

MT. SAN ANTONIO COLLEGE

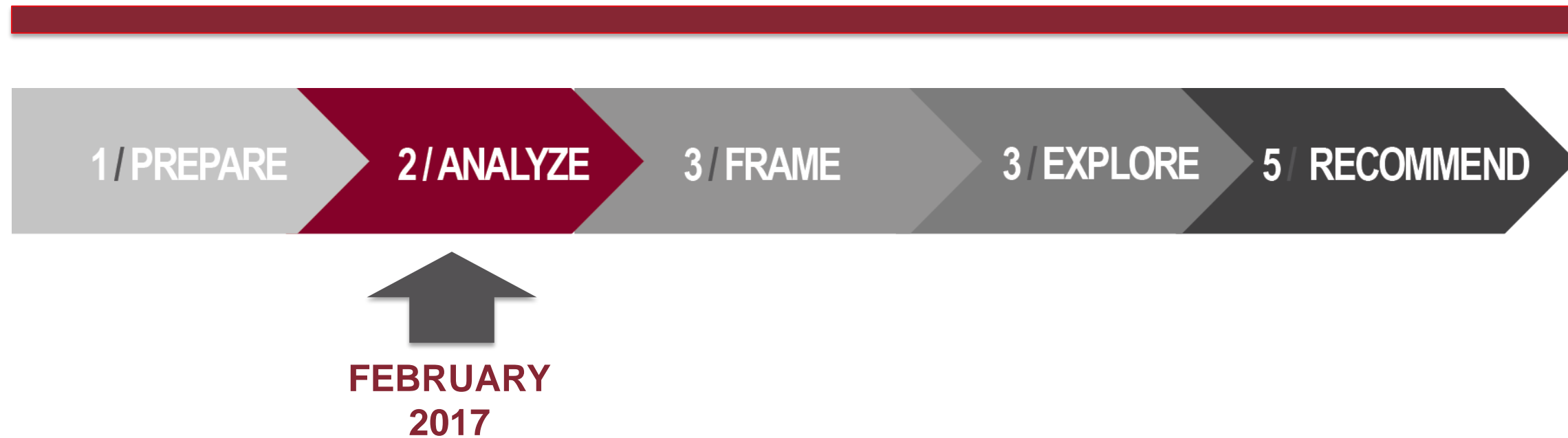
2018 Educational and Facilities Master Plan

FEBRUARY 10, 2017 MASTER PLAN STEERING TASK FORCE MEETING

Updates

SEPTEMBER
2016

DECEMBER
2017



UPDATE – EFMP

/ REPORT TO BOARD OF TRUSTEES – JANUARY 21ST

/ DESCRIPTIONS OF INSTRUCTIONAL DISCIPLINES

/ DESCRIPTIONS OF STUDENT SERVICES & ADMINISTRATIVE SERVICES

/ DATA PORTFOLIO REVIEWED BY OFFICE OF RESEARCH & INSTITUTIONAL
EFFECTIVENESS

UPDATE – EFMP

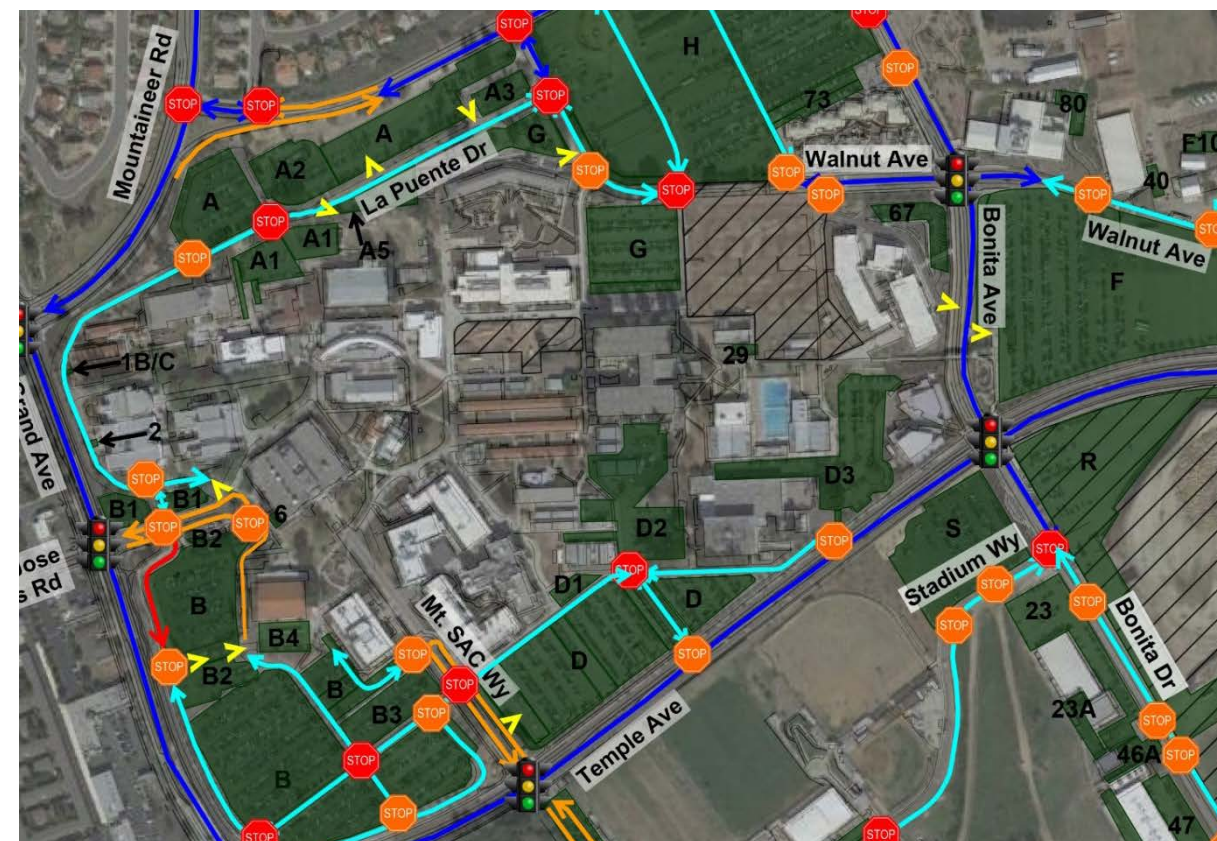
- / OBSERVATIONS OF THE SITE & FACILITIES
- / REPORTS, SPACE INVENTORY, & BUILDING PLANS
- / CLIMATE COMMITMENT COMMITTEE MEETING



