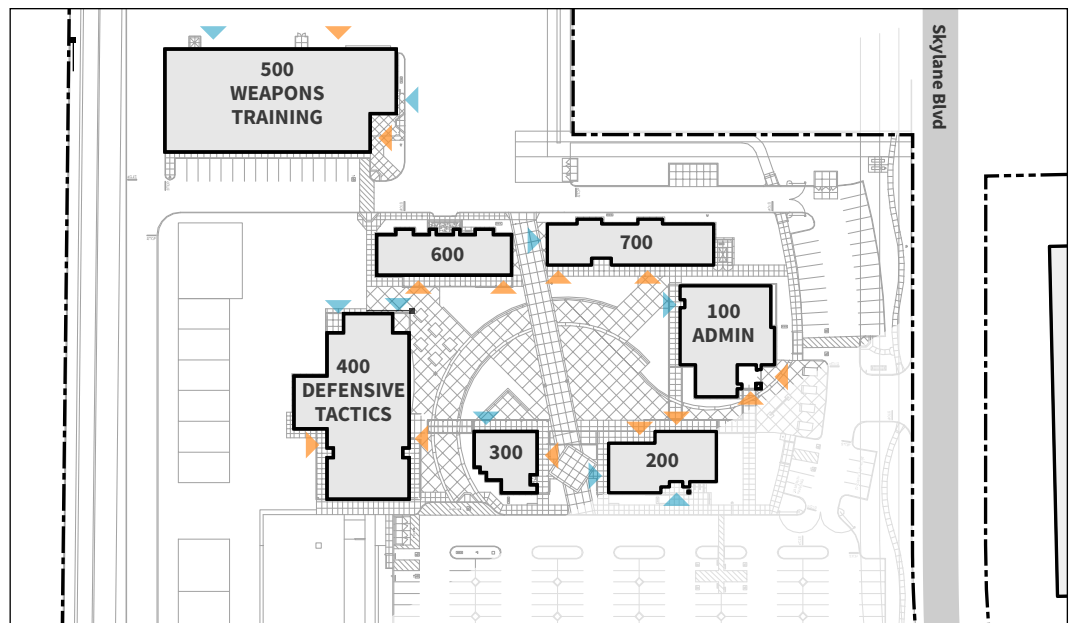
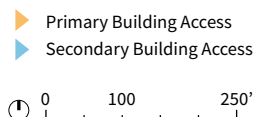
ANALYSIS

Pedestrian Network and Building Entries

PEDESTRIAN NETWORK



BUILDING ENTRIES



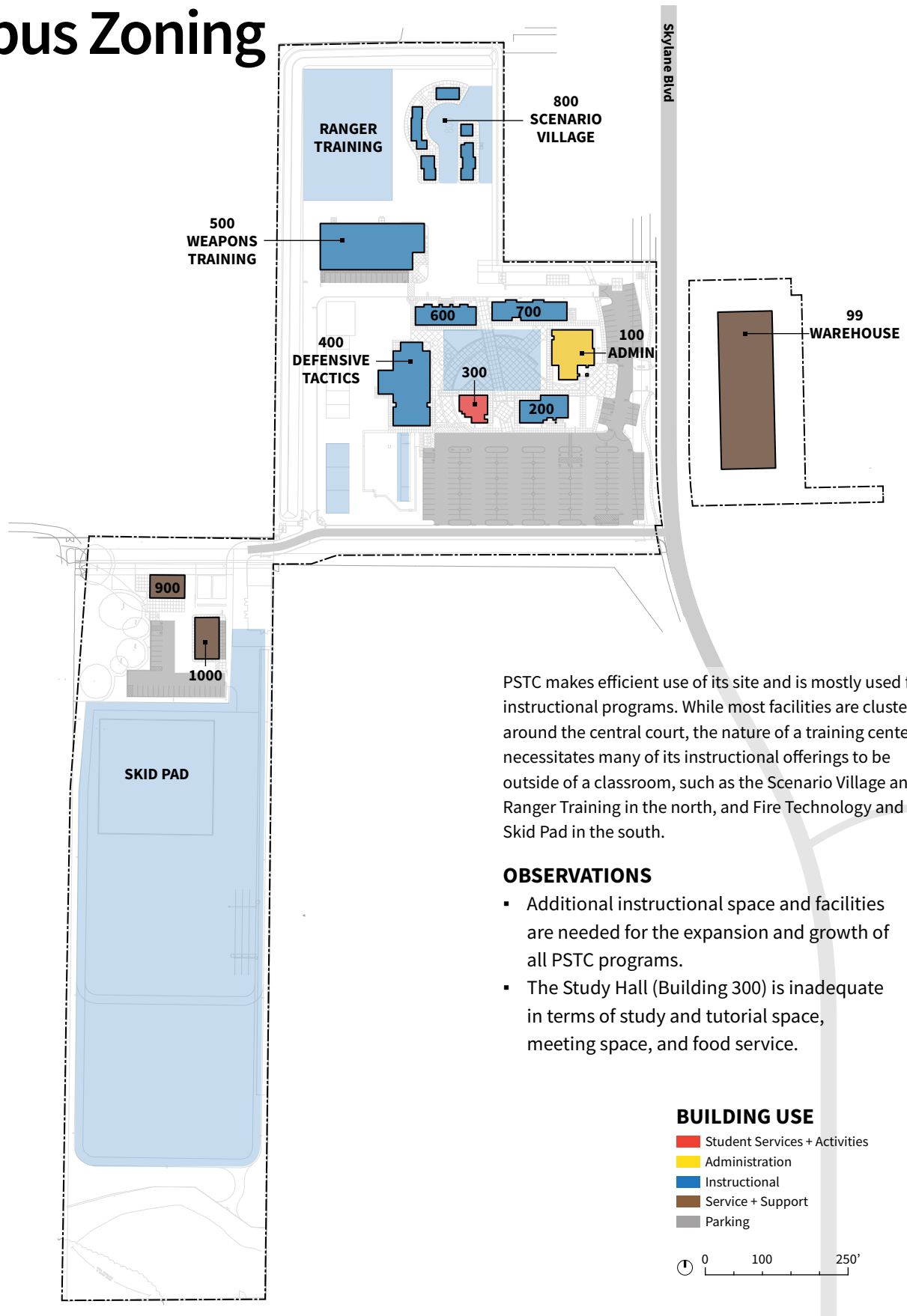
The Pedestrian Network at PSTC is clearly defined, with well-marked and evident Building Entries at all facilities. Additionally, there is a public walking trail to the west of the core facilities, accessed through the site. The Town of Windsor has designated Shiloh Road a Pedestrian Corridor from Skylane Boulevard to Esposti Park, facilitating pedestrian access to the site from the north.

OBSERVATIONS

- There is no marked pedestrian crossing east of the parking lot to the Fire Technology and Skid Pad area.
- There is no marked pedestrian crossing across Skylane Boulevard.

ANALYSIS

Campus Zoning



PSTC makes efficient use of its site and is mostly used for instructional programs. While most facilities are clustered around the central court, the nature of a training center necessitates many of its instructional offerings to be outside of a classroom, such as the Scenario Village and Ranger Training in the north, and Fire Technology and the Skid Pad in the south.

ANALYSIS

Facility Condition Plan



Public Safety Training Center
Photo By: Gensler

Building #	Building	Architectural	Structural	Fire	Plumbing	Mechanical	Overall
100	Administration	3	4	3	3	3	3
200	Classroom	4	4	3	3	2	4
600	Classroom	4	4	4	3	1	4
700	Classroom	4	4	4	2	2	4
400	Defensive Tactics	4	4	4	2	3	4
800	Scenario Village	3	4		3	3	2
900	Storage Bay	4	4		3	2	4
300	Study Hall	4	4	3	2	3	4
1000	Warehouse	2	2-3	3	3	2	2
500	Weapons Training	3	4	3	3	1	3
99	Warehouse	3	3		3	2	3



ANALYSIS

MEP Campus Systems

Electrical Campus Infrastructure



FEEDER SCHEDULE PLAN	EXISTING FEEDER RATING		DISTRIBUTED POWER CAPACITY	
<div>CAMPUS MAIN SWITCHBOARD, 'MSB'</div>	277/480V	1200A	240A	199KW

The PSTC is served from a single Campus Main Switchboard 'MSB.' MSB is rated at 277/480V and 1200 amps. Under CEC 2013, MSB is able to support 199 kW of distributed power. Any future distributed power must take into consideration the existing PV array rating from the total supportable distributed power value.

System capacity noted here is based on available as-built documentation and in-effect code cycle. Further investigation of existing system conditions and new code requirements is required. Renewable energy sources interconnection shall follow PG&E requirements.

PUBLIC SAFETY TRAINING CENTER

RECOMMENDATIONS

RECOMMENDATIONS

Vision Plan

Facilities
Recommendations

PUBLIC SAFETY
INSTRUCTIONAL FACILITY

A new facility for Public Safety Instruction is proposed west of Buildings 400 and 600, with Laboratories and Classrooms to meet the needs of current and growing instructional programs. Additionally, a divisible Multi-Purpose Room is necessary to support training activities for all programs. Student study and meeting rooms will be a part of this facility to support student success.

GENERAL INSTRUCTIONAL FACILITY

The Vision Plan supports a new instructional facility on acquired property. Instructional, Student Services, and Support space can supplement the Public Safety programs and/or host General Education programs. Additional parking with potential solar array will be provided to support needs.

STUDENT CENTER

As the current Student Center is inadequate to support the food service, gathering, and tutorial needs of the PSTC’s students, it is recommended that it be expanded and improved.

MULTI PURPOSE ROOM

The existing Building 400 requires more space to support instructional needs. A portable building will be located in proximity to Building 400 as an additional multi purpose room.

Property Acquisition

See Property Acquisition spread for further detail.

Site Recommendations

See Site Recommendations page for further detail regarding the following:

- Landscape
- Bus Stop and Pedestrian Crossing
- Track

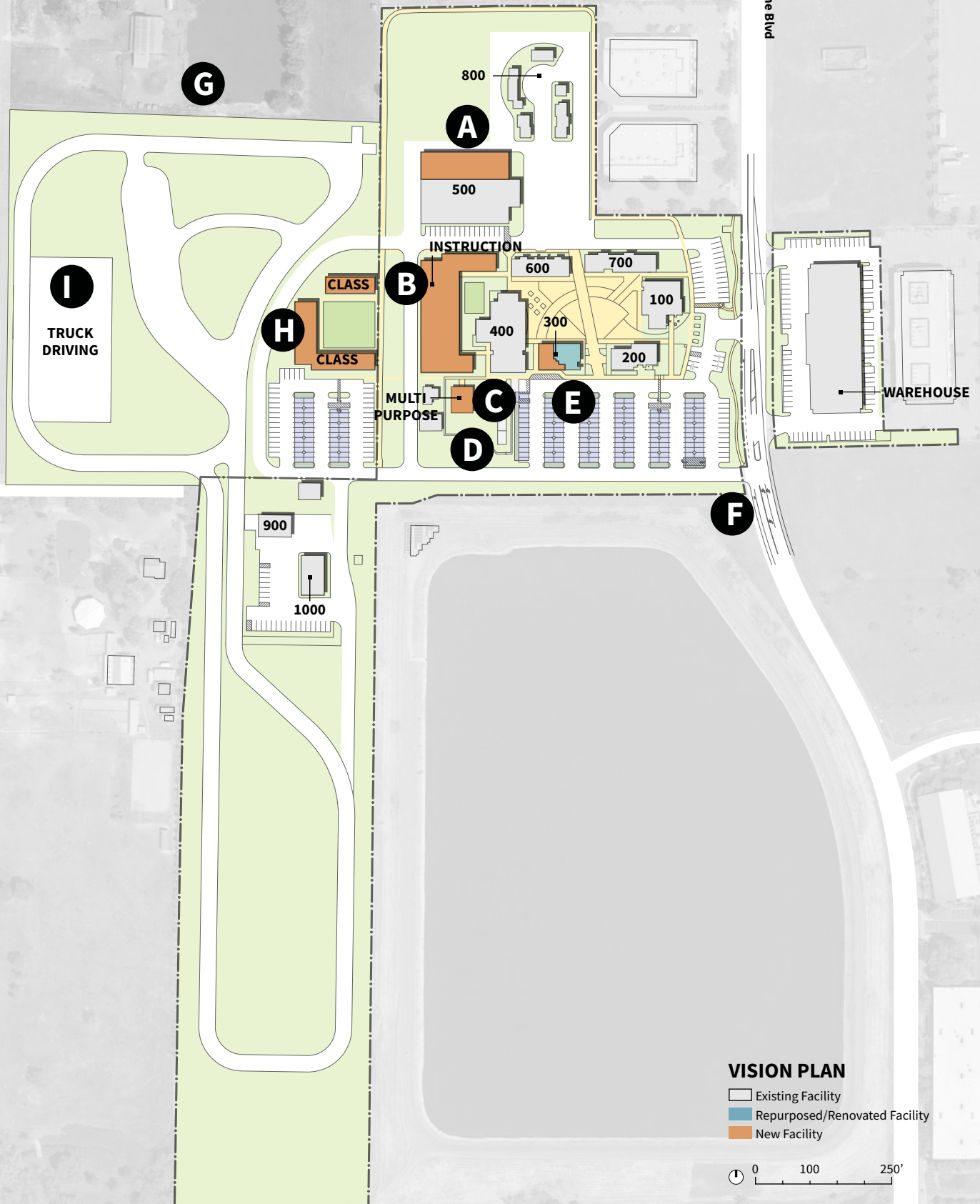
PROJECT LIST

Proj.	Concepts
A	Expand Building 500 <ul style="list-style-type: none">• Additional shooting lanes• Additional 8,000 GSF
B	New Public Safety Instruction Building (~32,500 GSF): <ul style="list-style-type: none">• Labs + Classrooms• Divisible Multi-purpose room for training purposes• Student study/meeting rooms
C	New Multi Purpose Room (~1,900 GSF)
D	Replace existing lawn with drought tolerant plants to save water
E	Improve Existing Student Center / Renovate Building 300 to better serve the students
F	Improve Skylane Bl. bus stop
G	Acquire adjacent property (extents TBD)
H	New Instructional facility on acquired property (~20,000 GSF): <ul style="list-style-type: none">• New Classrooms• New Student Services• Additional parking spaces with solar array
I	Add new track and truck driving school on acquired property <ul style="list-style-type: none">* track layout for diagram only* driving track dimension TBD

Overview

The Vision Plan recommends concepts and projects that support the educational goals of the Public Safety Training Center, and in doing so, the success of students within the Sonoma County Junior College District.

Skylane Blvd



VISION PLAN

- Existing Facility
- Repurposed/Renovated Facility
- New Facility

0 100 250'

RECOMMENDATIONS

Property Acquisition and Track Options



Public Safety Training Center
Gensler

PROPERTY ACQUISITION OVERVIEW

The District may have the opportunity to acquire the adjacent property, west of Buildings 100-800, north of Fire Technology and the Skid Pad. This acquisition would allow for the growth and expansion of existing and new programs at PSTC.

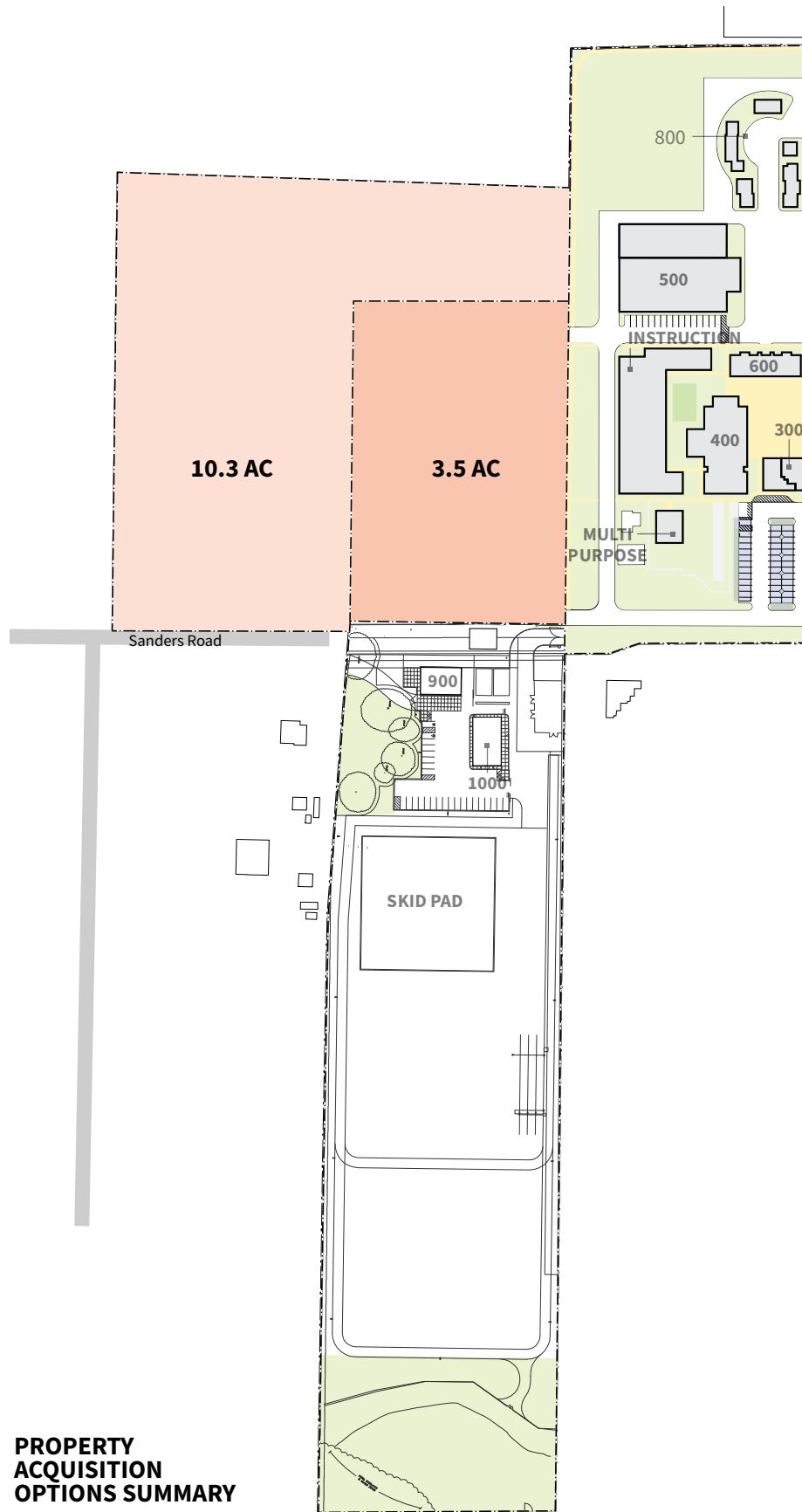
The amount of land the District may acquire will have varying effects on the level of growth and expansion of the Public Safety Training Center. The following paragraphs and diagrams describe the options in further detail. Note that all driving tracks shown are for diagrammatic purposes only, and further study will be necessary for track design.