UPDATE – CIRCULATION AND PARKING MASTER PLAN

/ SCOPE & TIMING

/ INFORMATION FOR THE EFMP



UPDATE – COMMUNITY OUTREACH

- / COMMUNITY FACILITIES PLAN ADVISORY COMMITTEE
- / UPCOMING PUBLIC WORKSHOPS HOSTED BY LOCAL TRUSTEES



TRUSTEE AREAS

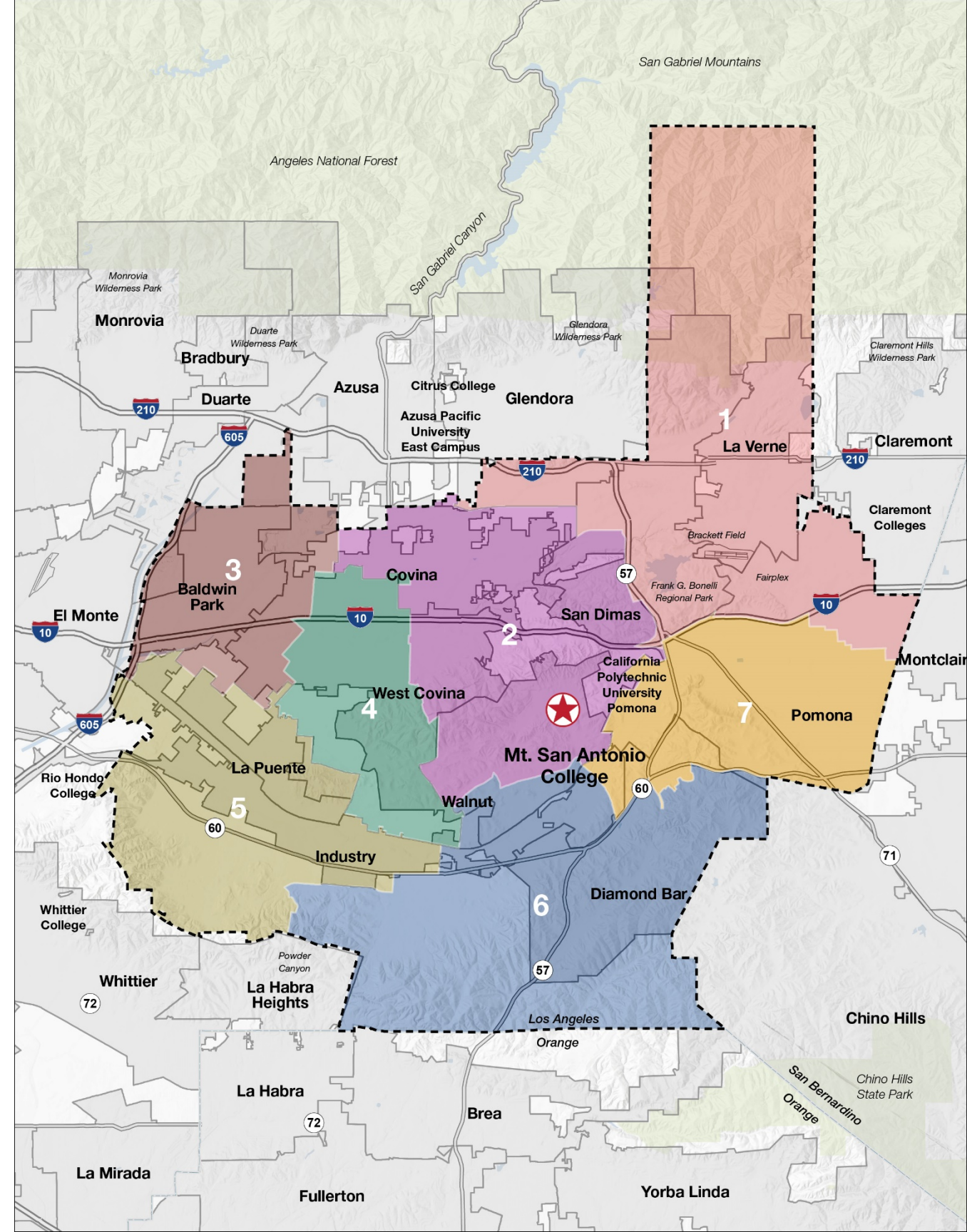
OBSERVATIONS:

- 7 Trustees represent specified areas of the Service District

- 1 – Rosanne Bader
- 2 – David Hall
- 3 – Laura Santos
- 4 – Robert Hidalgo
- 5 – Jay Chen
- 6 – Judy Chen Haggerty
- 7 – Manuel Baca

LEGEND

	MT. SAN ANTONIO COLLEGE
	MT. SAC COMMUNITY COLLEGE DISTRICT
	INTERSTATE
	STATE HIGHWAY
	COUNTY BOUNDARIES
	CITY BOUNDARIES
	AIRPORT RUNWAY
	AIRPORT AREA
	BODIES OF WATER
	FORESTS AND PARKLANDS
	1 - ROSANNE BADER TRUSTEE AREA
	2 - DAVID HALL TRUSTEE AREA
	3 - LAURA SANTOS TRUSTEE AREA
	4 - ROBERT HIDALGO TRUSTEE AREA
	5 - JAY CHEN TRUSTEE AREA
	6 - JUDY CHEN HAGGERTY TRUSTEE AREA
	7 - MANUEL BACA TRUSTEE AREA



Data Portfolio

/ PLANNING IMPLICATIONS
/ ANNUAL GROWTH FORECAST

PLANNING IMPLICATIONS












1. Slow Population Growth
2. Aging Population
3. Stable Student Participation Rate
4. Increase in High School Graduate Enrollments
5. Positive FTES and Headcount Trends






Planning Implications

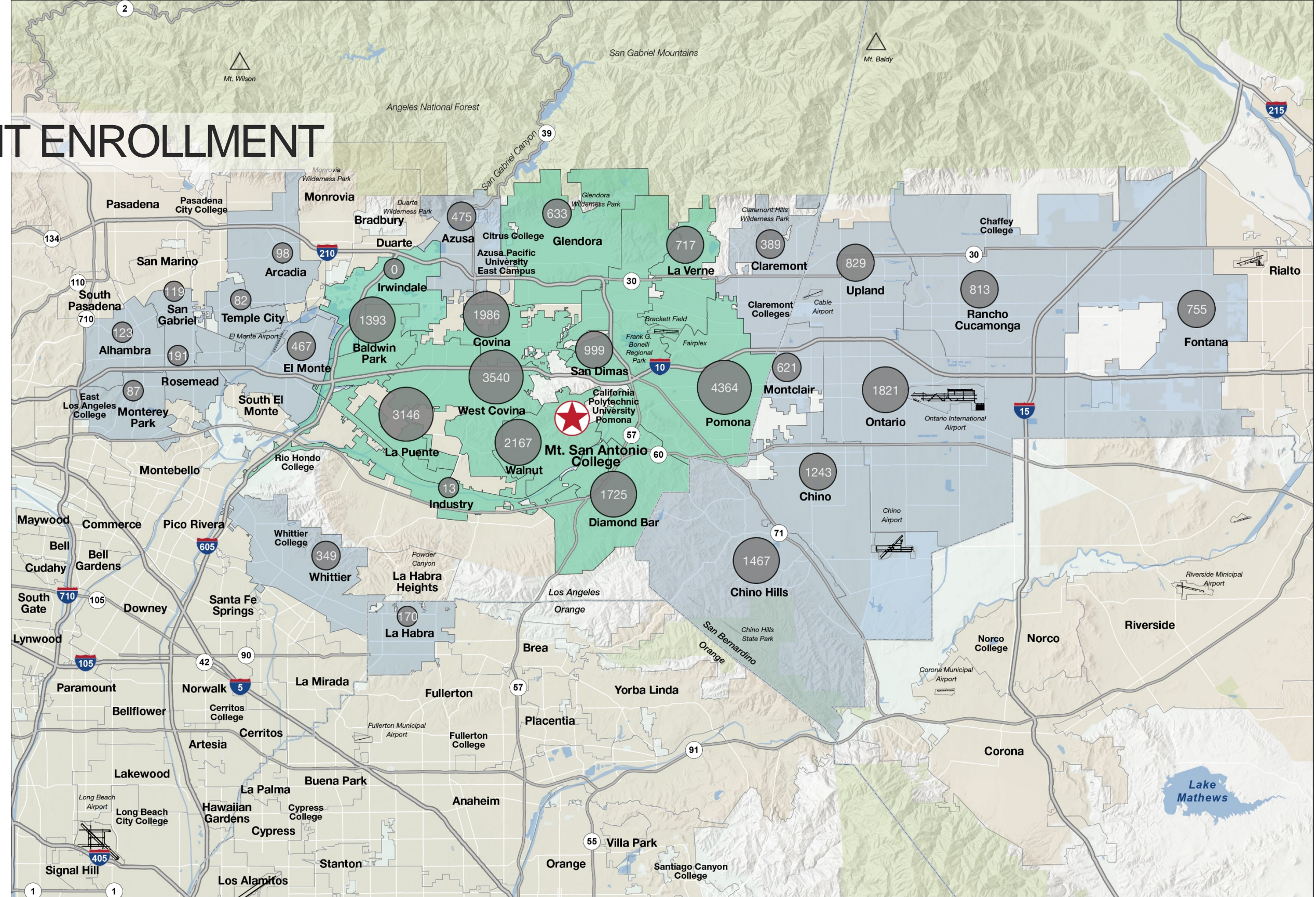
SLOW POPULATION GROWTH

ANALYSIS

STUDENT ENROLLMENT

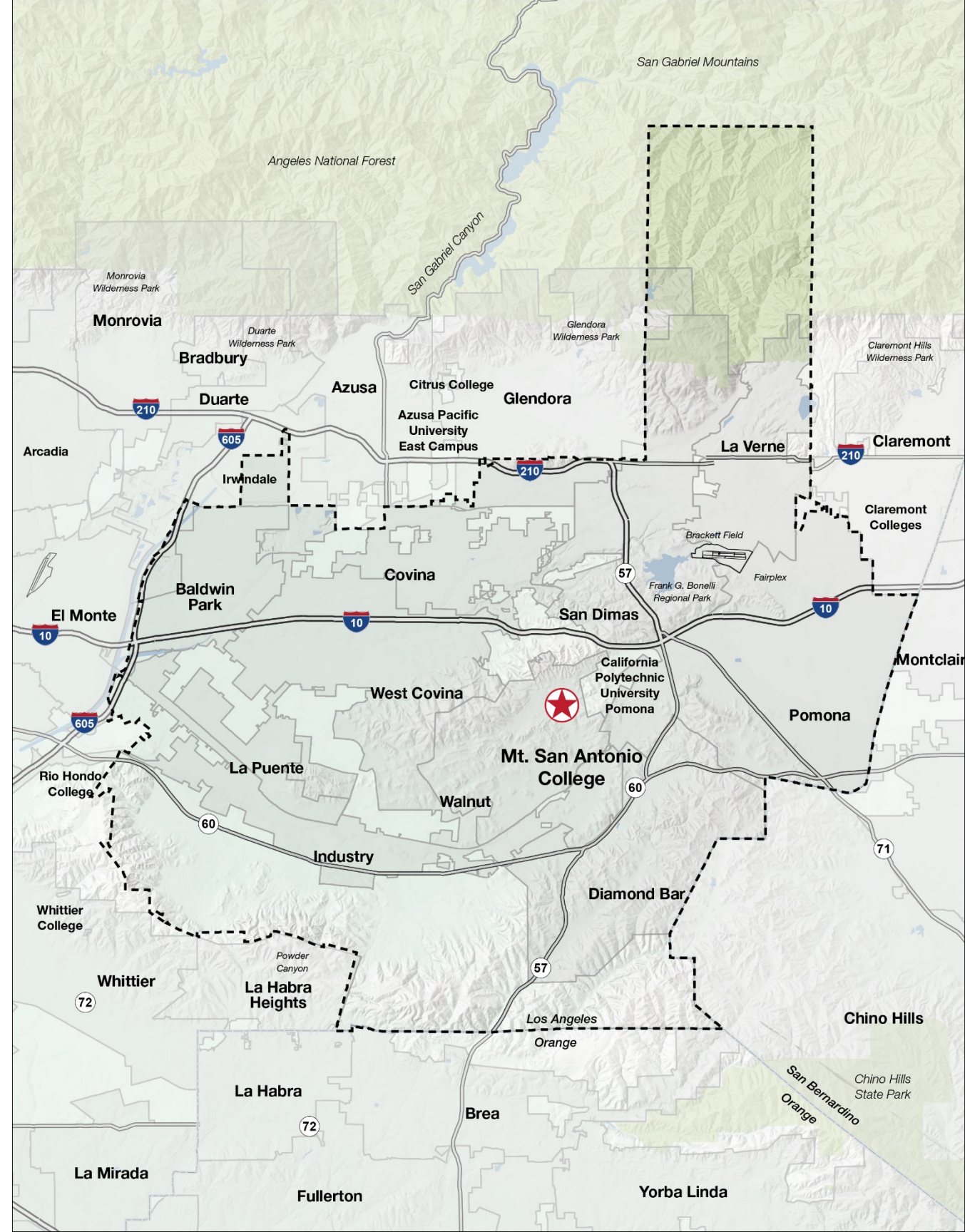
- LEGEND**
-  MT. SAN ANTONIO COLLEGE
 -  INTERSTATE
 -  STATE HIGHWAY
 -  COUNTY BOUNDARIES
 -  CITY BOUNDARIES
 -  CITY SERVICE AREAS
 -  CITY DISTRICTS
 -  AIRPORT RUNWAY
 -  AIRPORT AREA
 -  BODIES OF WATER
 -  FORESTS AND PARKLANDS