OPTION 1

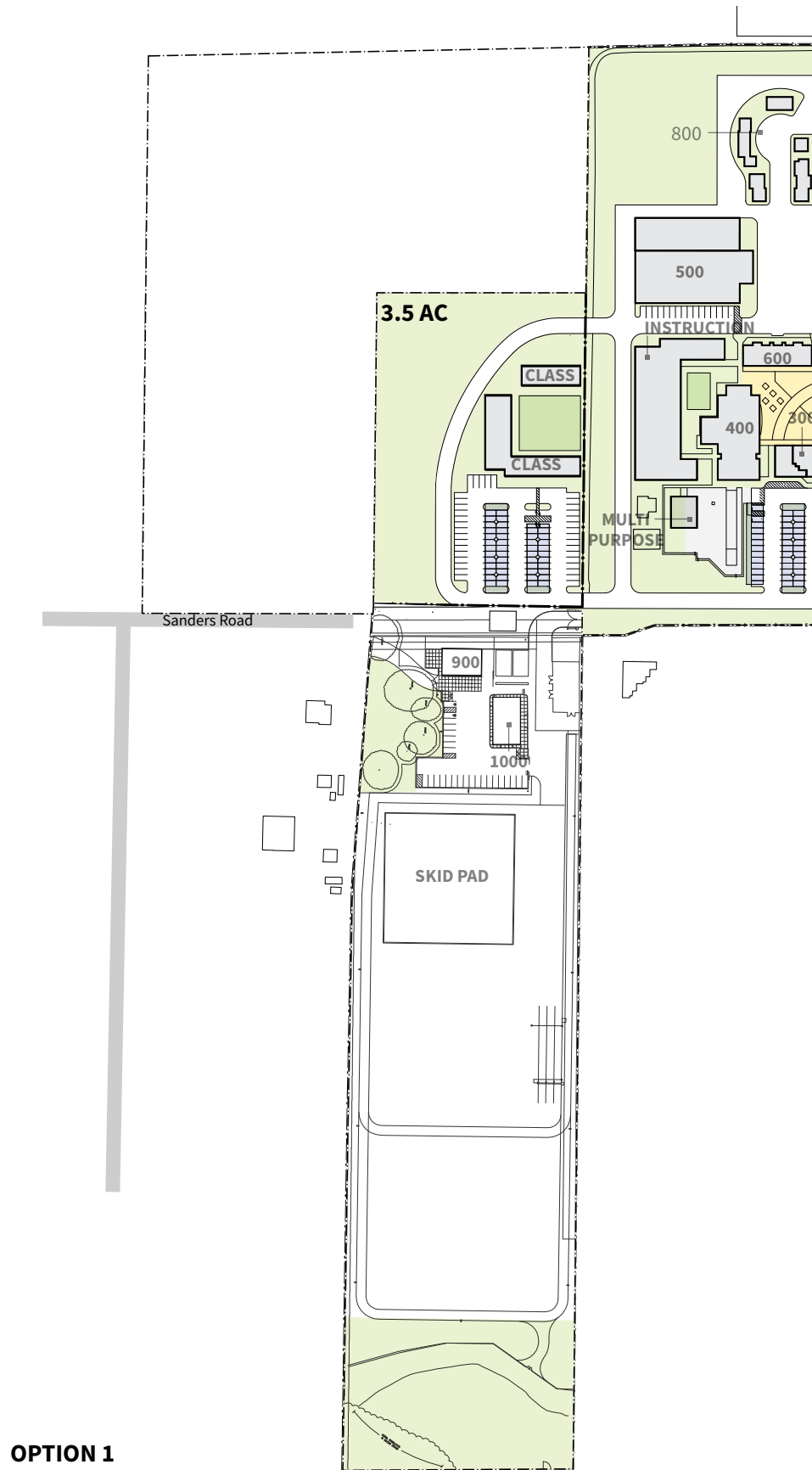
Option 1 includes the minimal amount of land the PSTC could acquire: 3.5 acres, directly west of Building 400 and north of Building 900. In this scenario, the PSTC can add new general education instructional facilities as well as parking.

OPTION 2

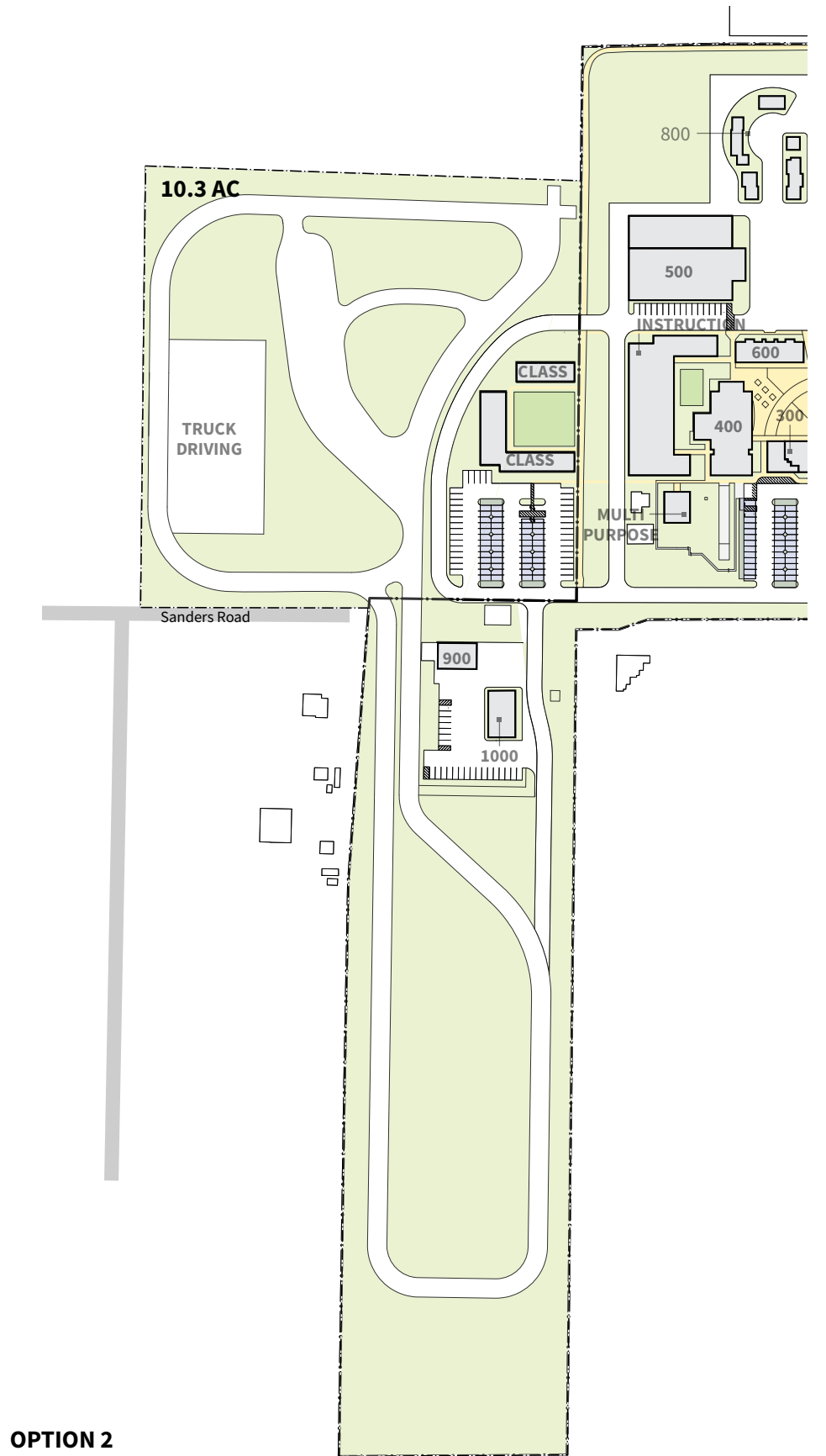
Option 2 shows 10.3 acres of land acquired, directly west of Building 400 and north of Sanders Road, aligned with the existing fence line at south edge of the existing lake. In this scenario, the PSTC can add new general education instructional facilities as well as parking to the new parcel, establish a multiple loop track that can be connected to the existing driving loop to the south, and potentially a Truck Driving program.



PROPERTY
ACQUISITION
OPTIONS SUMMARY



OPTION 1



OPTION 2

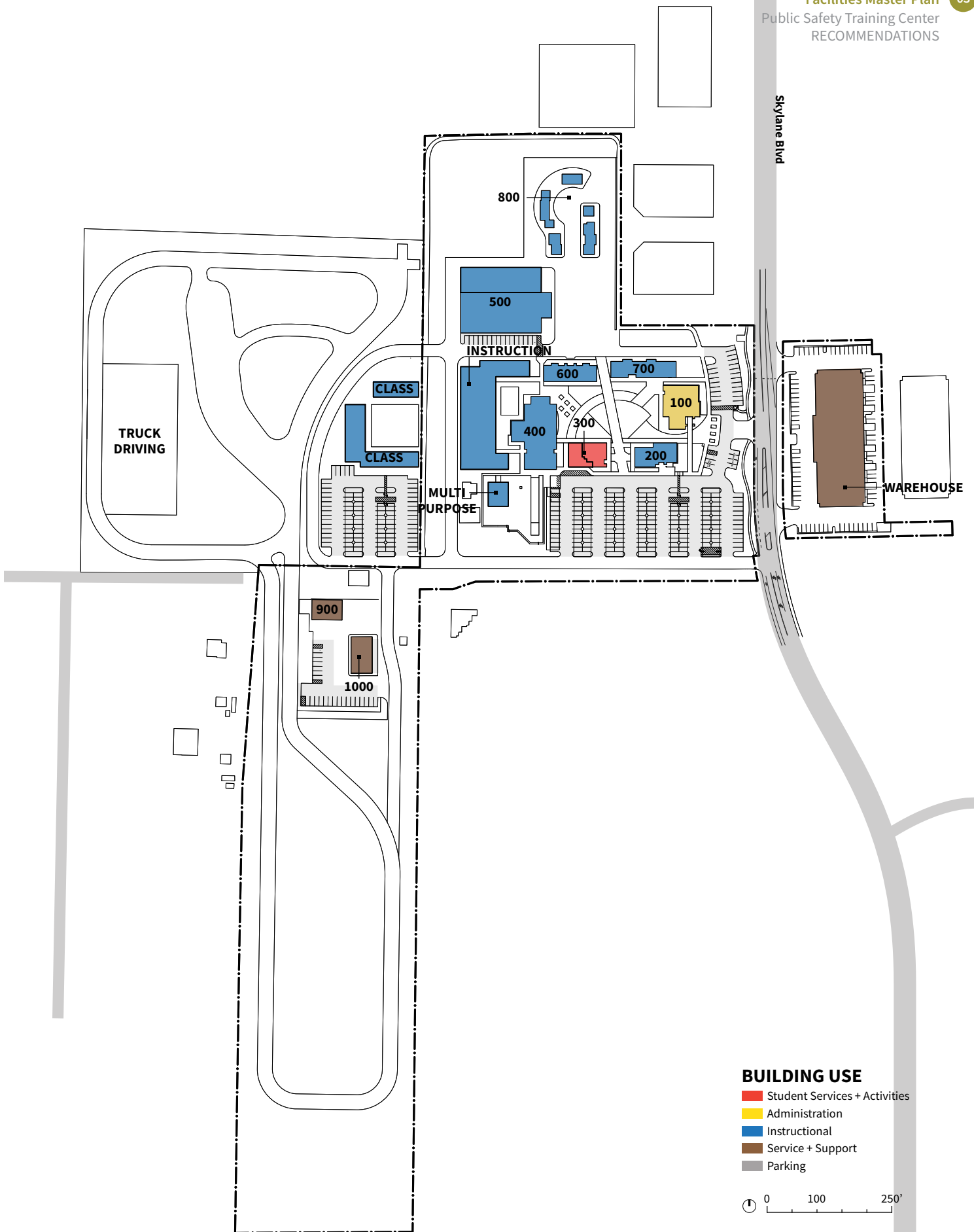
RECOMMENDATIONS

Building Use



Public Safety Training Center
Photo By: SCJCD

In the Vision Plan, the existing Campus Zoning has been expanded, and revised for relocation and addition of new programs. There is additional instructional area at the driving track in the new parcel to the west. The Student Services and Activities zone has been enlarged at Building 300 for the Student Center expansion. Parking area and Instructional facilities zoning has also been added to the new programs on the east side of Skylane Boulevard.



RECOMMENDATIONS

Site Recommendations



Public Safety Training Center
Photo By: SCJCD

CIRCULATION + PARKING

The Vision Plan recommends vehicular access and parking to the parcel east of Skylane Boulevard. Application of the parking occupancy rate from the field counts (141 spaces divided by 1,182 students) indicates that 193 spaces will be needed for the anticipated future enrollment of 1,623. Approximately 11 additional spaces should be provided to accommodate anticipated increases in enrollment unless sufficient mode shift to bicycles or multiple-occupant vehicles can be achieved. Internal roads will need to be added to access the Warehouse west of Building 400. The new proposed parking area on the adjacent facility can accommodate this need.

BICYCLE PARKING

No bicycles were observed parked on-site, and there are limited bicycle facilities in the area. To accommodate long-range plans for improved bicycle facilities throughout the County, including along the SMART rail right-of-way, bike parking is recommended on site in the form of safe and secure bike racks.

PEDESTRIAN NETWORK

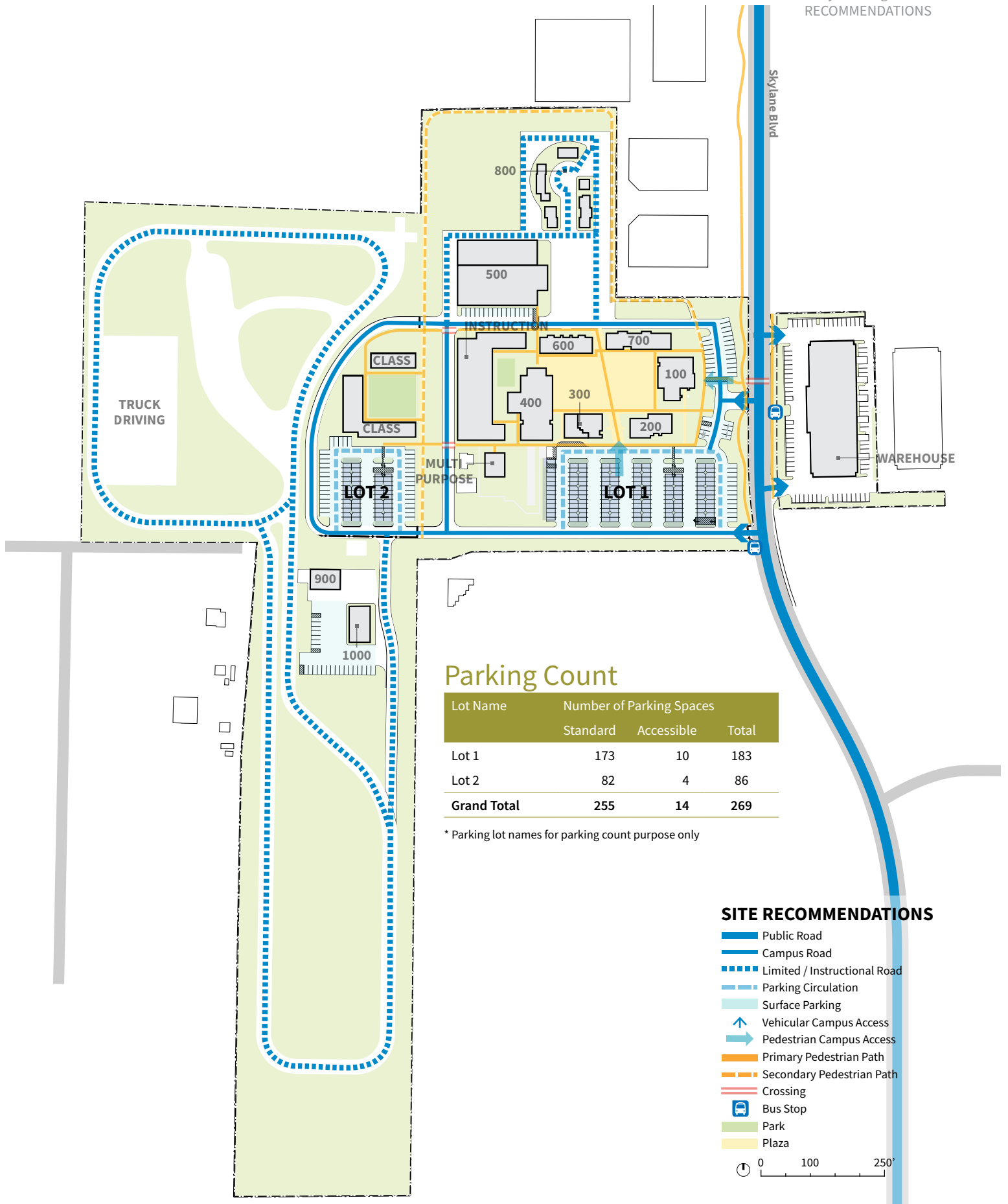
The Vision Plan recommends improvements to the public bus stop on the west side of Skylane

Boulevard, northeast of the water treatment facility. Currently, there is no public sidewalk south of PSTC's main entry. The Vision Plan recommends a clearly defined path to the bus stop as well as a bus shelter and seating at this location. A marked crossing is also recommended to ensure pedestrian safety across Skylane Boulevard.