-  2015 DISTRICT ENROLLMENT | 0-191
-  2015 DISTRICT ENROLLMENT | 192-633
-  2015 DISTRICT ENROLLMENT | 634-1243
-  2015 DISTRICT ENROLLMENT | 1243-2167
-  2015 DISTRICT ENROLLMENT | 2168-4364



MT. SAC DISTRICT

- Baldwin Park
- City of Industry
- Covina
- Diamond Bar
- Glendora
- Irwindale
- La Puente
- La Verne
- Pomona
- San Dimas
- Walnut
- West Covina



POPULATION PROJECTIONS - DISTRICT

Projected annual growth rate for cities within Mt. SAC District boundaries: 0.6%

- Baldwin Park
- City of Industry
- Covina
- Diamond Bar
- Glendora
- Irwindale
- La Puente
- La Verne
- Pomona
- San Dimas
- Walnut
- West Covina

Top Three

Irwindale:	1.3%
La Puente:	1.0%
Pomona:	1.0%

ANALYSIS **POPULATION PROJECTIONS – SERVICE AREA**

Projected annual growth rate for cities within Mt. SAC Service Area: 0.8%

- Alhambra
- Arcadia
- Azusa
- Chino
- Chino Hills
- Claremont
- El Monte
- Fontana
- La Habra
- Montclair
- Monterey Park
- Ontario
- Rancho Cucamonga
- Rosemead
- San Gabriel
- Temple
- Upland
- Whittier

Top Three

Chino:	1.3%
Fontana:	1.1%
Ontario:	2.4%

POPULATION PROJECTIONS

Region	Annual Growth Rate
MSACCD	0.6%
Mt. SAC Service Area Cities	0.8%
California	0.9%

Planning Implications

AGING POPULATION

POPULATION AGE PROFILE

- Population age 18-24 will decrease through 2025
- Older age groups will grow through 2025

Mt. SAC Student Age Profile

Age Range	Fall 2012	Fall 2015	Change (Percentage Points)
19 or Less	24.5%	25.0%	+0.5%
20 to 24	36.9%	35.2%	-1.7%
25 to 29	12.7%	13.6%	+0.9%
30 to 34	5.4%	5.9%	+0.5%
35 to 39	3.5%	3.7%	+0.2%
40 to 49	5.1%	4.8%	-0.4%
50 +	11.8%	11.8%	+0.0%

STUDENT AGE PROFILE VS. STATE

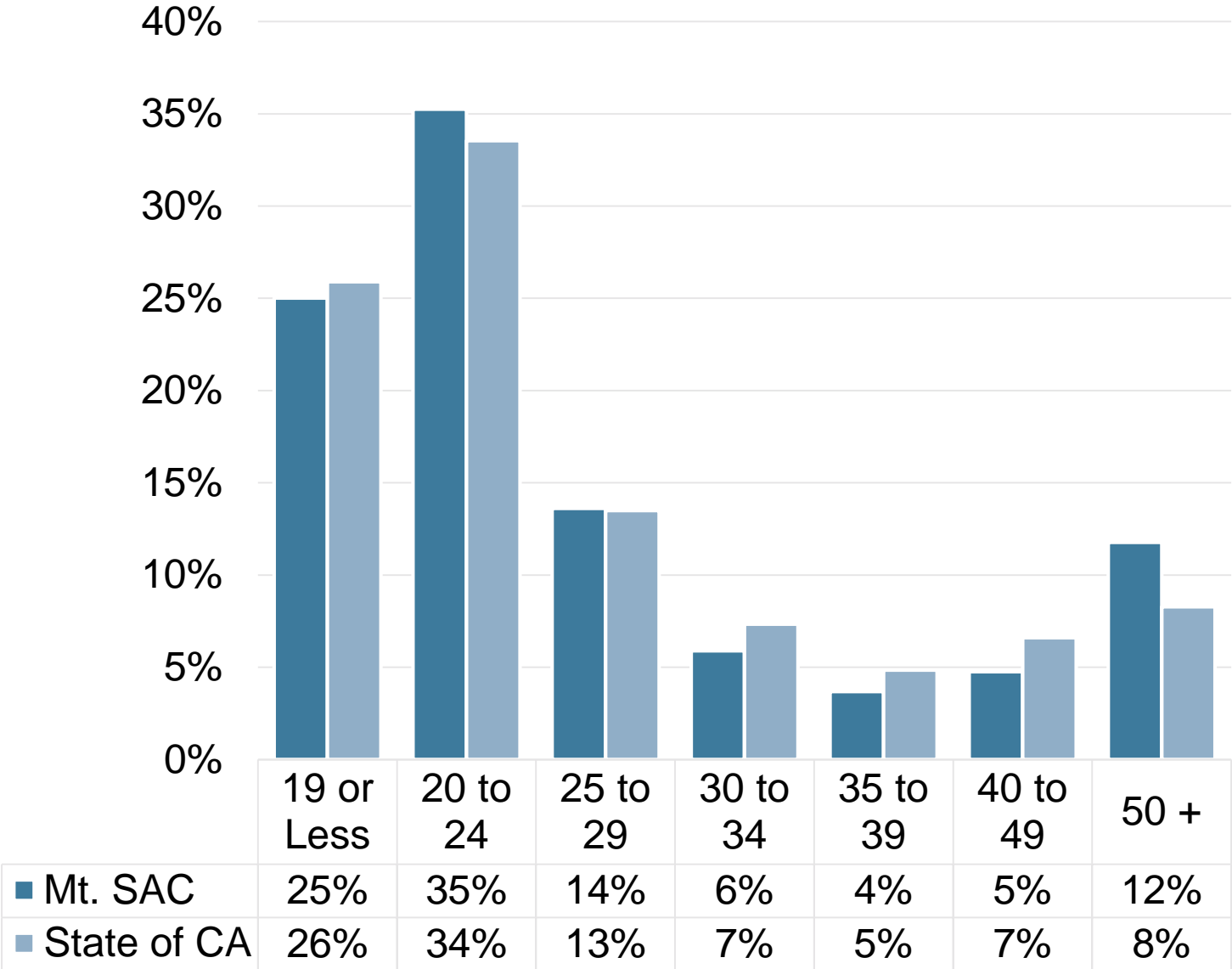
Higher percentage of students

- 20-24 Years
- 50+ Years

Lower percentage of students

- 30-49 Years

Mt. SAC Student Age Profile
Fall 2015 vs. State of CA



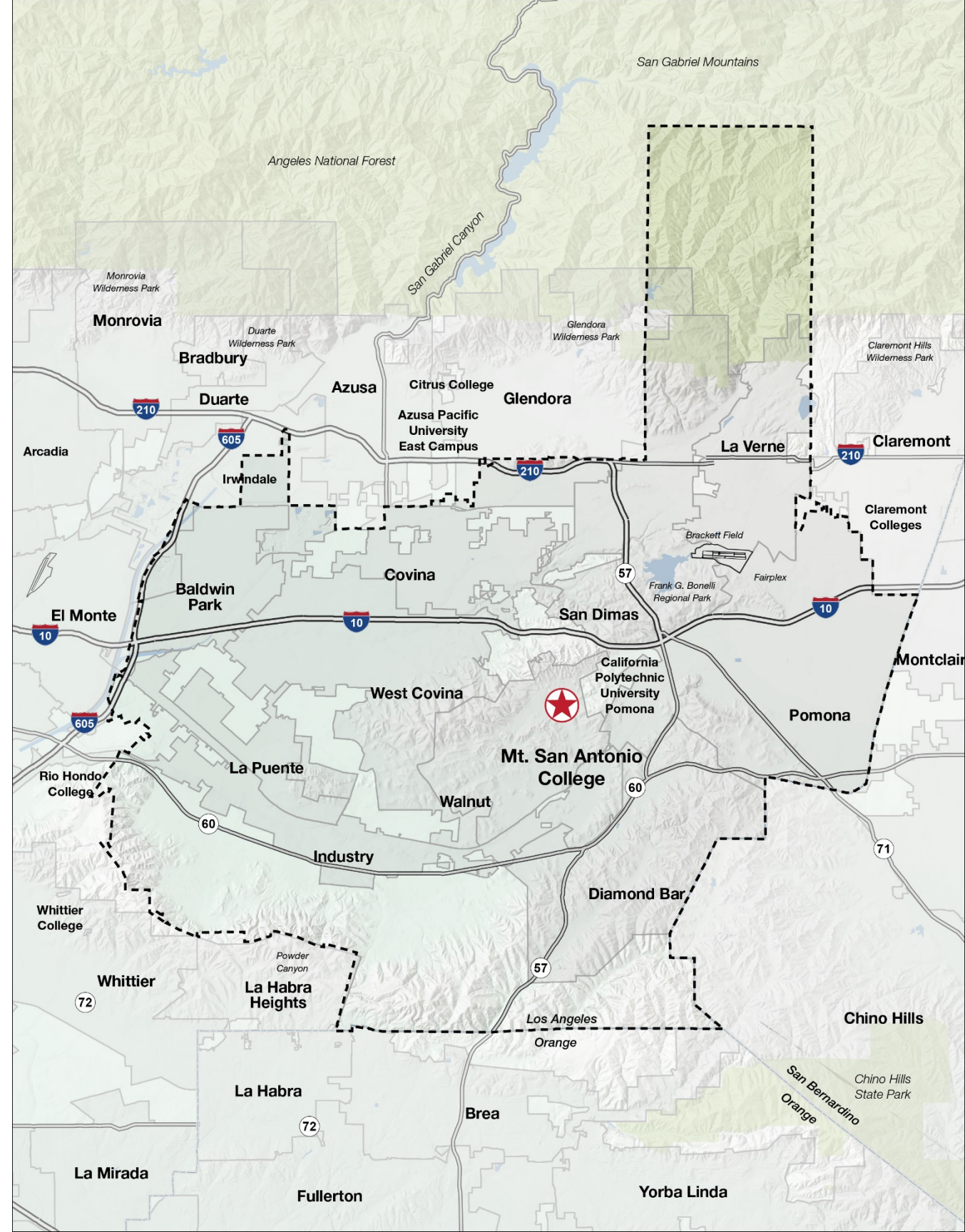
Challenges and Opportunities

Planning Implications

STABLE STUDENT PARTICIPATION RATE

MT. SAC DISTRICT

- Baldwin Park
- City of Industry
- Covina
- Diamond Bar
- Glendora
- Irwindale
- La Puente
- La Verne
- Pomona
- San Dimas
- Walnut
- West Covina