OPEN SPACE + LANDSCAPE

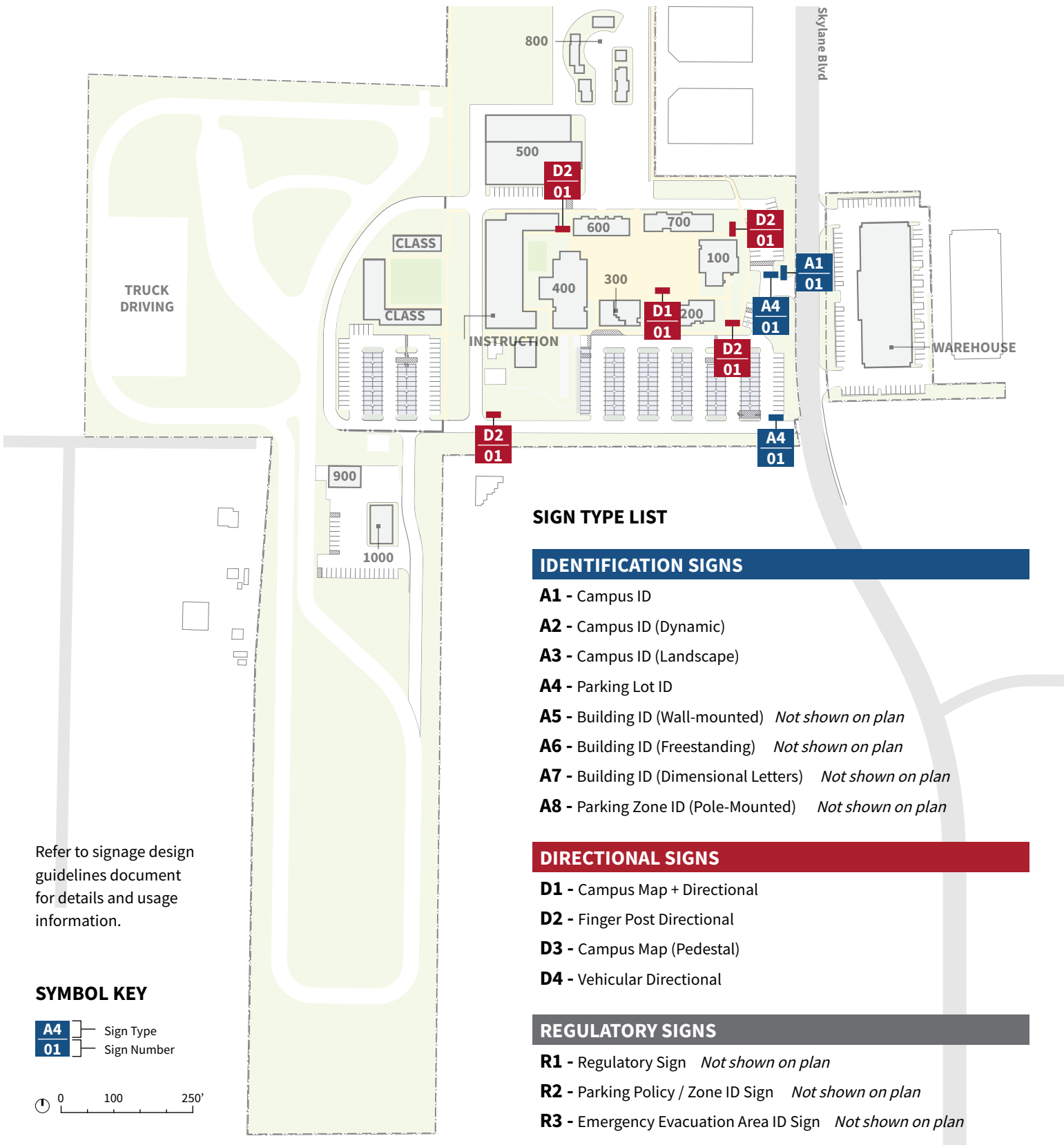
The Public Safety Training Center uses reclaimed water from the Town of Windsor for its landscape and site irrigation. To further the sustainability goals of the District, the Vision Plan recommends that existing areas of turf, such as the landscape buffer alongside Skylane Boulevard and the area west of Building 400 and the parking lot be replaced with drought-tolerant planting and/or artificial turf. Further study will be needed to assess the quality of the reclaimed water and its suitability for landscape planting areas, as well as the suitability of artificial turf for training activities.

Currently, water used in fire training activities (150,000-300,000 gallons of potable water) is not collected on site. The Vision Plan recommends further study to assess the feasibility of recycling this water.



RECOMMENDATIONS

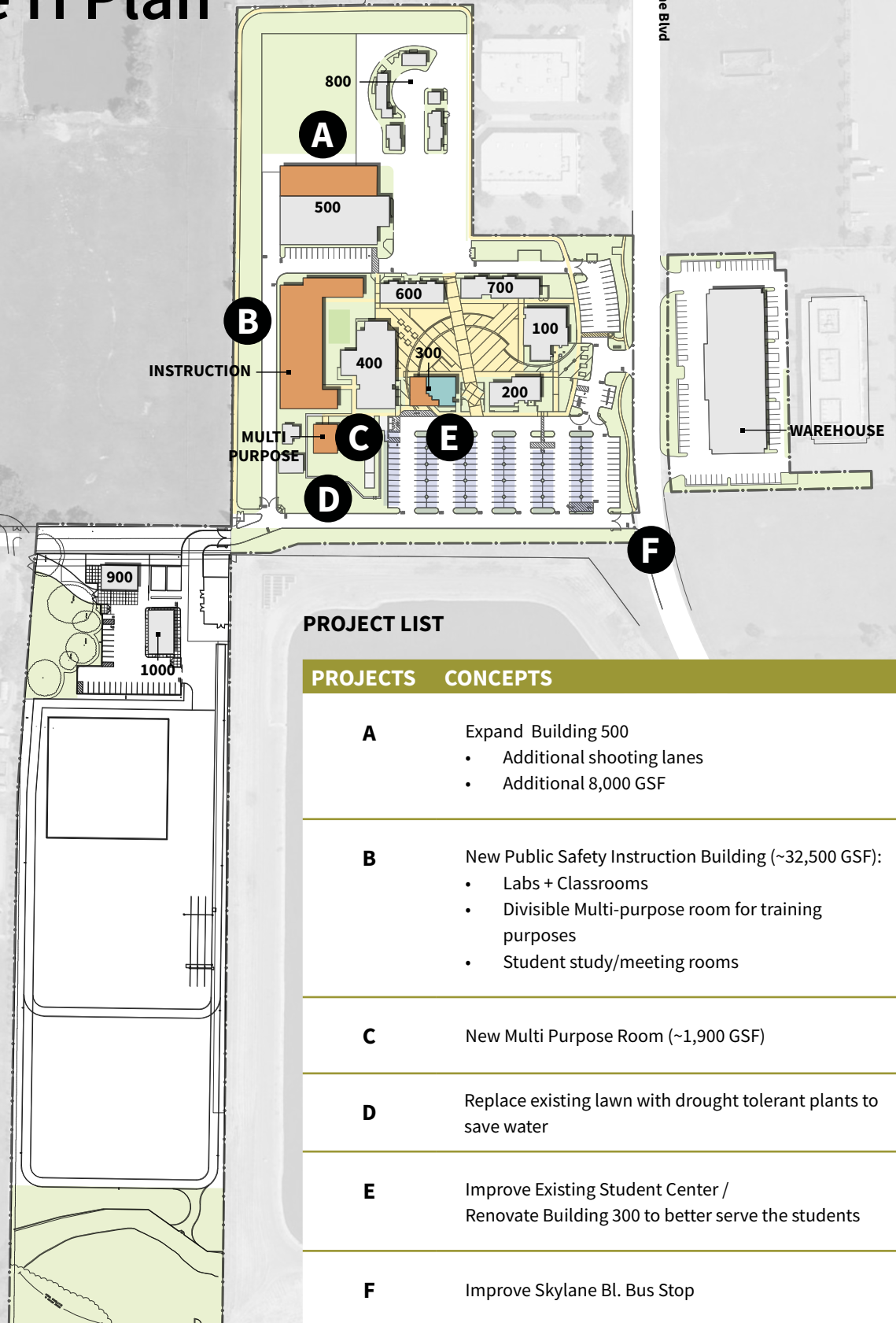
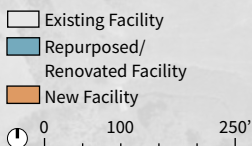
Signage and Wayfinding



RECOMMENDATIONS

Measure H Plan

MEASURE H PLAN



RECOMMENDATIONS

Recommended MEP Campus Systems

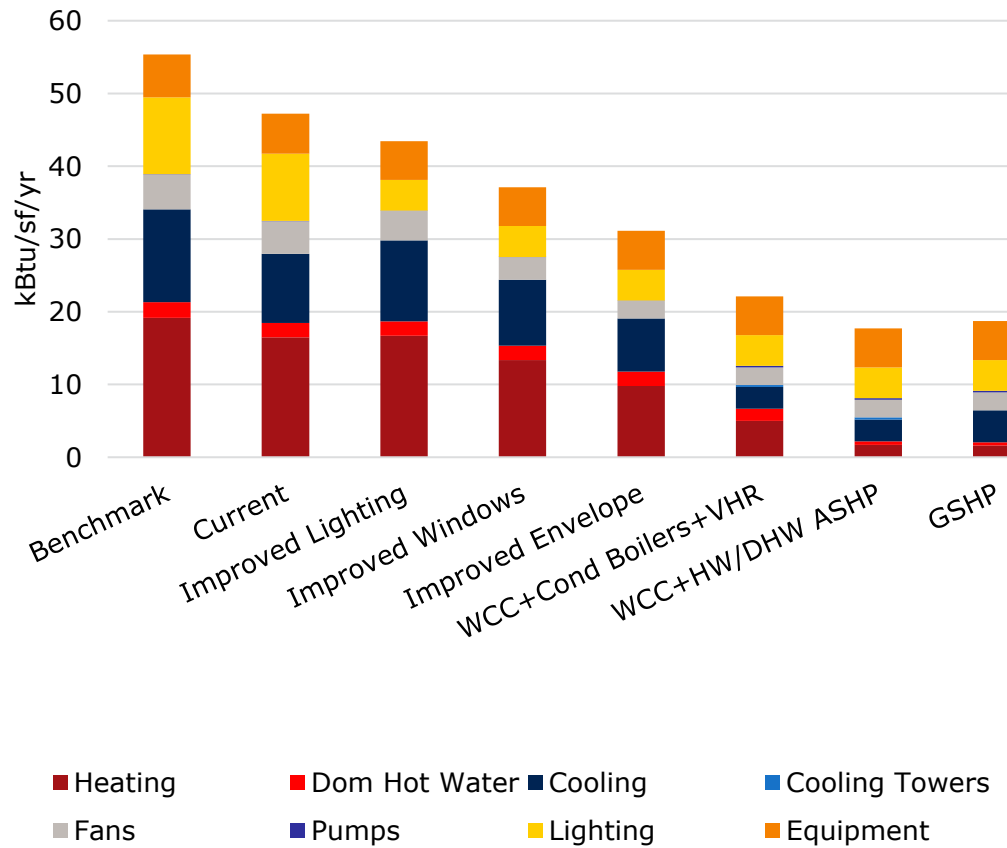
Energy and water analysis was done to reach the recommended systems and strategies below, that analysis is included in the MEP report included in the appendix of this document. Refer to that document for detailed information on the data that supports the following MEP recommendations.

Energy

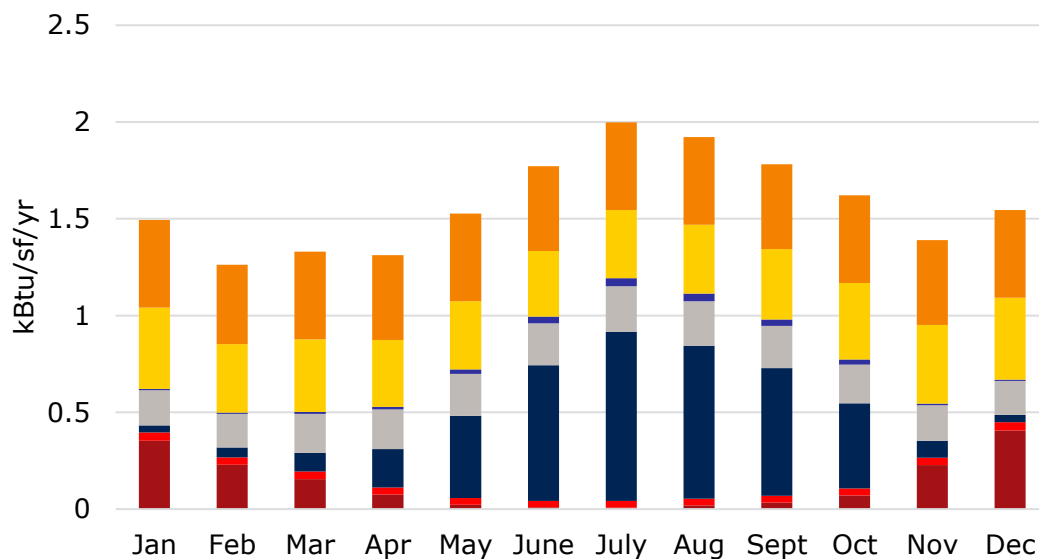
Similar to the other sites, for all new construction or renovation projects we recommend that the efficiency measures described in the previous section be implemented. Once sub-metering data is available, specific buildings might be identified as candidates for energy upgrades.

Based on the estimated current EUI, the efficiency measures are applied to each of the program type and the impact on the resulting weighted average for the campus EUI. With all the measures applied to every building, the campus average EUI would be about 25 kBtu/sf (66% reduction) which would bring the campus within reach of being Net Zero Energy.

ENERGY EFFICIENCY MEASURES IMPACT EUI - PSTC



PROJECTED MONTHLY ENERGY PROFILE - PSTC



RECOMMENDATIONS

Recommended MEP Campus Systems



**RECOMMENDED CAMPUS LEVEL
ENERGY STRATEGIES**

Given the size of the Public Safety Training Center we do not recommend a central plant condenser water option. Instead, chillers and cooling towers could be shared between the different buildings.

Currently, the Public Safety Training Center has a 255kW PV array installed as carport shade. Based on the actual and projected EUI at completion of Measure H and the Vision Plan, assuming that all the efficiency measures have been implemented, the amount of additional PV required to achieve net zero is indicated in the table. These estimated areas have been calculated assuming a constant campus space square footage and program.

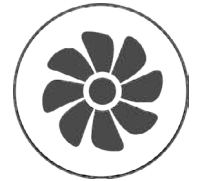
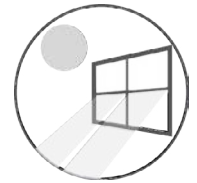
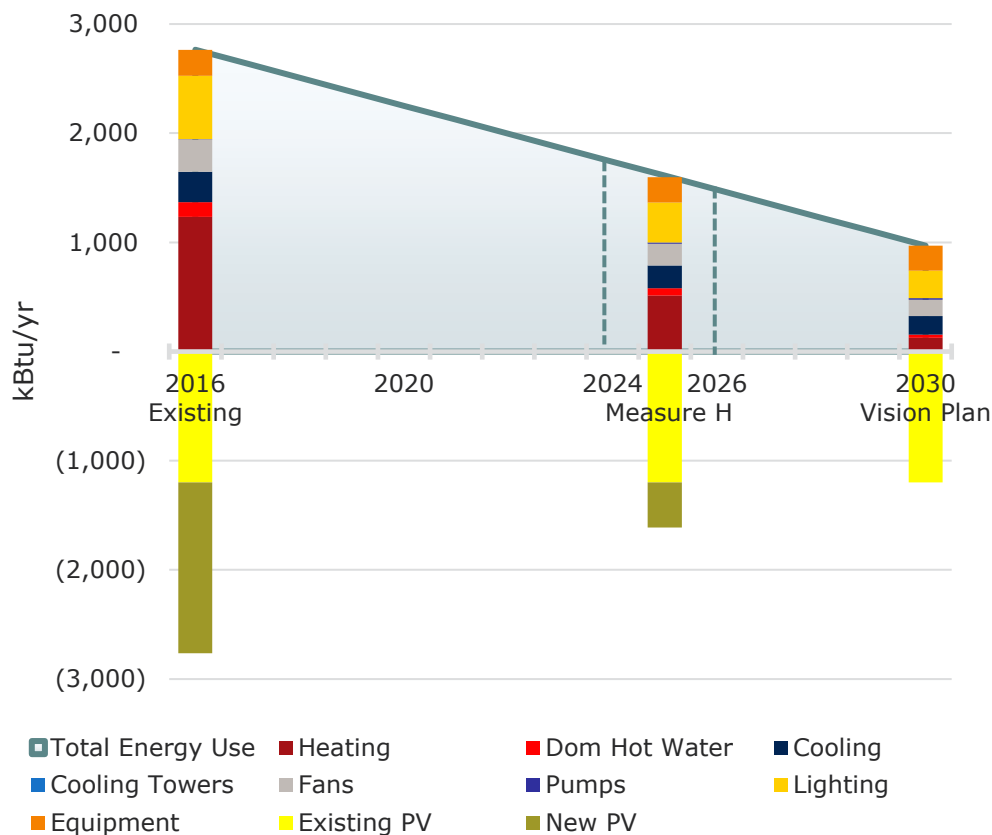
PV AREA REQUIRED

	Area (sf)	Cost (\$)
Current	35,000	1,800,000
Measure H	20,000	1,000,000
Vision Plan	12,000	600,000

RECOMMENDED BUILDING LEVEL ENERGY STRATEGIES

The amount of PV required to achieve Net Zero Energy is directly related to the ability to reduce the campus' energy consumption. Each of the building efficiency measures (energy efficient glazing, daylight harvesting, efficient lighting, heat recovery ventilation and laboratory low airflow minimum) are recommended for new constructions and should be evaluated for building retrofits through LCCA analysis.

ANNUAL ENERGY USE AND PV GENERATION - PATH TO NET ZERO



RECOMMENDATIONS

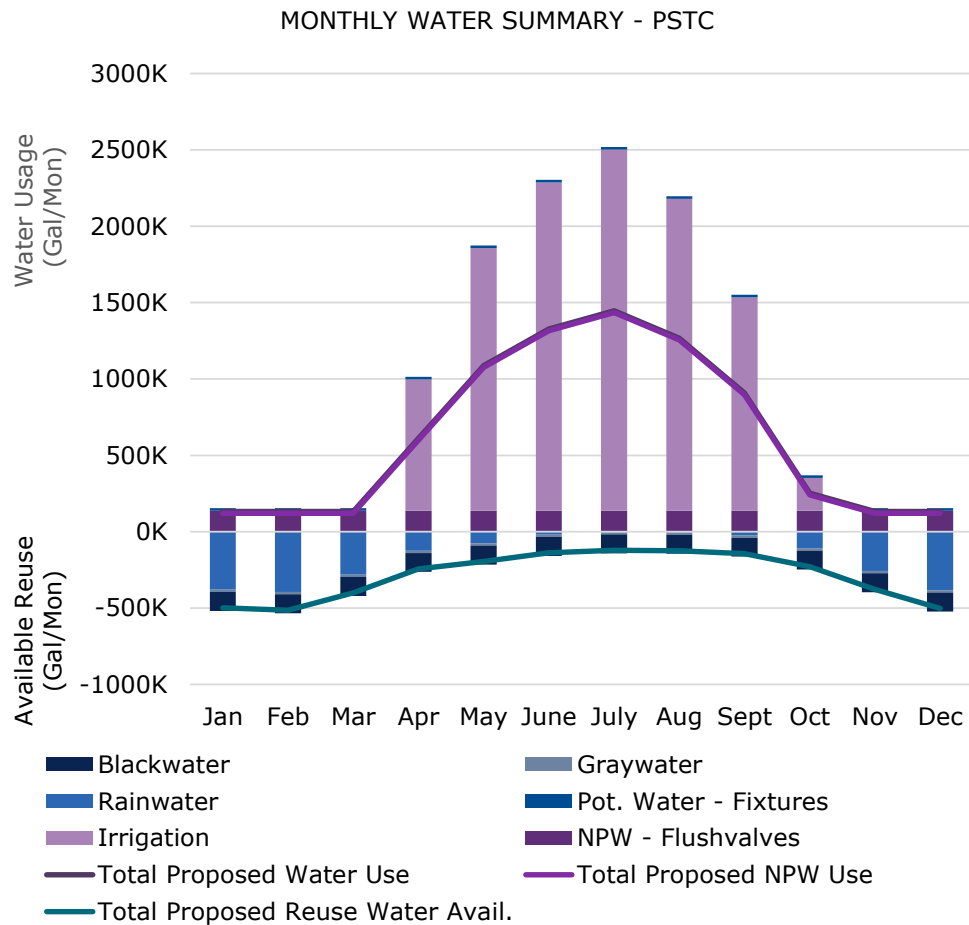
Recommended MEP Campus Systems

Water

Similar to the Existing Monthly Water Use graph in the appendix, the Monthly Water Summary graph shows the monthly water use of meeting code minimum of CalGreen, by the bar graph. The lines through the graph depict the proposed case of implementing low flow fixtures, drought tolerant landscape and swimming pool covers. These strategies are evaluated in the section below.