STUDENT PARTICIPATION RATE

- District SPR increased from 41 in 2012 to 43 in 2015

City	2012	2015	SPR Change
Baldwin Park	21	26	+5
City of Industry	-	-	-
Covina	48	55	+6
Diamond Bar	38	38	+0
Glendora	15	16	+1
Irwindale	-	-	-
La Puente	93	102	+9
La Verne	32	28	-4
Pomona	36	38	+2
San Dimas	42	37	-5
Walnut	86	91	+5
West Covina	40	43	+2
District Total	41	43	+2











Planning Implications

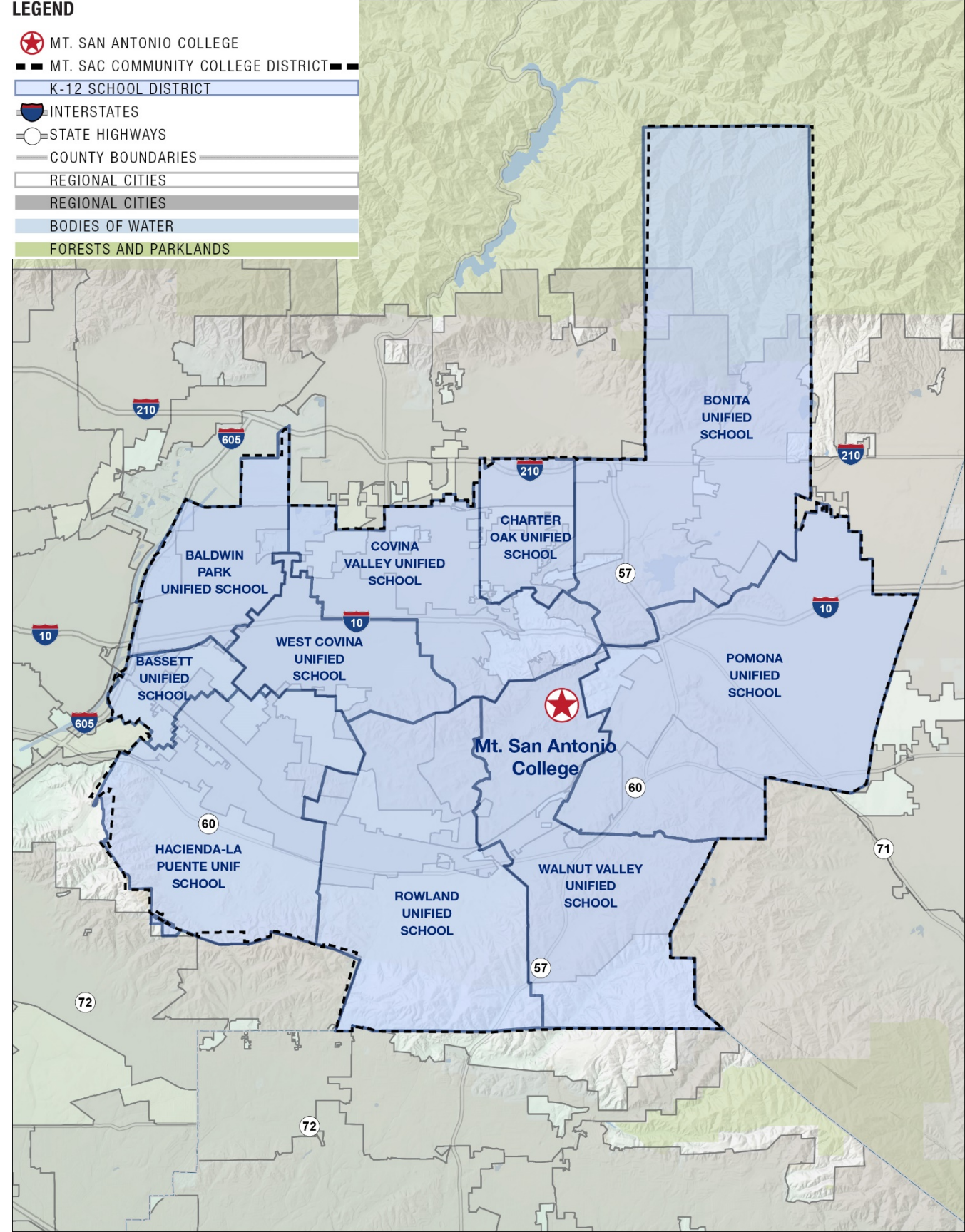
INCREASE IN HIGH SCHOOL GRADUATE
ENROLLMENTS

FEEDER HIGH SCHOOLS (TOP 10)

High School Name	Fall 2012 Enrolled Count	Fall 2015 Enrolled Count	Change
West Covina High	124	190	+53%
Walnut High	142	189	+33%
South Hills High	127	155	+22%
Diamond Bar High	113	147	+30%
Rowland (John A.) High	143	147	+3%
Diamond Ranch High	89	121	+36%
Nogales High	130	118	-9%
Wilson (Glen A.) High	63	97	+54%
Garey Senior High	86	93	+8%
Baldwin Park High	81	92	+14%

LEGEND

-  MT. SAN ANTONIO COLLEGE
-  MT. SAC COMMUNITY COLLEGE DISTRICT
-  K-12 SCHOOL DISTRICT
-  INTERSTATES
-  STATE HIGHWAYS
-  COUNTY BOUNDARIES
-  REGIONAL CITIES
-  REGIONAL CITIES
-  BODIES OF WATER
-  FORESTS AND PARKLANDS



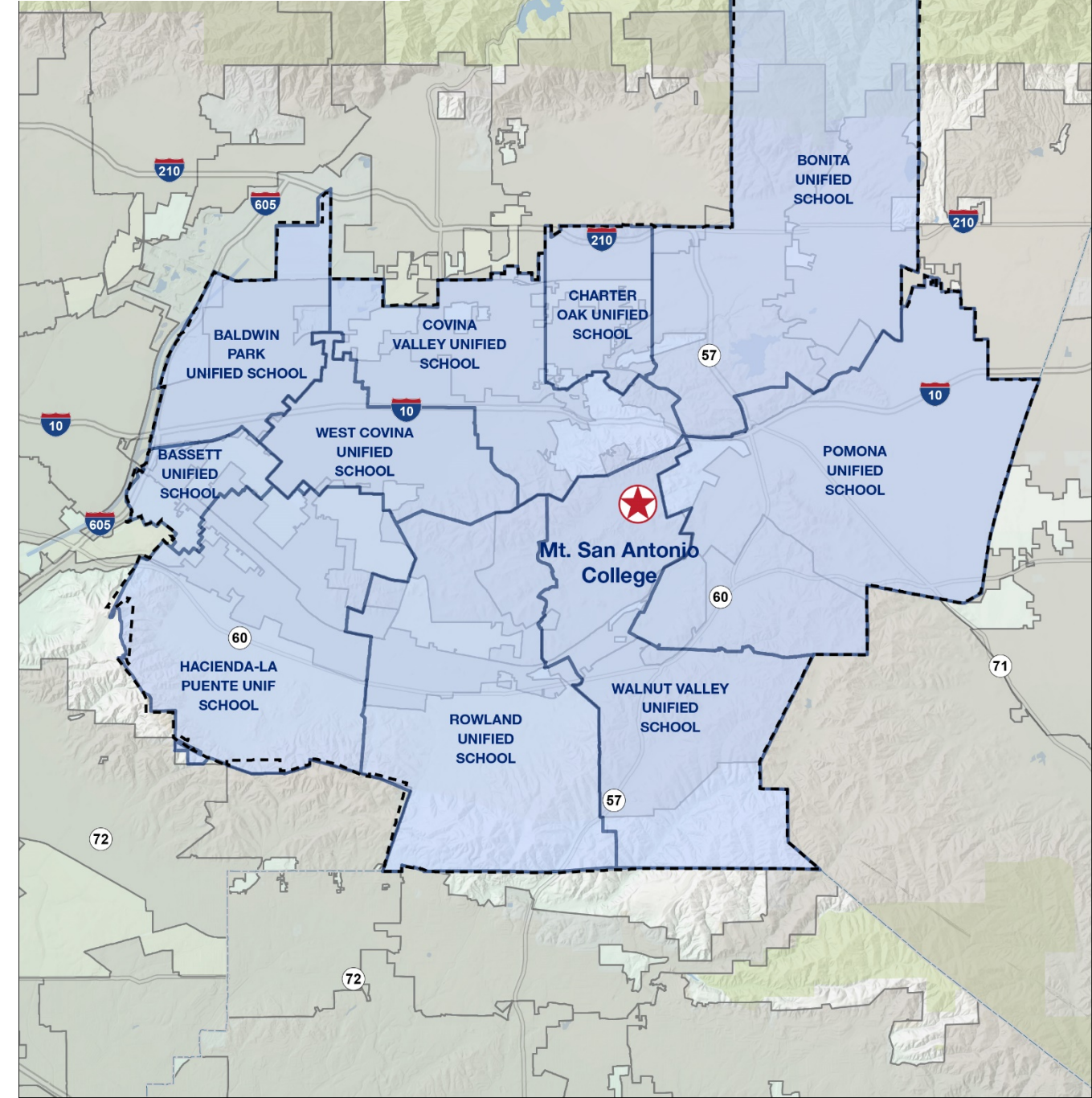
HIGH SCHOOL GRADUATION PROJECTIONS

ANALYSIS

High School Graduation Projection

County	Actual 2013-14	Projected 2024-25	% Change
Los Angeles County	106,271	98,021	-7.8%
Riverside County	29,308	29,737	+1.5%
San Bernardino County	28,003	27,104	-3.2%

- LEGEND**
- ★ MT. SAN ANTONIO COLLEGE
 - MT. SAC COMMUNITY COLLEGE DISTRICT
 - K-12 SCHOOL DISTRICT
 - 🛣 INTERSTATES
 - 🛣 STATE HIGHWAYS
 - ▬ COUNTY BOUNDARIES
 - ▬ REGIONAL CITIES
 - ▬ REGIONAL CITIES
 - ▬ BODIES OF WATER
 - ▬ FORESTS AND PARKLANDS