There are some key water usage trends depicted in this graph, that show why certain water saving strategies are recommended or not. When reviewing this graph it is important to understand that treated reclaimed water from rainwater, greywater or blackwater can only be reused for non-potable water, indicated in a shade of purple. Treated water can't be reused for any potable water, indicated in a shade of blue.

The graph shows that with the proposed case rainwater, greywater, and blackwater treatment would not be able to meet the non-potable water demand (line in graph is above non-potable water use) for the campus in the summer months due to the irrigation load.



RECOMMENDATIONS

Recommended MEP Campus Systems



Recommended Water Strategies

The following strategies are recommended because they offer significant water savings with relatively low to medium cost and because they are critical to achieving the Vision Plan goals.

LOW FLOW PLUMBING FIXTURES

Replacing all the existing fixtures with the efficient low flow plumbing fixtures is outlined in Section 6.16 “Low Flow Plumbing Fixtures” of the appendix. If low flow fixtures are installed estimated water savings is 40% from LEED and 14% savings from CalGreen. For new buildings the cost difference between the low flow fixtures and CalGreen fixtures is negligible.

An important item to note is that food service water usage has the highest indoor water demand. This water usage is based on process loads for equipment and fixtures. If the water usage was reduced by a significant factor, it would affect the fixture/equipment’s functionality. It is assumed that no water savings will be obtained from food service.

DROUGHT TOLERANT LANDSCAPE

Replacing all existing vegetation and irrigation systems with low water use plants and efficient subsurface irrigation, can have a large impact on water savings. This provides an estimated of 44% water savings from the assumed baseline of medium water use plants with an overhead spray irrigation system.

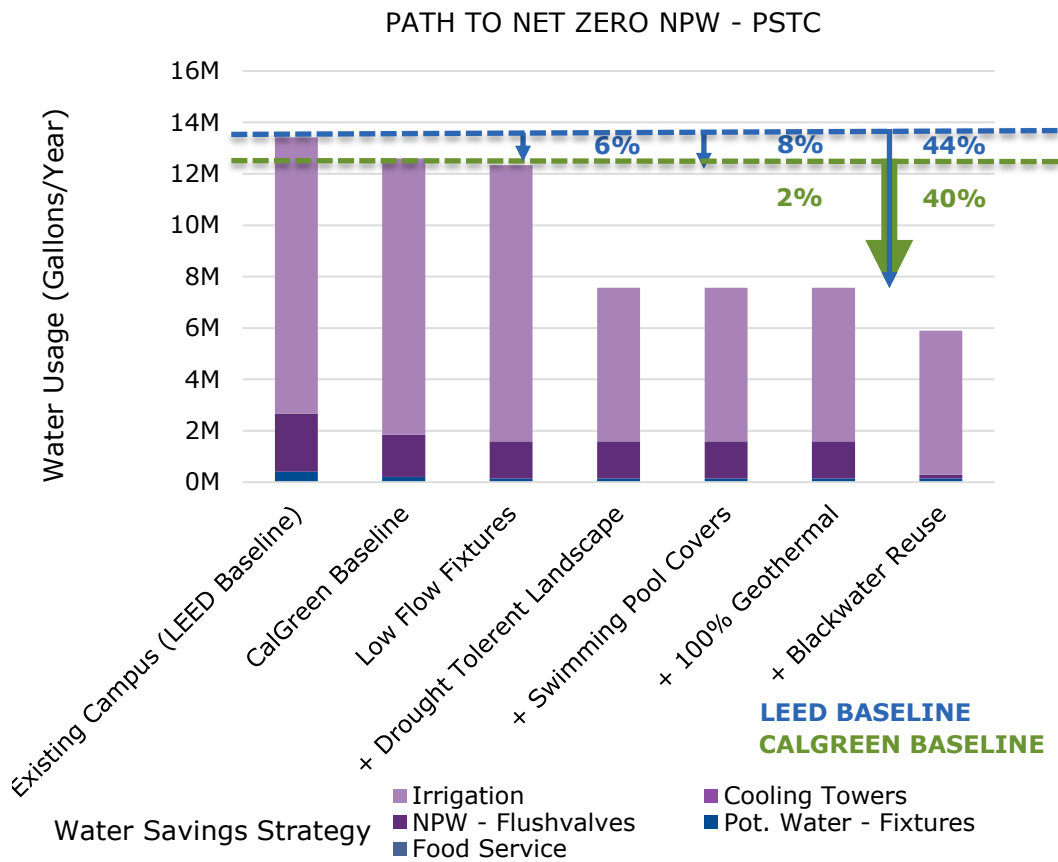


There are no additional strategies recommended in order to achieve the 2030 goal of net zero non-potable water for the campus. If desired sewer mining is a water treatment option that could be utilized to offset the remainder of the campus’ non-potable water demands. Just as the name implies, sewer mining involves tapping into a wastewater collection system, siphoning some of the sewage off to an on-site treatment facility, and then reusing the reclaimed water on-site for non-potable water uses, irrigation and flush-valves. This treatment option was not analyzed due to the fact that it isn’t as feasible for the campus.

No additional strategies are recommended in order to achieve the 2030 goal of net zero non-potable water for the campus. There are no cooling towers on the project, so Geothermal isn’t required. If desired sewer mining is a water treatment option that could be utilized to offset the remainder of the campus’ non-potable water demands. Just as the name implies, sewer mining involves tapping into a wastewater collection system, siphoning some of the sewage off to an on-site treatment facility, and then reusing the reclaimed water on-site for non-potable water uses, irrigation and flush-valves. This treatment option was not analyzed due to the fact that it isn’t as feasible for the campus.

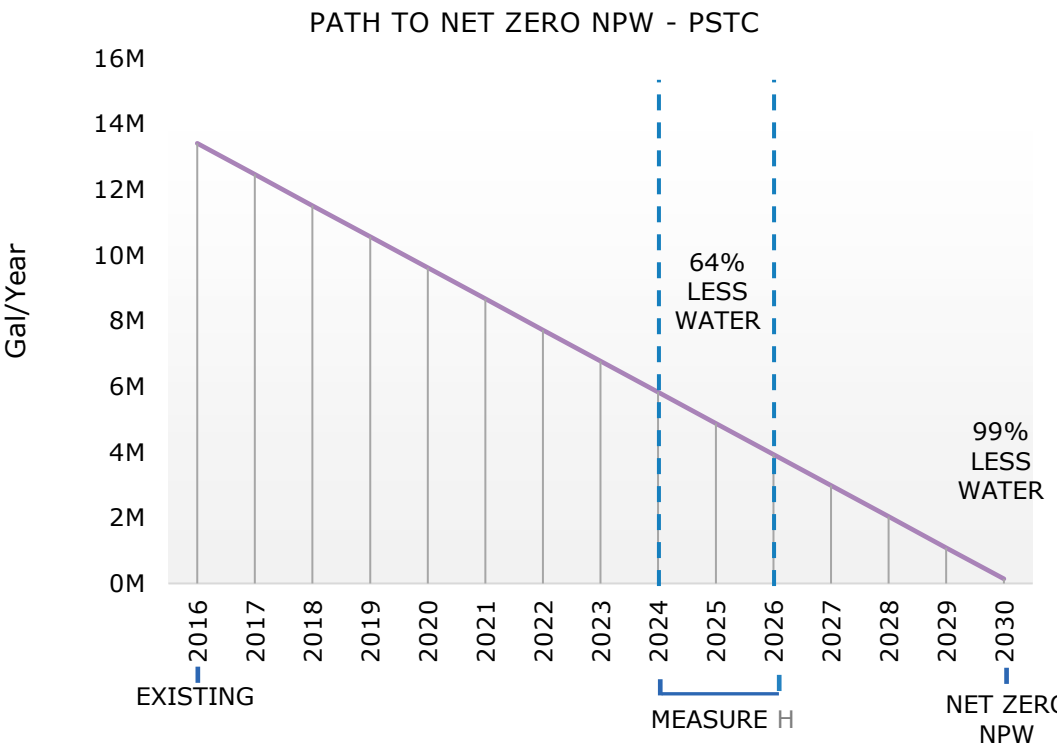
Path to 2030

By incrementally implementing the campus water saving measures within the “Reuse Proposed Case”, the campus can achieve net zero-non-potable water. The Path to Net Zero graph shows the water savings achieved.



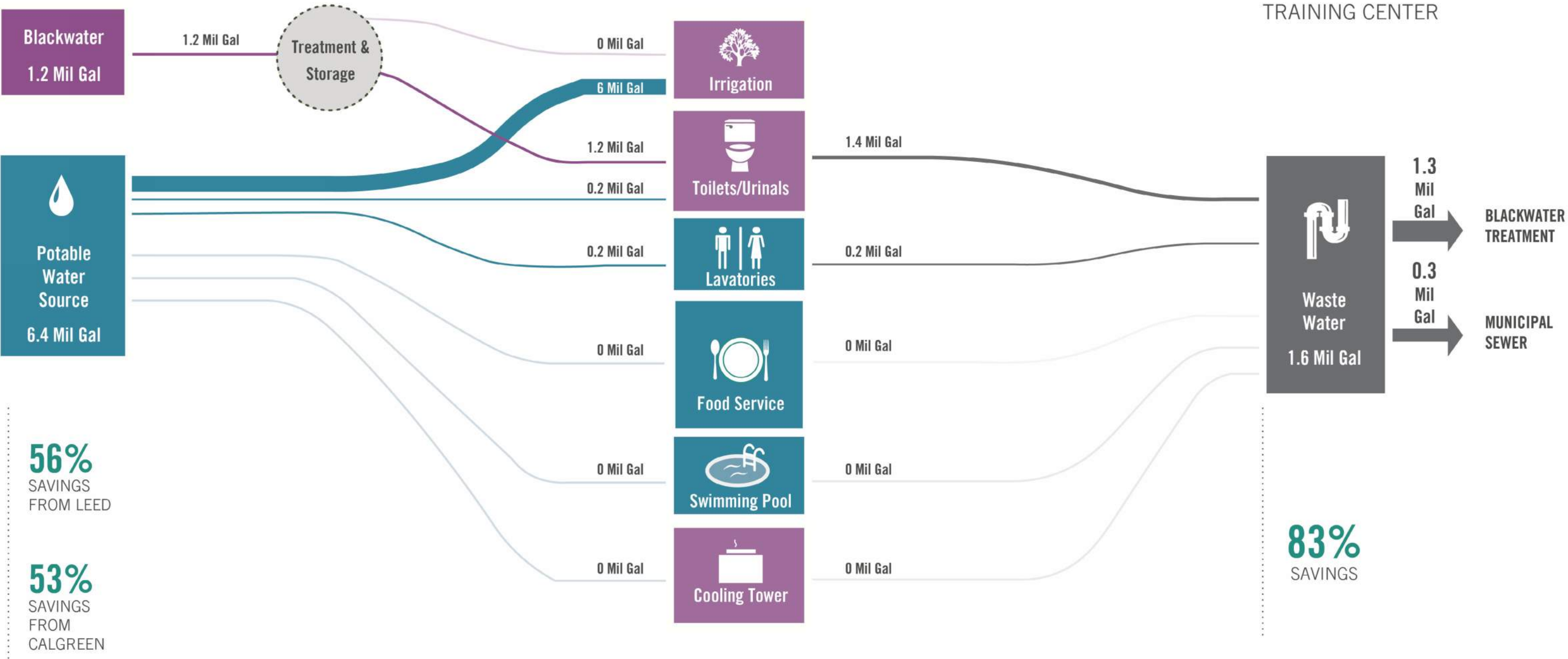
RECOMMENDATIONS

Recommended MEP Campus Systems



The Progress Path to Net Zero Non-Potable Water graph depicts the current campus water usage, along with the net-zero non-potable water goal in 2030. Measure H is tracking for years 2024 to 2026 and the percent water savings indicated should be achieved by Measure H, in order to be on track to reach the 2030 goal of net-zero non-potable water.

PUBLIC SAFETY TRAINING CENTER



REUSE PROPOSED CASE:

LOW FLOW FIXTURES, DROUGHT TOLERANT LANDSCAPE,
SWIMMING POOL COVERS, GEOTHERMAL & BLACKWATER REUSE

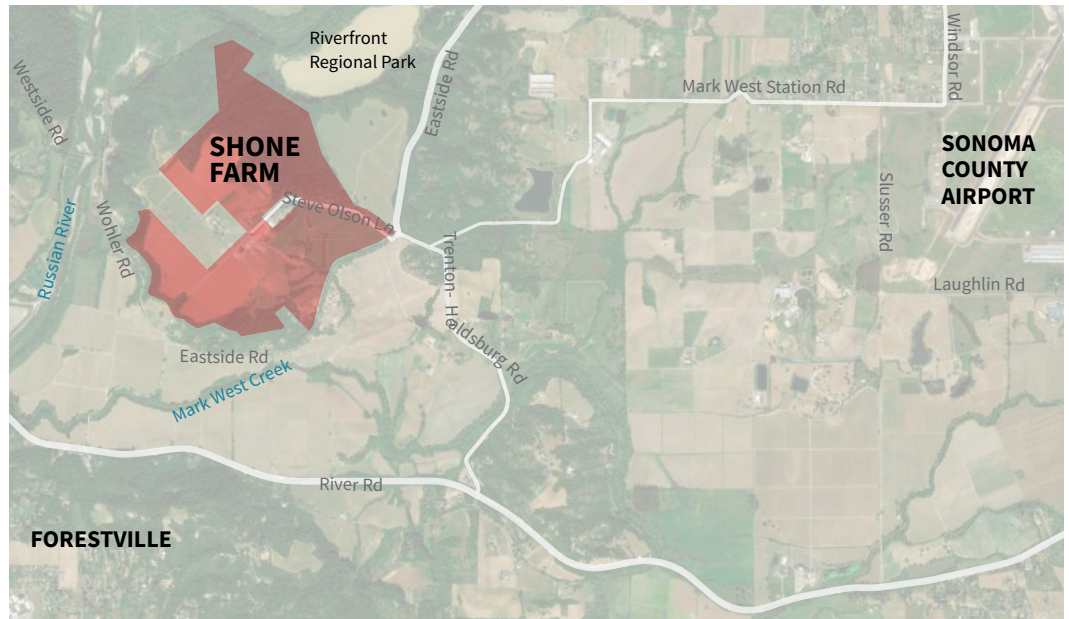
3.5 Shone Farm

SHONE FARM

ANALYSIS

ANALYSIS

Site Context



CONTEXT MAP



Context

LOCATION

The Robert Shone Farm is a 365-acre site in the Russian River Valley in Forestville, California. It is roughly bounded by the Riverfront Regional Park to the north, the Russian River to the west, the Mark West Creek to the south, and Eastside Road and Trenton-Healdsburg Road to the west. Shone Farm is located 3 miles west of the Sonoma County Airport, 5.5 miles southwest of the SRJC Public Safety Training Center in Windsor, and 12 miles northwest of the Santa Rosa Campus.

Land Use Adjacencies

AGRICULTURAL

Shone Farm is largely surrounded by Agricultural uses, as is characteristic for this part of the Russian River Valley.

PUBLIC / QUASI-PUBLIC

There are some Public and Quasi-Public Uses in the vicinity, such as the Riverfront Regional Park to the north and the Sonoma County Airport to the east.

RESOURCES + RURAL DEVELOPMENT

The Resources and Rural Development (RRD) land use category provides protection of lands needed for production of resources such as timber, and protection of natural resources such as watershed and habitat. It also allows a very low-density residential and recreational development where compatible. The northwest portion of the Shone Farm site, as well as some adjacent lands bordering the Russian River are designated as RRD.

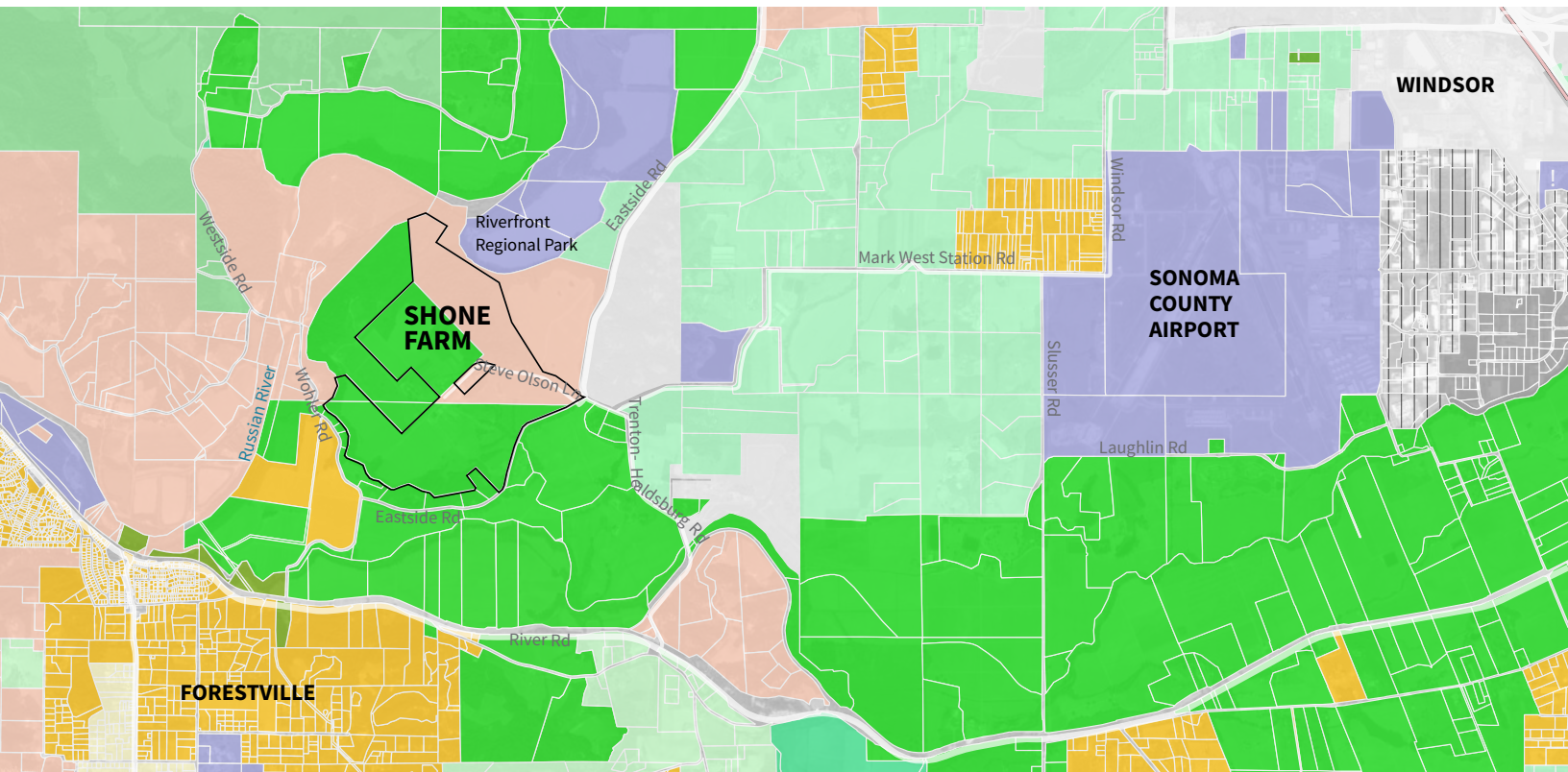
Source: Sonoma County Zoning Regulations, Chapter 26.

RESIDENTIAL

There are some Residential uses near Shone Farm, most notably south of River Road, concentrated in the census-designated place of Forestville.

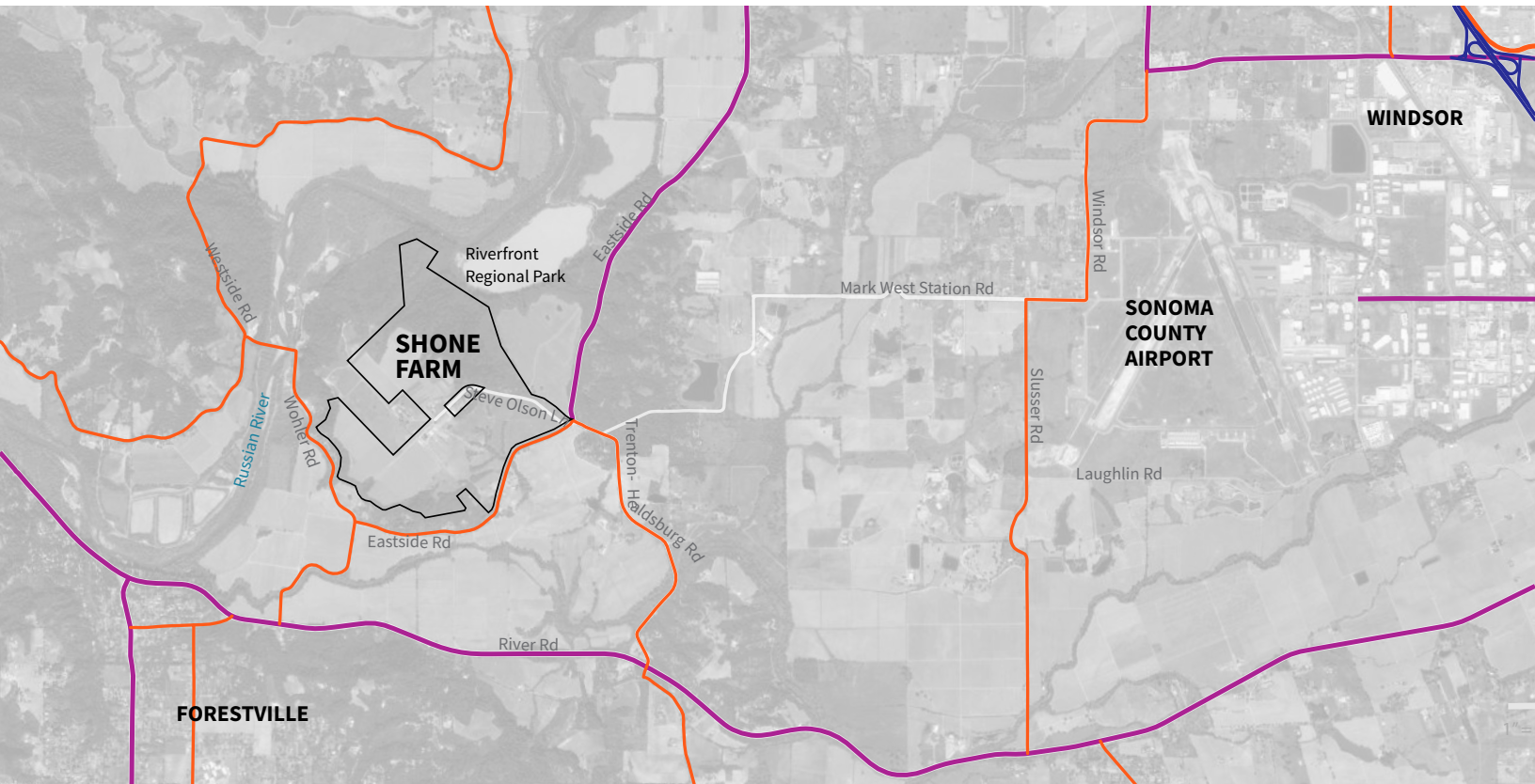
Site Access

The entry to Shone Farm is at the intersection of Eastside Road and Trenton-Healdsburg Road, via Steve Olson Drive.



LAND USE ADJACENCIES

- Diverse Agriculture
- Land Extensive Agriculture
- Land Intensive Agriculture
- Resource & Rural Development
- Rural Residential
- Public / Quasi-Public



ROAD NETWORK

- Arterial
- Collector

ANALYSIS

Existing Campus and Campus Evolution

Campus Evolution

SITE HISTORY

Shone Farm was established in 1972. During World War II, the property was a military listening post, monitoring radio traffic around the world. In 1972 it was declared surplus land by the federal government, and subsequently, acquired by Santa Rosa Junior College.

Existing Facilities

WARREN G. DUTTON JR. AGRICULTURE PAVILION (BUILDING 56)

Dedicated on November 1, 2006, the Warren G. Dutton Jr. Agricultural Pavilion is the educational centerpiece of Shone Farm. The pavilion provides instructional space for virtually all of SRJC's Agricultural and Natural Resource Management programs, as well as related community events.

SONOMA COUNTY VINTNERS CONFERENCE AND LEARNING CENTER

Spacious classroom(s), dining area and conference room.

THE HARRY MERLO JR. CULINARY CENTER AND JOE VERCELLI KITCHEN

Contains a commercial kitchen, which provides space for SRJC culinary classes, as well as functions as a catering facility for large events.

GALLO FAMILY WINE EDUCATION LABORATORY

A fully-outfitted commercial winery producing wine under the Shone Farm label. Home to hands on wine-making courses in the Wine Studies Program.

KUNDE SHOWCASE ARENA

An indoor arena for a variety of livestock and equine related classes and events.

GK HARDT STABLE (BUILDING 57)

Used by the SRJC Equine Program to house horses requiring special care and space for supplies, equipment storage, and staff offices.

BELDEN CENTER (BUILDING 51)

The Charles D. Belden Center, originally constructed in 1983, includes general instructional space, living quarters for two student farm attendants, offices and a wine press. A variety of campus disciplines hold classes on farm acreage, and each is eligible to utilize the Belden Center.

EQUIPMENT SHED (BUILDING 53)

Built in 1975.

RICHARD L. THOMAS CLASSROOM (BUILDING 50)

The Richard L. Thomas Classroom opened in 2002. It is a modular all-purpose instructional facility.

MARE MOTEL (BUILDING 59)

Built in 2009. Eighteen stalls

JAMES PORTER BARN ANIMAL SCIENCE CENTER (BUILDING 52)

Built in 1975. Used for hay storage and the feeding, care and restraint of animals for the Animal Science program.

GREENHOUSE (BUILDING 54) + GREENHOUSE BARN (BUILDING 55)

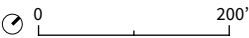
Built in 1999.

Sources: <http://www.shonefarm.com/facilities.shtml>
<http://maps.santarosa.edu/directions-srjc-shone-far>
Fusion Database
SRJC Shone Farm Program Resource Planning Process, 2015.



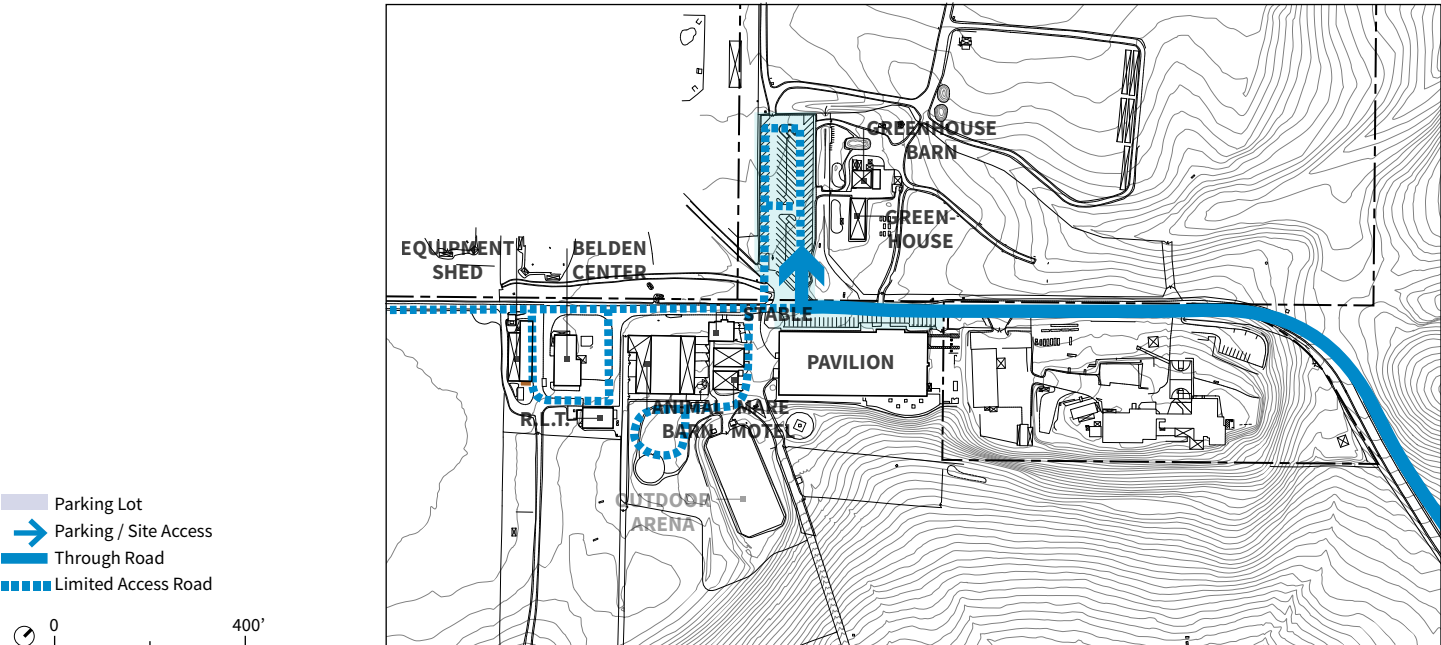
CAMPUS EVOLUTION

- 1970's
- 1980's
- 1990's
- 2000's



ANALYSIS

Campus Access



SITE CIRCULATION

As the facilities for Shone Farm are grouped in close proximity to one another, there is little in the way of formal site circulation. Steve Olson Lane provides clear access to the Pavilion, main parking lot, the Stable, the Barn, Belden Center, and the Equipment Shed.

Shone farm is not accessible by public transit; however, free shuttle service is offered from the Santa Rosa campus to the site for students registered in certain classes.

SITE PARKING

Currently, the Shone Farm campus has a main parking lot northwest of the Pavilion across Steve Olson Lane and additional parking in front of and to the northeast side of the Pavilion. Additionally, some visitors informally park on the side of Steve Olson Lane, near the Belden Center and near the Richard L. Thomas Classroom. There are a total of

143 parking spaces on campus, four of which are designated as accessible.

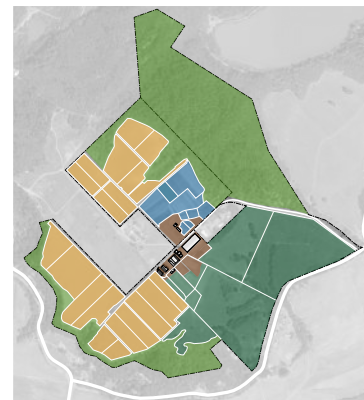
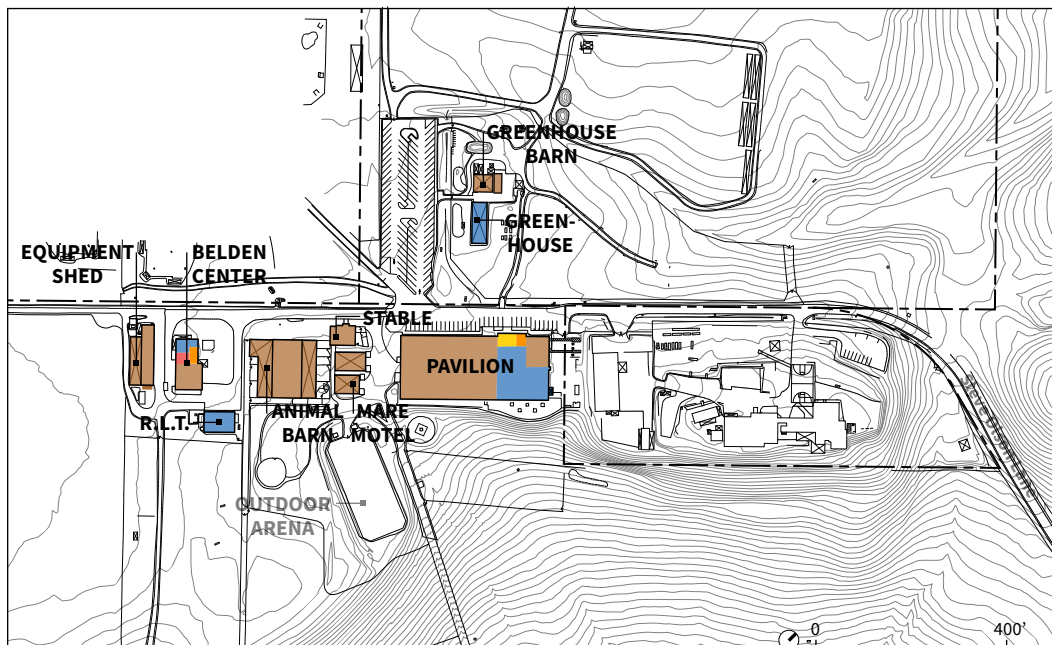
Based on parking occupancy counts taken between Tuesday, August 30 and Thursday, September 1, 2016, the campus parking lots are currently less than 30 percent occupied throughout the entire day. The low parking occupancy rates indicate that Shone Farm has sufficient room to expand classes and programs within the available parking supply, and no additional spaces are needed.

Parking Count

Lot Name	Number of Parking Spaces		
	Standard	Accessible	Total
Main Lot	93	-	93
Pavilion (Front and Side)	32	6	38
Staff Parking (Playing Fields)	12	-	12
Grand Total	137	6	143

ANALYSIS

Campus Zoning



BUILDING ZONING

- Student Services + Activities
- Administration
- Instructional
- Service + Support
- Parking
- Hospitality / Housing

FIELD ZONING

- Vineyards
- Forests
- Pasture
- Crop Production
- Other

Source:
Brelje & Race Consulting Civil Engineers -
Agricultural Field Areas Exhibit (March 2015)

OVERVIEW: OUTDOOR LEARNING LAB

Shone Farm includes 120 acres of forest, 100 acres of pasture, 70 acres of vineyard, 12 acres for crop production, and 4 acres of olive and apple trees, one of the largest agriculture sites in the California Community Colleges system. In addition, there is open space around the farm's perimeter that serves as wildlife habitat, as well as the farmstead, which includes various buildings and improvements. The farm's size allows for teaching small commercial scale production techniques.

FOREST

The forested area of the farm is a mixture of soft and hard wood tree species. Redwood, Douglas Fir, Pine, Madrone, Bay, and several species of Oak provide a dense buffer between the farm and the Russian River and provide riparian habitat for many native bird and animal species.

PASTURE

The pasture supports Shone Farm's grass-fed beef and sheep for the Animal Science Program, as well as horses for the Equine Program. The animals thrive in a free-range environment where they move about and forage native grasses at will.

Irrigation is provided to parts of the pasture using tertiary treated recycled water from Windsor.

VINEYARD

The farm also includes 70 acres of vineyard, which is professionally managed and the grapes sold to local wineries. Some of the Shone Farm grapes are crushed at the Shone Farm Winery and sold under the Shone Farm label. Varieties grown include Chardonnay, Sauvignon blanc, Pinot noir, Merlot, and Syrah. There is also a one-acre student-managed teaching block planted with several grape and rootstock varieties from Albarino to Zinfandel.

CROP PRODUCTION

Shone Farm's large crop production area allows students to learn sustainable farming practices on a small commercial scale.

EQUINE SCIENCE

The outdoor equestrian spaces include an outdoor arena, round pen, hot walker, and turn out pastures.

Sources: <http://www.shonefarm.com/story.shtml>
<http://ag.santarosa.edu/equine-science>

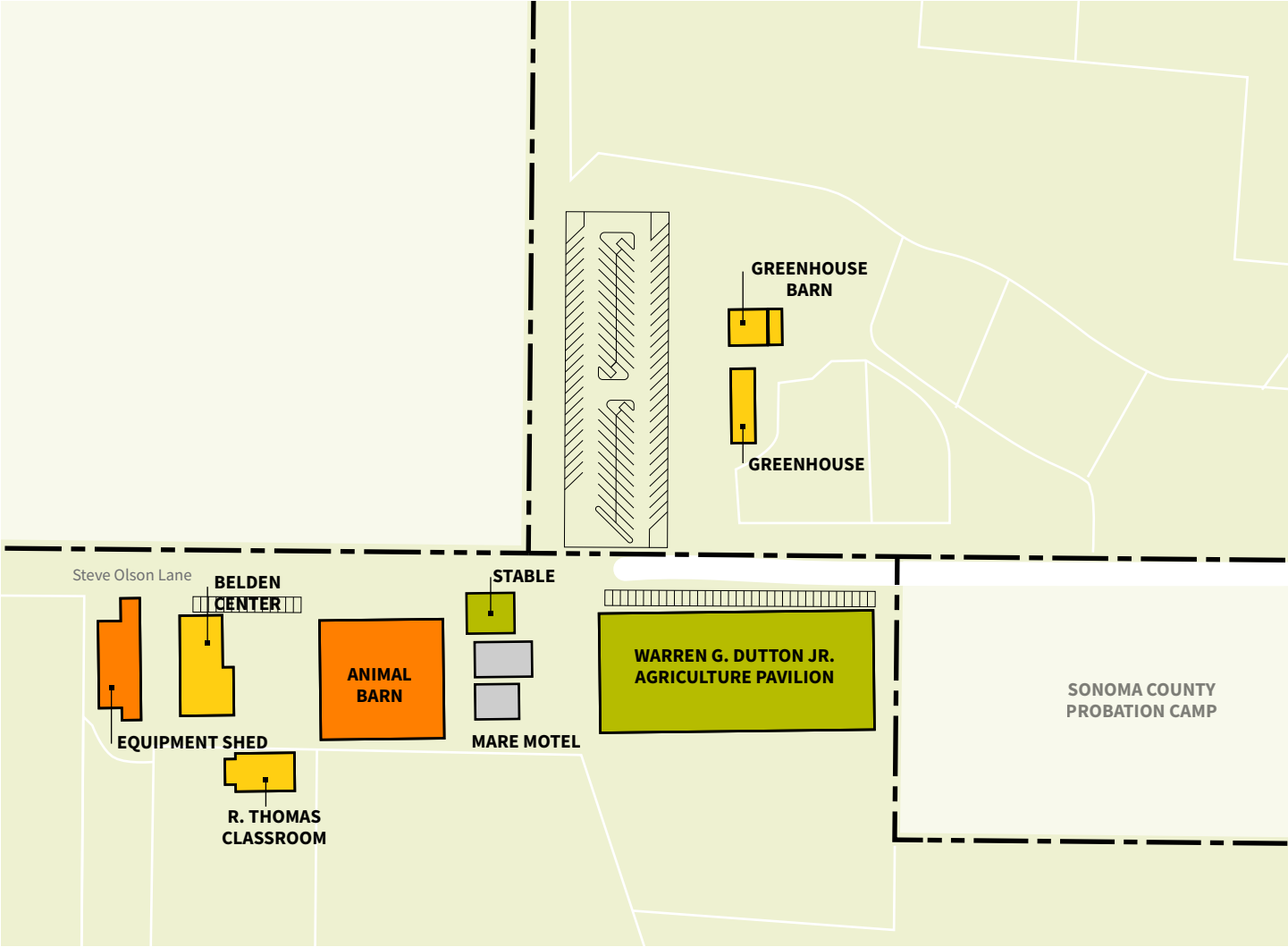
ANALYSIS

Facility Condition Plan

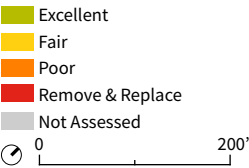


Shone Farm
Photo by: Gensler

Building	Architectural	Structural	Fire	Plumbing	Mechanical	Overall
Animal Science Center	2	2		3	1	2
Equipment Shed	2	3		3	1	2
GK Hardt Stables	4	4		3	3	4
Charles Belden Center	3	3		3	3	3
Classroom Building	3	4		3	1	3
Greenhouse and Storage	3	3		3	1	3
AG Pavilion	4	4		3	3	4



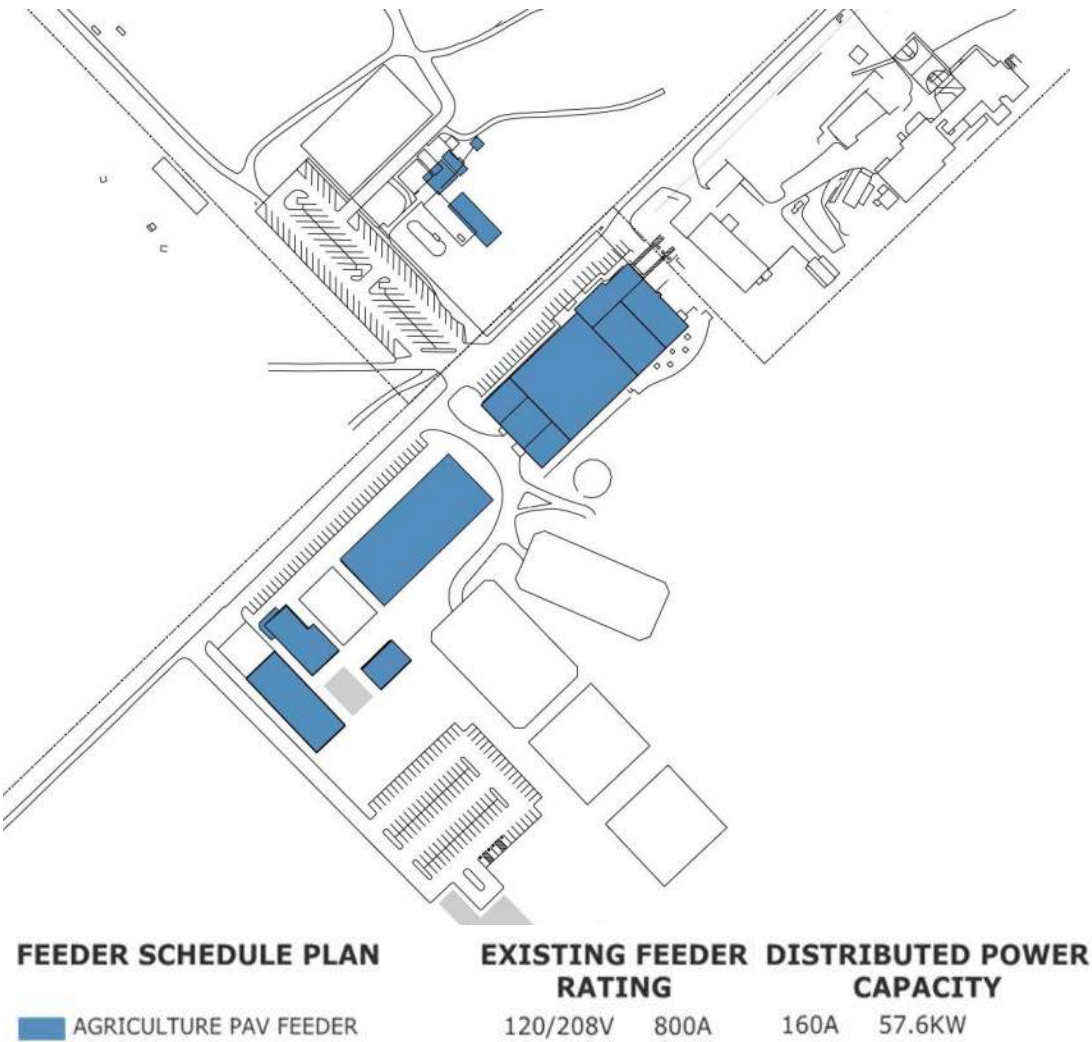
FACILITY CONDITION PLAN



ANALYSIS

MEP Campus Systems

Electrical Campus Infrastructure



Shone Farm is fed from four separate PG&E services. Future distributed power is expected to serve from the Warren G. Dutton Agricultural Pavilion. The Agricultural Pavilion is served from a single Main Switchboard 'MSA.' MSA is rated at 120/208V and 800 amps. Under CEC 2013, MSA is able to support 57.6 kW of distributed power.

System capacity noted here is based on available as-built documentation and in-effect code cycle. Further investigation of existing system conditions and new code requirements is required. Renewable energy sources interconnection shall follow PG&E requirements.

SHONE FARM

RECOMMENDATIONS

RECOMMENDATIONS

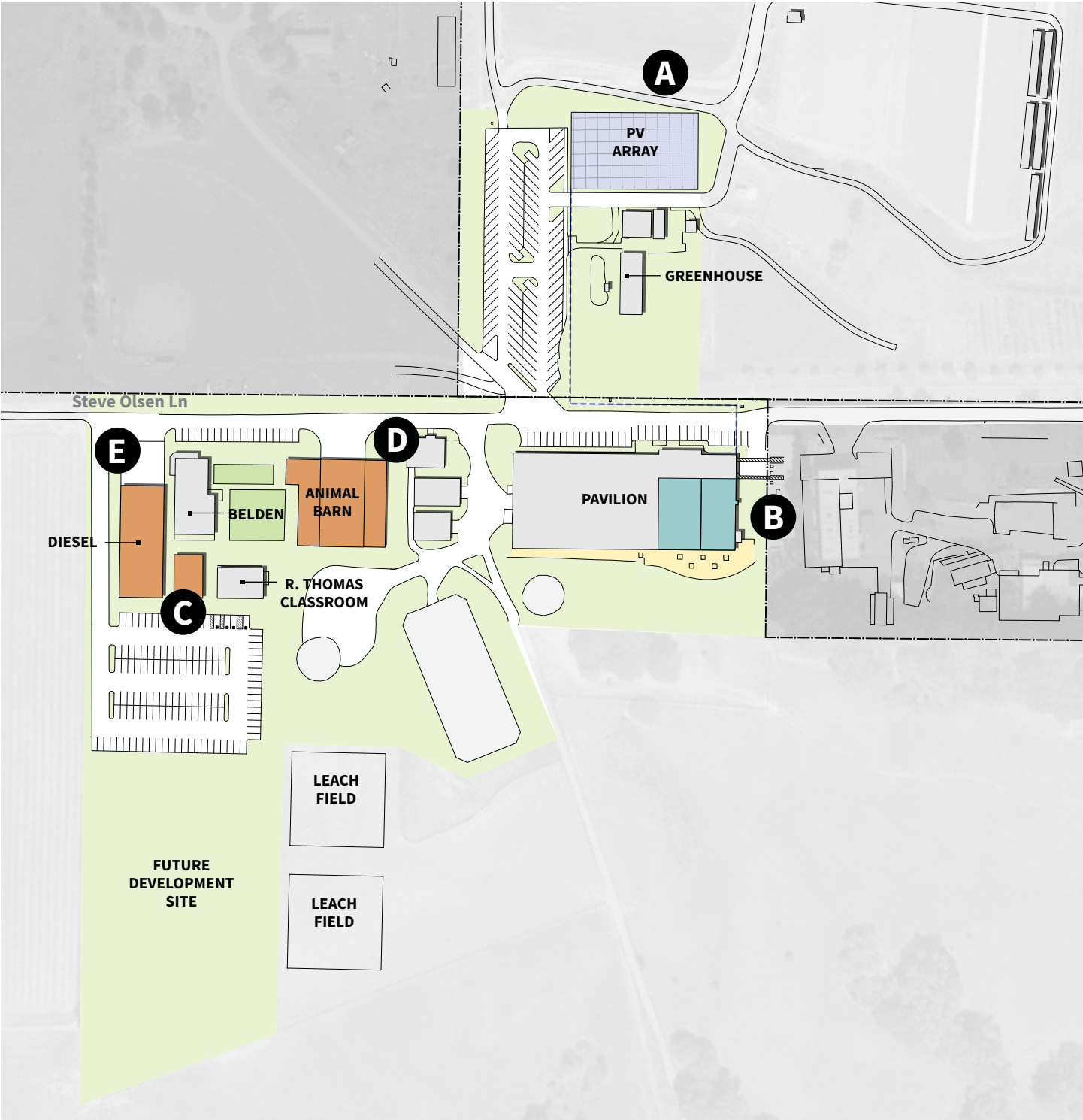
Vision Plan

Overview

The Vision Plan supports the mission of the Shone Farm to increase the knowledge, improve the skills, and enhance the lives of those served by its programs, preparing leaders in agriculture, food systems, and natural resources who are equipped to address the diverse needs of society.

PROJECT LIST

Proj.	Concepts
A	Add PV Array for self-generated energy (using existing District owned PV panels: <ul style="list-style-type: none">Connect to the existing electrical room in the Pavilion.
B	Pavilion Instructional Renovations.
C	Add Instructional Space (lab or classroom)
D	Rebuild or Renovate Existing Animal Barn.
E	Relocate Diesel program (11,000 gsf) from Santa Rosa Campus. <ul style="list-style-type: none">Demolish existing Equipment ShedConstruct new Diesel facilityIncorporate equipment storage space in new Diesel facility



VISION PLAN

- Existing Facility
- Repurposed/Renovated Facility
- New Facility
- PV Panels



RECOMMENDATIONS

Facilities Recommendations

PHOTOVOLTAIC ARRAYS

To support the Sustainability goals of the District and Shone Farm, the Vision Plan recommends the installation of Photovoltaic (PV) Arrays on the site for self-generated energy. Preliminary study indicates that a location north of the existing Greenhouse is sufficient in size and orientation to provide a solar photovoltaic system with the potential to attain Net Zero Energy. Further study will be necessary to determine the exact location and size of the PV system. Other considerations include the ability to employ panels the District owns, the ability to employ virtual net metering, the connection of the PV array to the electrical room in the north corner of the Pavilion, and the flexibility to accommodate future, high-density solar panels.

PAVILION

Renovation and expansion of the current culinary facilities within the Pavilion are recommended to support the growth and success of the existing Culinary Arts programs at Shone Farm. Projects associated with the expansion of Culinary Arts include: renovation of the existing kitchen to expand culinary instructional offerings; renovation and expansion of the beer brewing / wine making and equipment storage facilities for program growth; and, the addition of a wine tasting room.

ANIMAL BARN

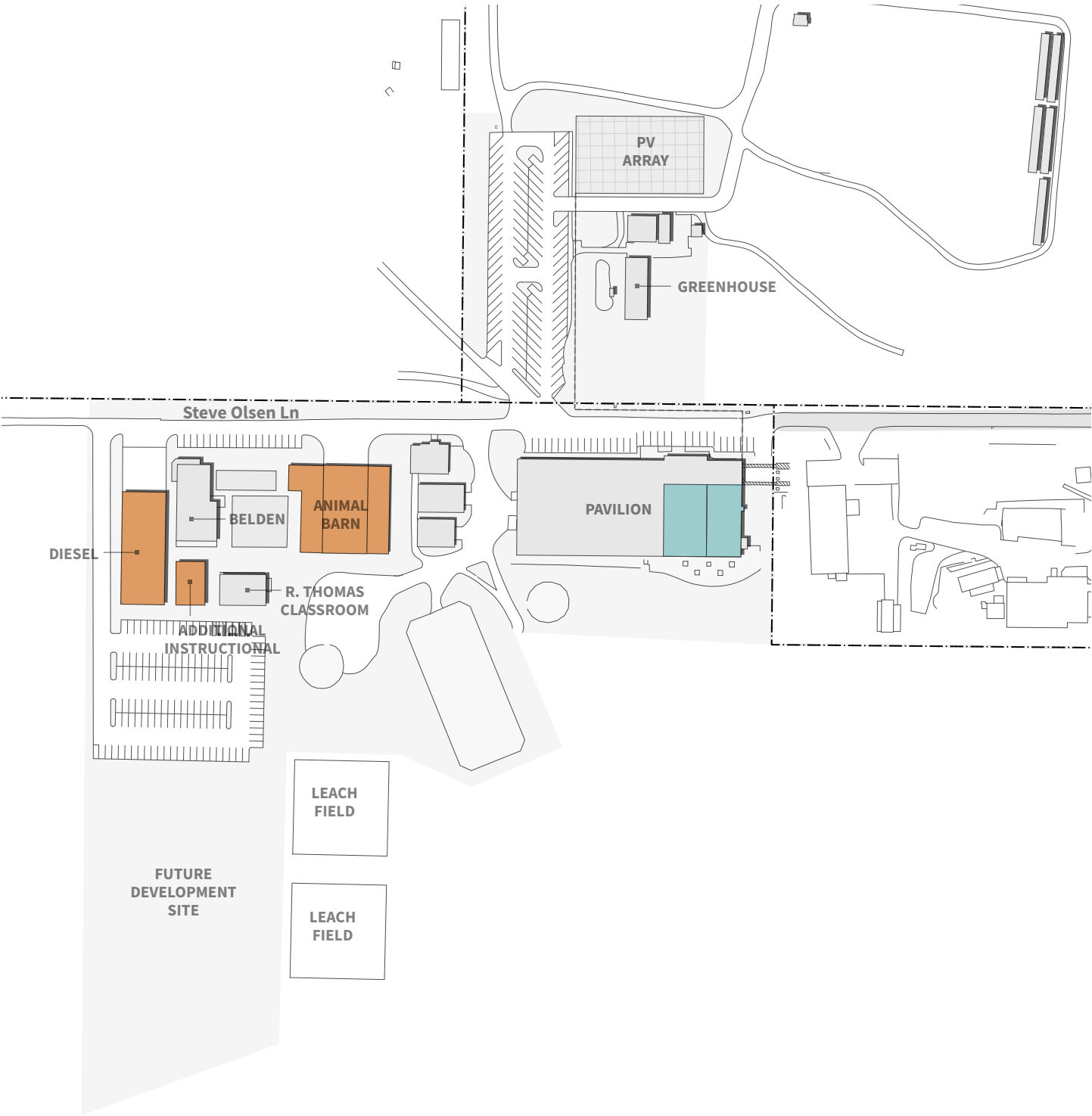
The Facility Assessment shows that the existing Animal Barn is in poor condition. The Vision Plan recommends that it be replaced or its program relocated to another facility on site, pending further studies.

ADDITIONAL INSTRUCTIONAL

To augment the existing instructional facilities at Shone Farm, the Vision Plan recommends that an additional modular instructional facility be added, with lab or classroom, adjacent to the existing R.L. Thomas Classroom.

DIESEL PROGRAM

The Sonoma County Junior College District is advantageous in its holdings of multiple teaching sites in which learning resources can be shared. In the event that the Diesel program is eliminated from the Santa Rosa campus, a new Diesel facility (approximately 11,000 GSF) may be constructed on the Shone Farm site. The Vision Plan recommends that the new facility be constructed on the footprint of the existing Equipment Shed, incorporating the latter's associated program and storage.



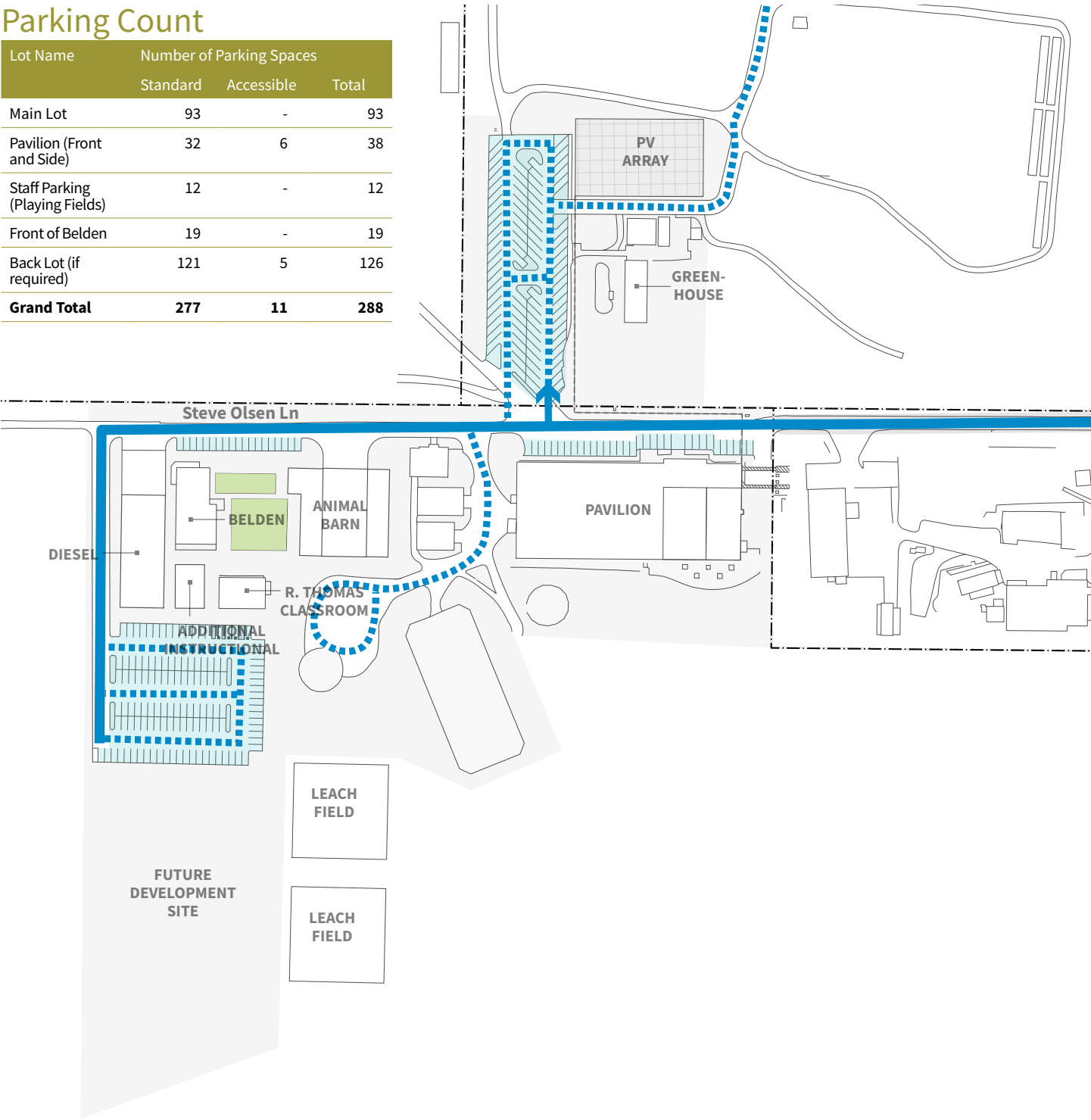
FACILITIES RECOMMENDATIONS

- Existing Facility
- Repurposed/Renovated Facility
- New Facility
- PV Panels



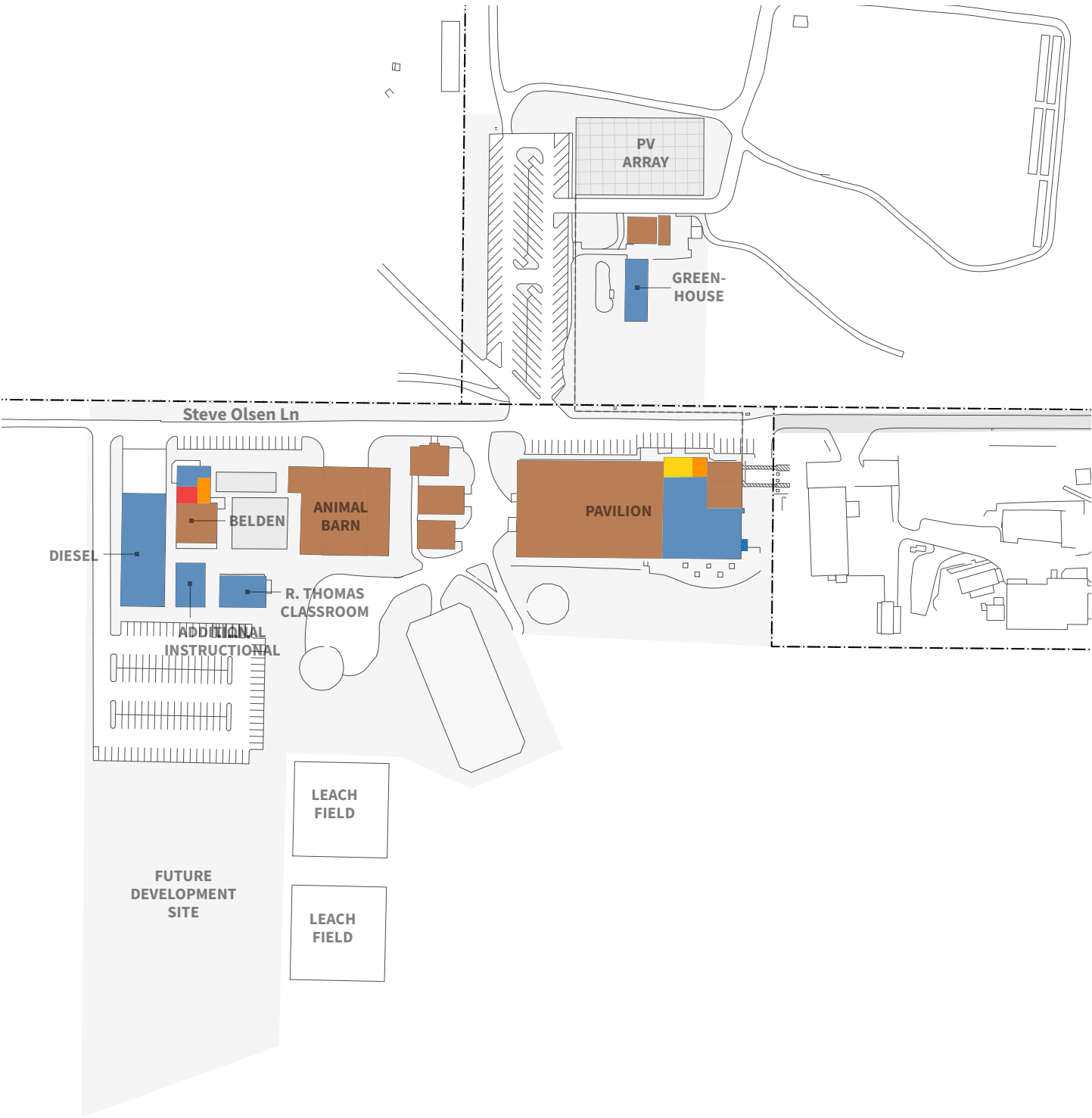
Parking Count

Lot Name	Number of Parking Spaces		
	Standard	Accessible	Total
Main Lot	93	-	93
Pavilion (Front and Side)	32	6	38
Staff Parking (Playing Fields)	12	-	12
Front of Belden	19	-	19
Back Lot (if required)	121	5	126
Grand Total	277	11	288



SITE RECOMMENDATIONS

- Parking Lot
 - Parking / Site Access
 - Through Road
 - Limited Access Road
- 0 200'



- CAMPUS ZONING**
- Student Services + Activities
 - Administration
 - Instructional
 - Service + Support
 - Parking
 - Hospitality / Housing



RECOMMENDATIONS

Signage and Wayfinding

SIGN TYPE LIST

IDENTIFICATION SIGNS

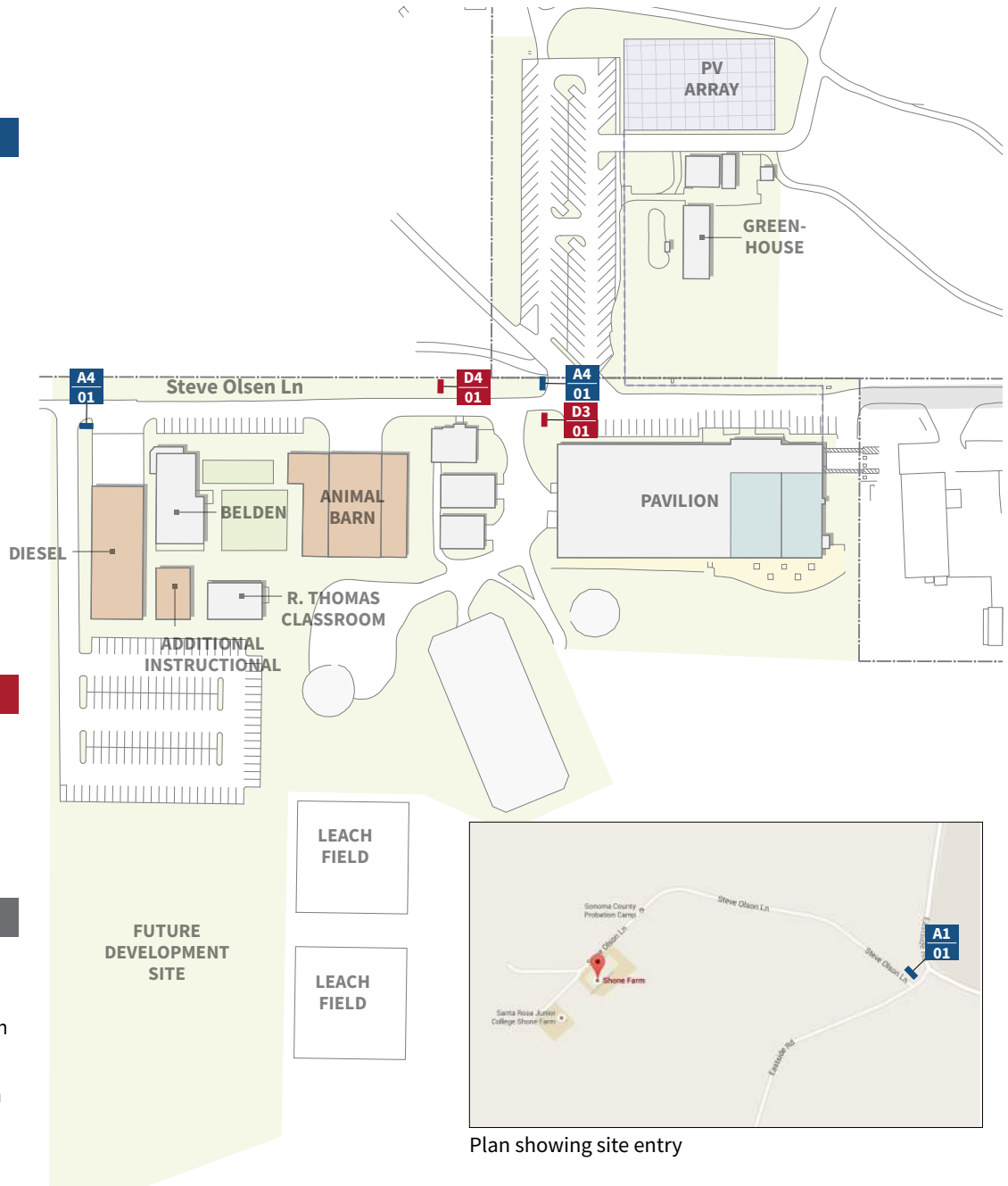
- A1** - Campus ID
- A2** - Campus ID (Dynamic)
- A3** - Campus ID (Landscape)
- A4** - Parking Lot ID
- A5** - Building ID (Wall-mounted)
Not shown on plan
- A6** - Building ID (Freestanding)
Not shown on plan
- A7** - Building ID
(Dimensional Letters)
Not shown on plan
- A8** - Parking Zone ID
(Pole-Mounted)
Not shown on plan

DIRECTIONAL SIGNS

- D1** - Campus Map + Directional
- D2** - Finger Post Directional
- D3** - Campus Map (Pedestal)
- D4** - Vehicular Directional

REGULATORY SIGNS

- R1** - Regulatory Sign
Not shown on plan
- R2** - Parking Policy / Zone ID Sign
Not shown on plan
- R3** - Emergency Evacuation Area
ID Sign
Not shown on plan



Plan showing site entry

Refer to signage design guidelines document for details and usage information.

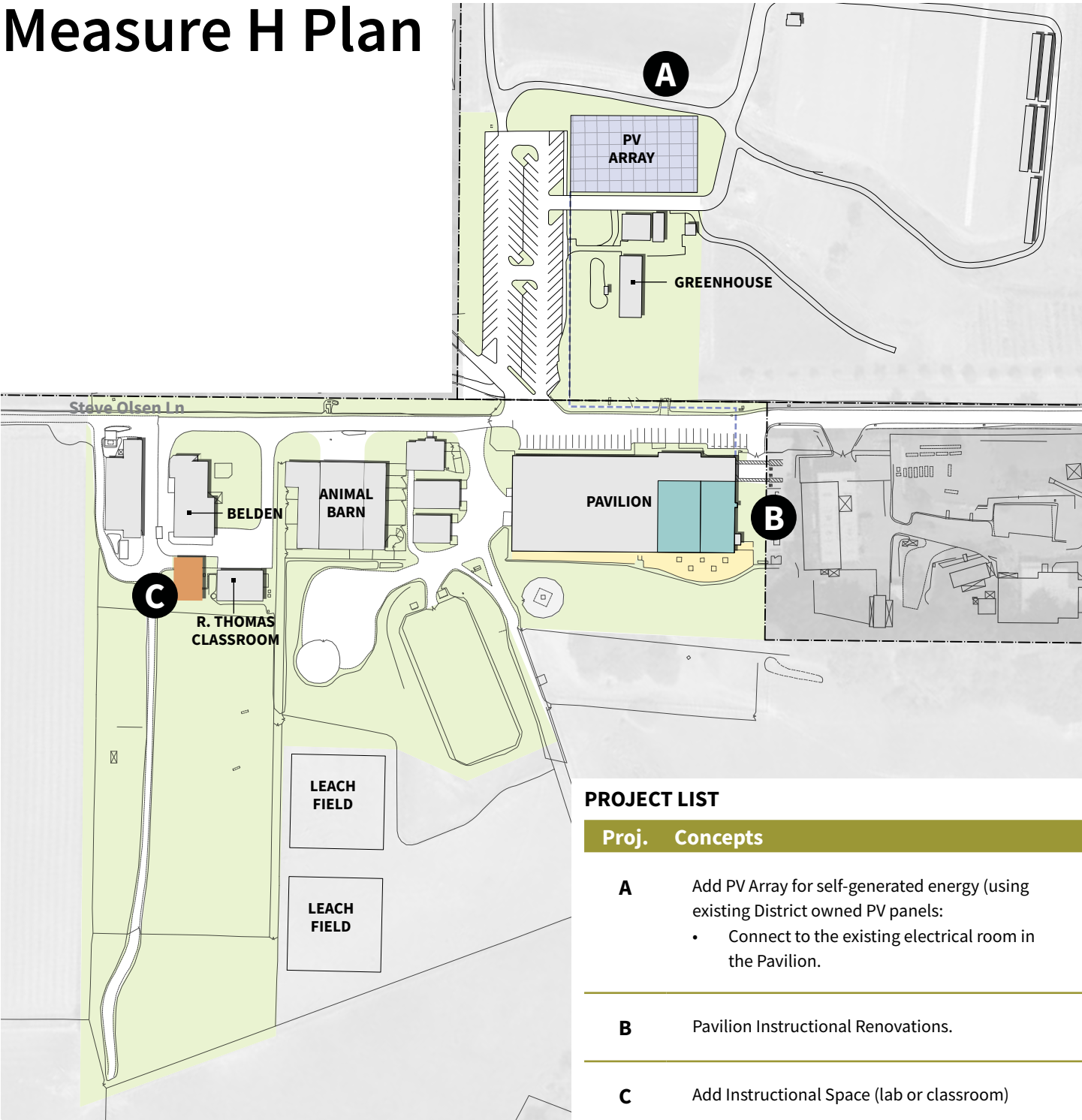
SYMBOL KEY

- A4** — Sign Type
- 01** — Sign Number



RECOMMENDATIONS

Measure H Plan



MEASURE H PLAN

Existing Facility

Repurposed/Renovated Facility

New Facility

PV Panels

0

200'

RECOMMENDATIONS

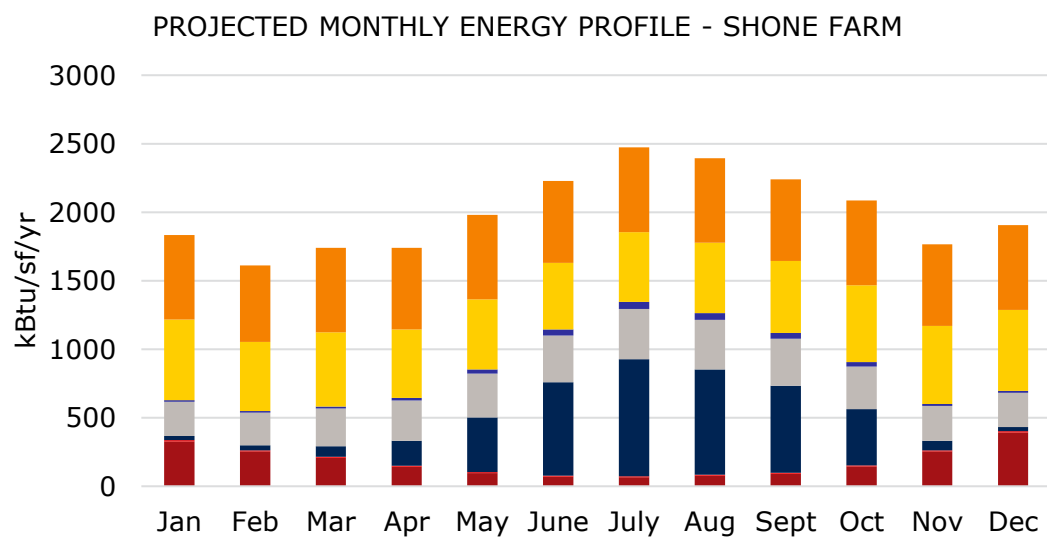
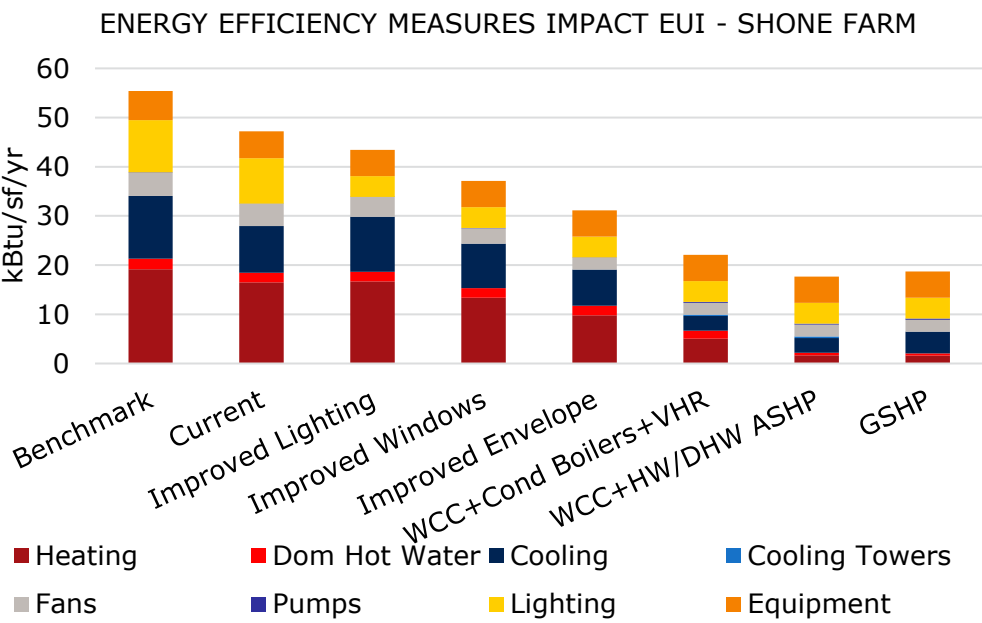
Recommended MEP Campus Systems

Energy and water analysis was done to reach the recommended systems and strategies below, that analysis is included in the MEP report included in the appendix of this document. Refer to that document for detailed information on the data that supports the following MEP recommendations.

Energy

Similar to the other sites, for all new construction or renovation projects we recommend that the efficiency measures described in the previous section be implemented. Once sub-metering data is available, specific buildings might be identified as candidates for energy upgrades.

Based on the estimated current EUI, the efficiency measures are applied to each of the program type and the impact on the resulting weighted average for the campus EUI. With all the measures applied to every building, the campus average EUI would be about 8 kBtu/sf which would maintain the campus within reach of being Net Zero Energy.



RECOMMENDATIONS

Recommended MEP Campus Systems



**RECOMMENDED CAMPUS LEVEL
ENERGY STRATEGIES**

Given the size of the Shone Farm we do not recommend a central plant condenser water option. Instead, chillers and cooling towers could be shared between the different buildings.

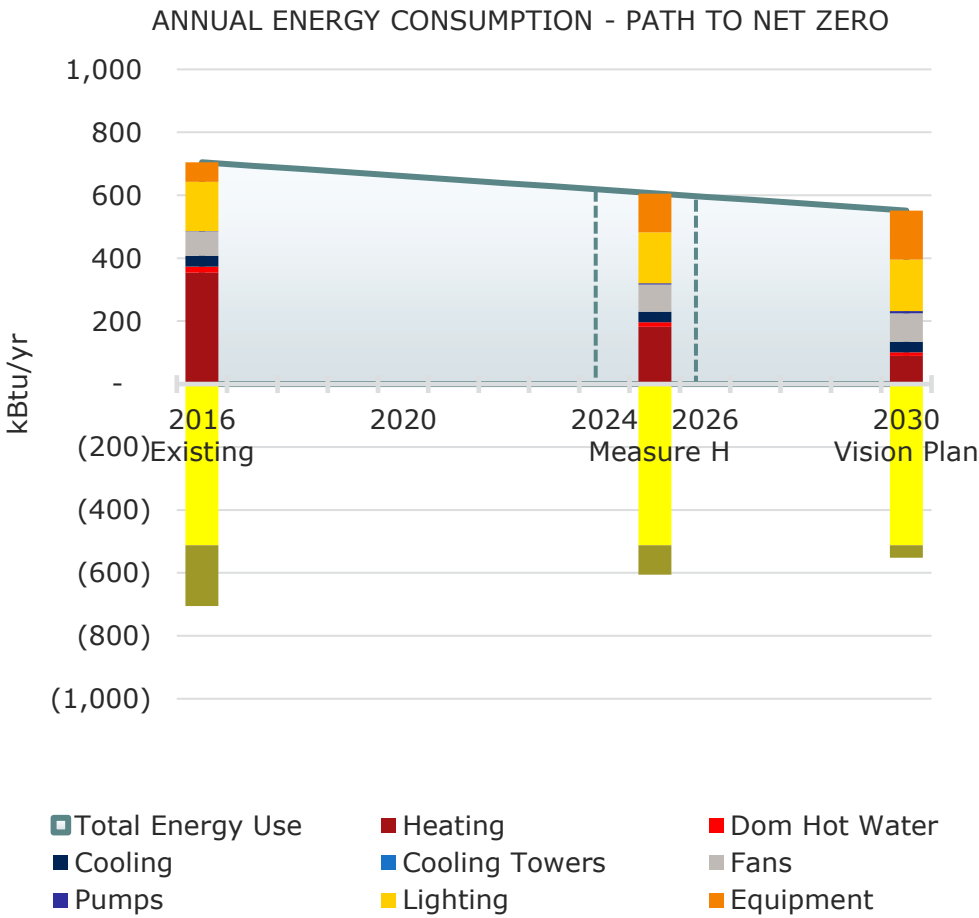
Currently, the Shone Farm is going to have 109kW PV array installed. Based on the actual and projected EUI at completion of Measure H and the Vision Plan, assuming that all the efficiency measures have been implemented, the amount of additional PV required to achieve net zero is indicated in table. These estimated areas have been calculated assuming a constant campus space square footage and program.

PV AREA REQUIRED

	Area (sf)	Cost (\$)
Current	2,000	100,000
Measure H	1,000	100,000
Vision Plan	-----	-----

RECOMMENDED BUILDING LEVEL
ENERGY STRATEGIES

The amount of PV required to achieve Net Zero Energy is directly related to the ability to reduce the campus' energy consumption. Each of the building efficiency measures (energy efficient glazing, daylight harvesting, efficient lighting, heat recovery ventilation, laboratory low airflow minimum and ground source heat pumps) are recommended for new constructions and should be evaluated for building retrofits through LCCA analysis.



RECOMMENDATIONS

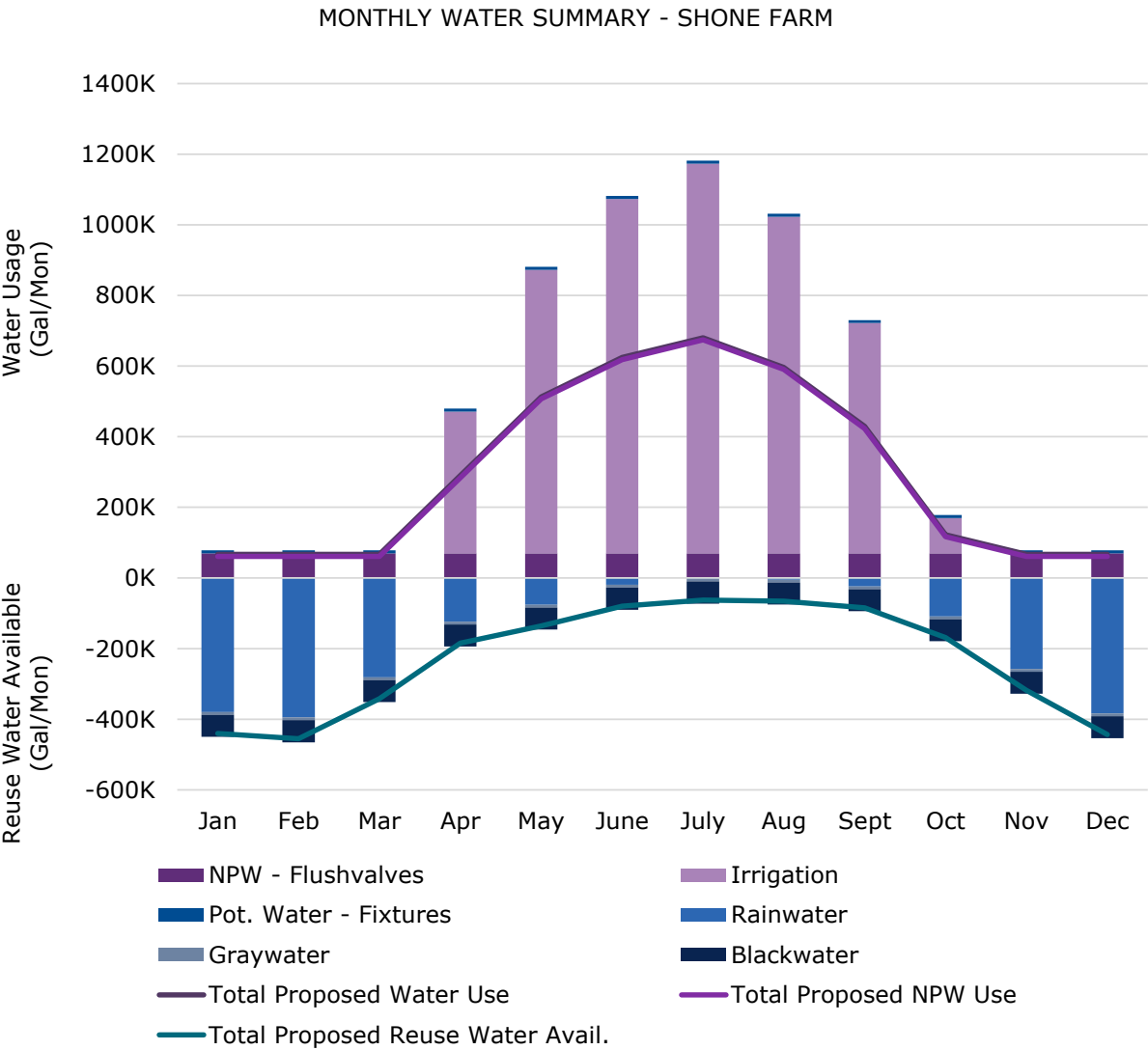
Recommended MEP Campus Systems

Water

Similar to the Existing Monthly Water Use graph in the appendix, the graph below shows the monthly water use of meeting code minimum of CalGreen, by the bar graph. The lines through the graph depict the proposed case of implementing low flow fixtures, drought tolerant landscape and swimming pool covers. These strategies are evaluated in the section below.

There are some key water usage trends depicted in this graph, that show why certain water saving strategies are recommended or not. When reviewing this graph it is important to understand that treated reclaimed water from rainwater, greywater or blackwater can only be reused for non-potable water, indicated in a shade of purple. Treated water can't be reused for any potable water, indicated in a shade of blue.

The graph shows that with the proposed case rainwater, greywater, and blackwater treatment would not be able to meet the non-potable water demand (line in graph is above non-potable water use) for the campus in the summer months due to the irrigation load.



RECOMMENDATIONS

Recommended MEP Campus Systems



Recommended Water Strategies

The following strategies are recommended because they offer significant water savings with relatively low to medium cost and because they are critical to achieving the Vision Plan goals.

LOW FLOW PLUMBING FIXTURES

Replacing all the existing fixtures with the efficient low flow plumbing fixtures is outlined in Section 6.16 “Low Flow Plumbing Fixtures” in the appendix. If low flow fixtures are installed estimated water savings is 40% from LEED and 14% savings from CalGreen. For new buildings the cost difference between the low flow fixtures and CalGreen fixtures is negligible.



An important item to note is that food service water usage has the highest indoor water demand. This water usage is based on process loads for equipment and fixtures. If the water usage was reduced by a significant factor, it would affect the fixture/equipment’s functionality. It is assumed that no water savings will be obtained from food service.



DROUGHT TOLERANT LANDSCAPE

Replacing all existing vegetation and irrigation systems with low water use plants and efficient subsurface irrigation, can have a large impact on water savings. This provides an estimated of 44% water savings from the assumed baseline of medium water use plants with an overhead spray irrigation system.

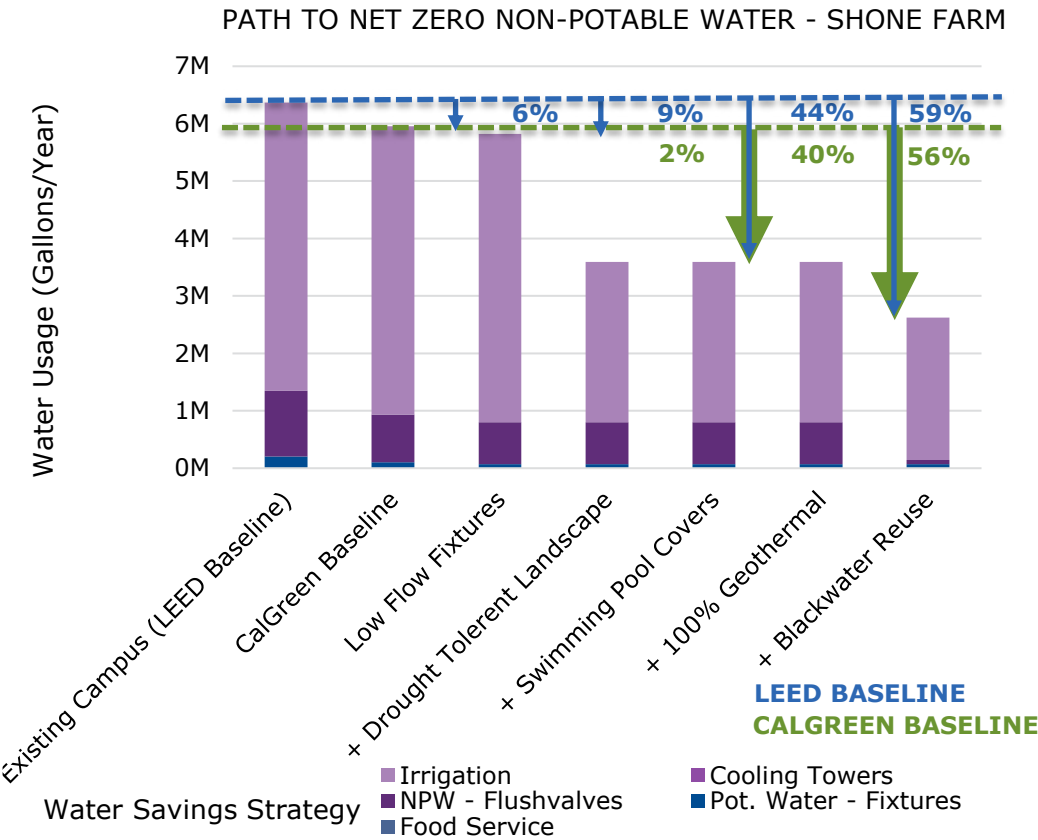
BLACKWATER TREATMENT & REUSE

Even though the blackwater treatment can’t meet the non-potable water demand, the site is dependent on a septic tank, so ideal location for a blackwater treatment system. Providing the treatment system enables the campus to reuse the blackwater, instead of just store it.

It is estimated that blackwater available on campus can meet 90% of the campus indoor demand and 19% of the outdoor non-potable demand. The campus would be unable to reach the net-zero non-potable water use goal for 2030.

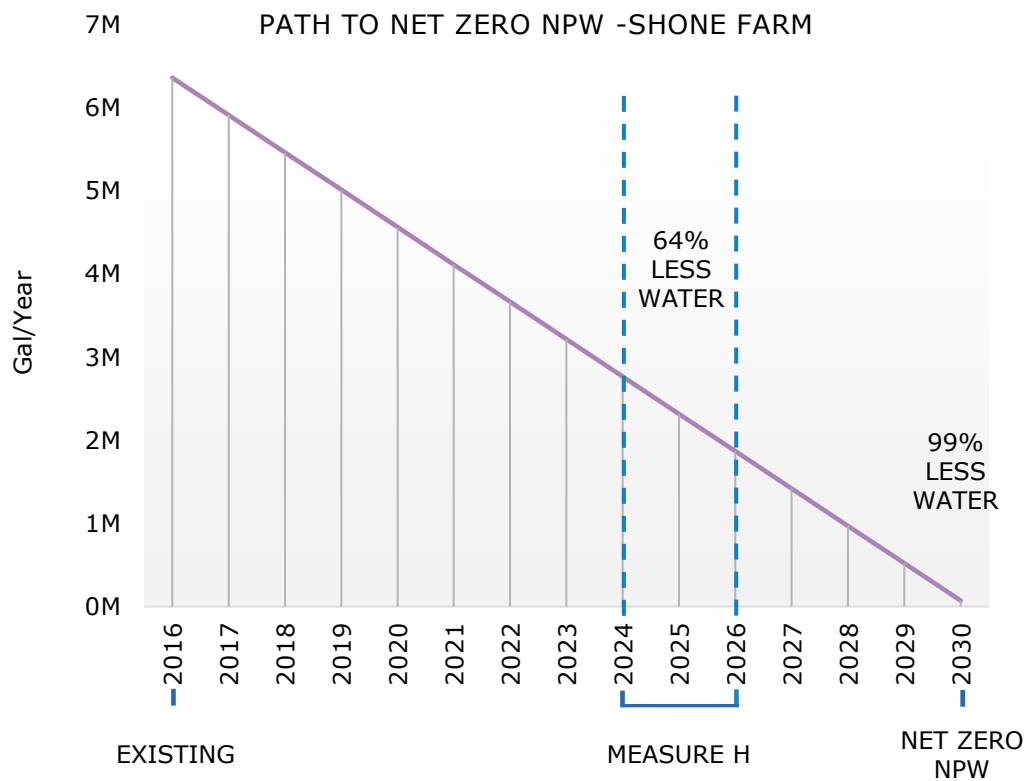
Path to 2030

By incrementally implementing the campus water saving measures within the “Reuse Proposed Case”, the campus can achieve net zero-non-potable water. The Path to Net Zero graph shows the water savings achieved.



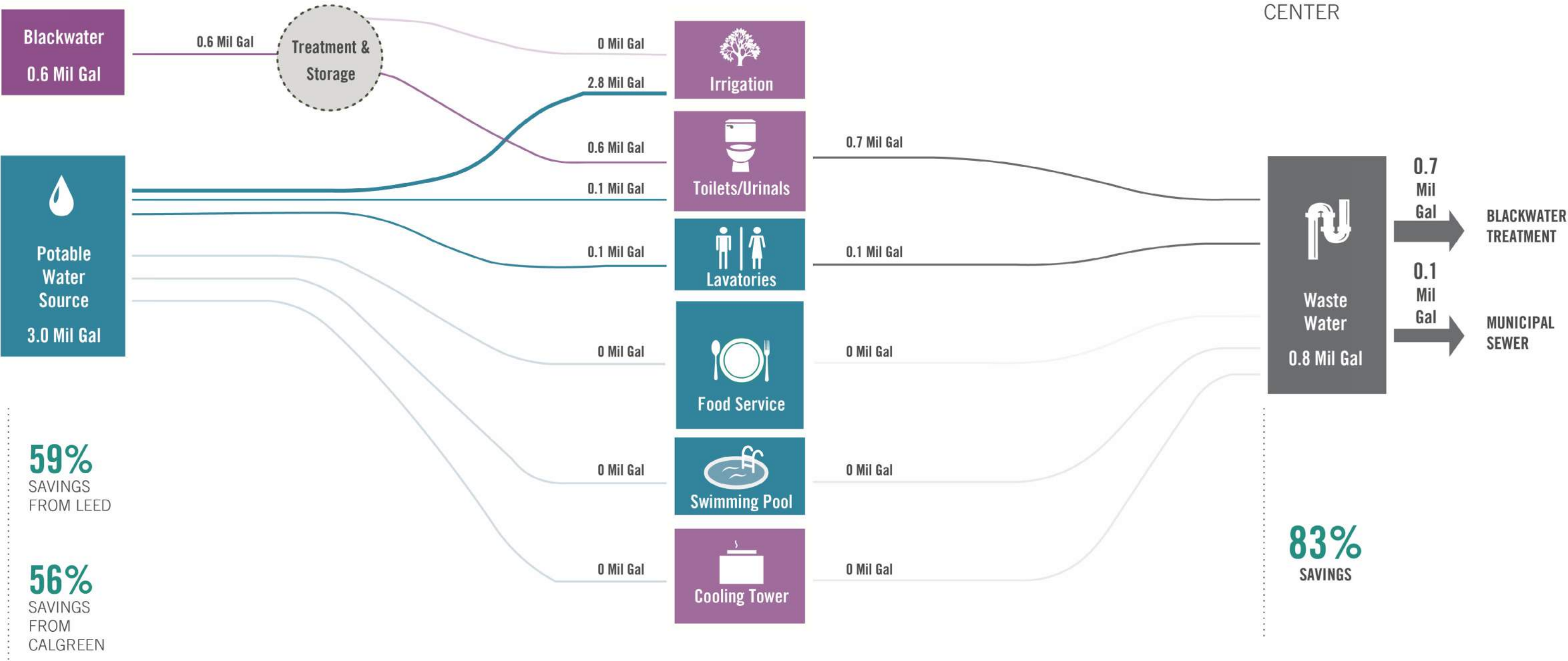
RECOMMENDATIONS

Recommended MEP Campus Systems



The Progress Path to Net Zero Non-Potable Water graph depicts the current campus water usage, along with the net-zero non-potable water goal in 2030. Measure H is tracking for years 2024 to 2026 and the percent water savings indicated should be achieved by Measure H, in order to be on track to reach the 2030 goal of net-zero non-potable water.

SHONE FARM CENTER



REUSE PROPOSED CASE:
LOW FLOW FIXTURES, DROUGHT TOLERANT LANDSCAPE,
SWIMMING POOL COVERS, GEOTHERMAL & BLACKWATER REUSE

RECOMMENDATIONS

Recommended MEP Campus Systems

Proposed MEP Upgrades

Based on the campus energy efficiency measures and the water strategies presented above, the map indicates the potential locations for the black water plants and geothermal field.