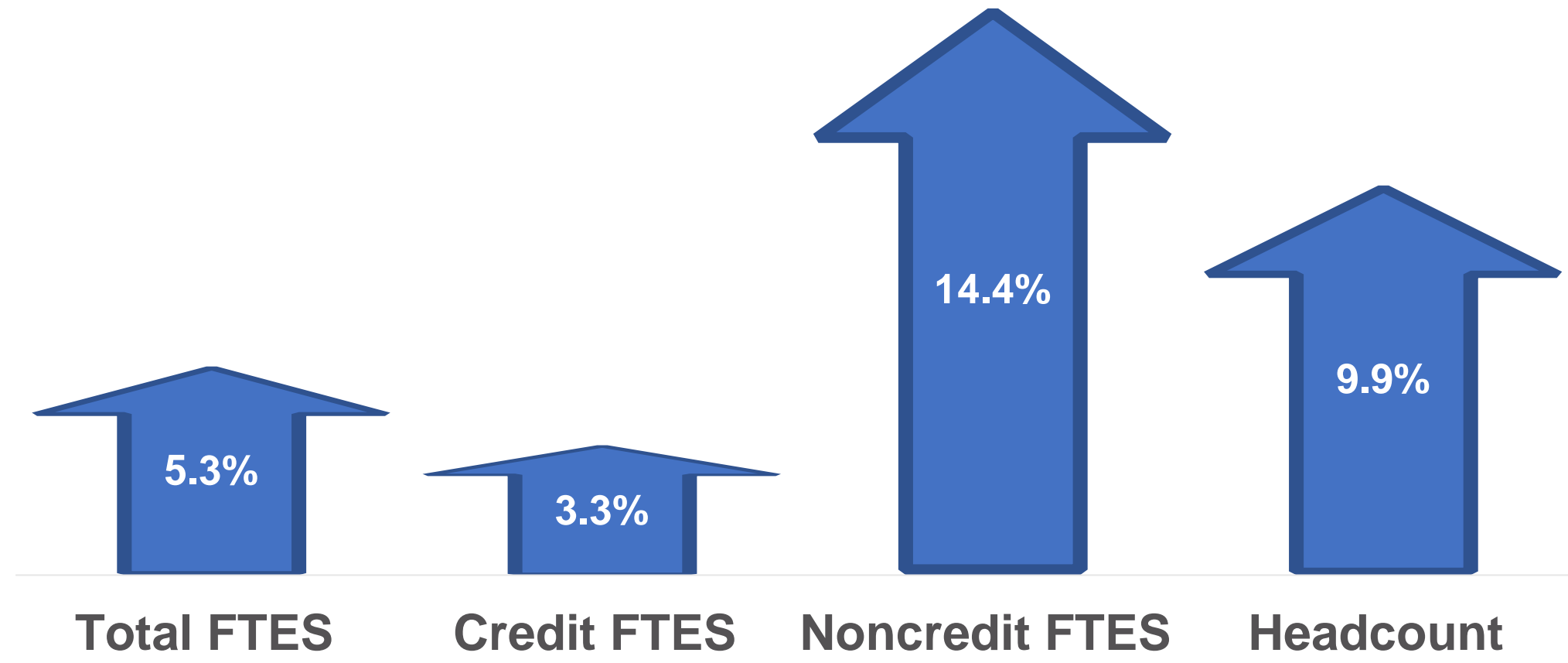
Challenges and Opportunities

Planning Implications

POSITIVE FTES AND HEADCOUNT TRENDS

FTES TRENDS - ANNUAL

Annual FTES 2012/13 to 2015/16



HEADCOUNT TRENDS - ANNUAL

Compared to prior year:

- 2013 - 2014 + 1.0%
- 2014 - 2015 + 5.7%
- 2015 - 2016 + 3.0%

Between 2012 – 2013 and 2015 – 2016, unduplicated headcount increased 9.9%.

Challenges and Opportunities

ANNUAL GROWTH FORECAST

FTES GROWTH FORECAST

0.75% Annual Growth Rate

FALL	FTES
2016	13,114
2017	13,212
2018	13,311
2019	13,411
2020	13,511
2021	13,613
2022	13,715
2023	13,818
2024	13,921
2025	14,026
2026	14,131

Challenges and Opportunities

OPPORTUNITIES FOR GROWTH

For your consideration...

1. Increase Distance Education Offerings
2. Craft Programs for New Age Distributions
3. Increase Evening Offerings
4. Increase Full-time Faculty and Staff Diversity
5. Expand Partnerships and Outreach

DISCUSSION

Break

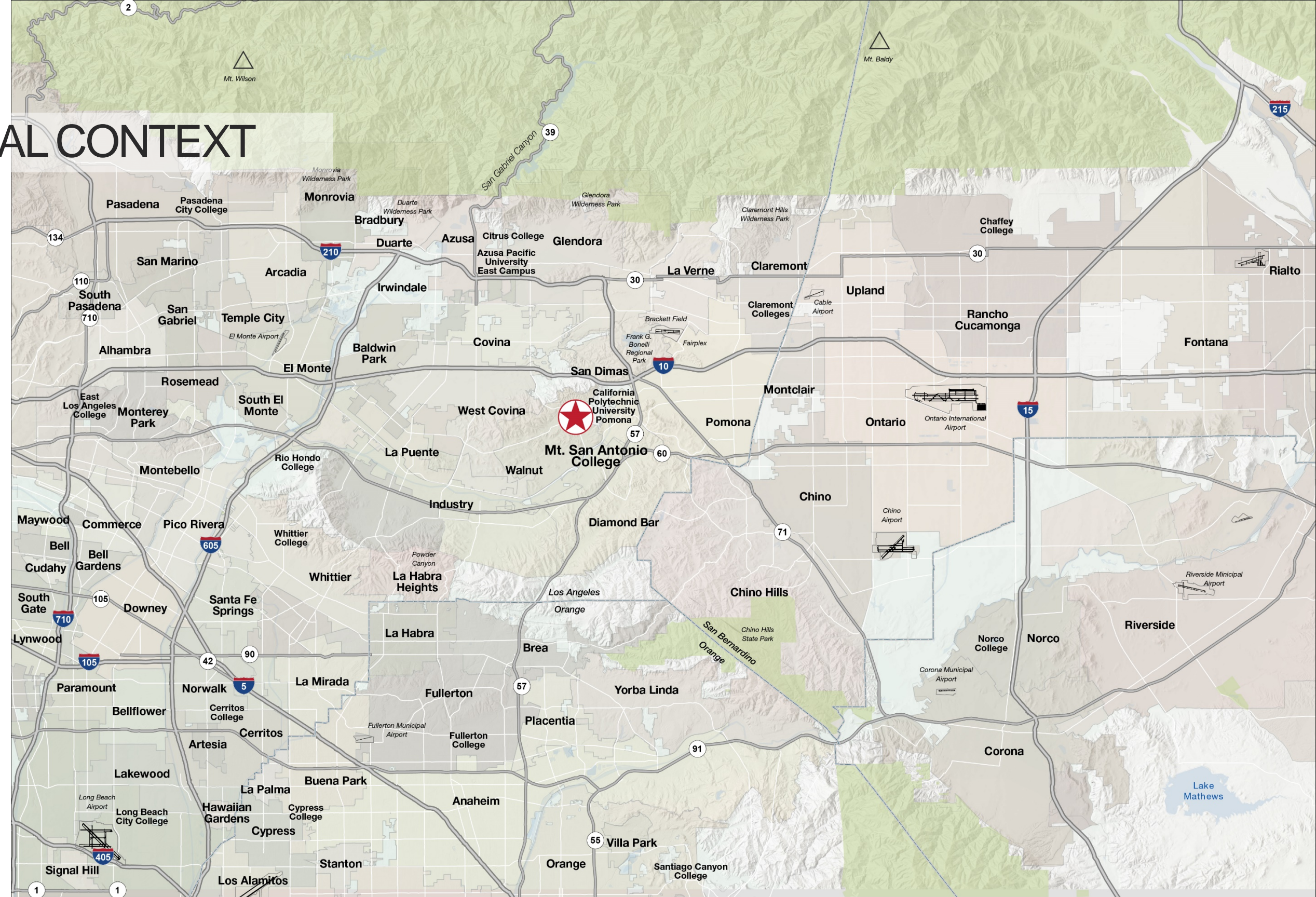


Existing Conditions Analysis

ANALYSIS

REGIONAL CONTEXT

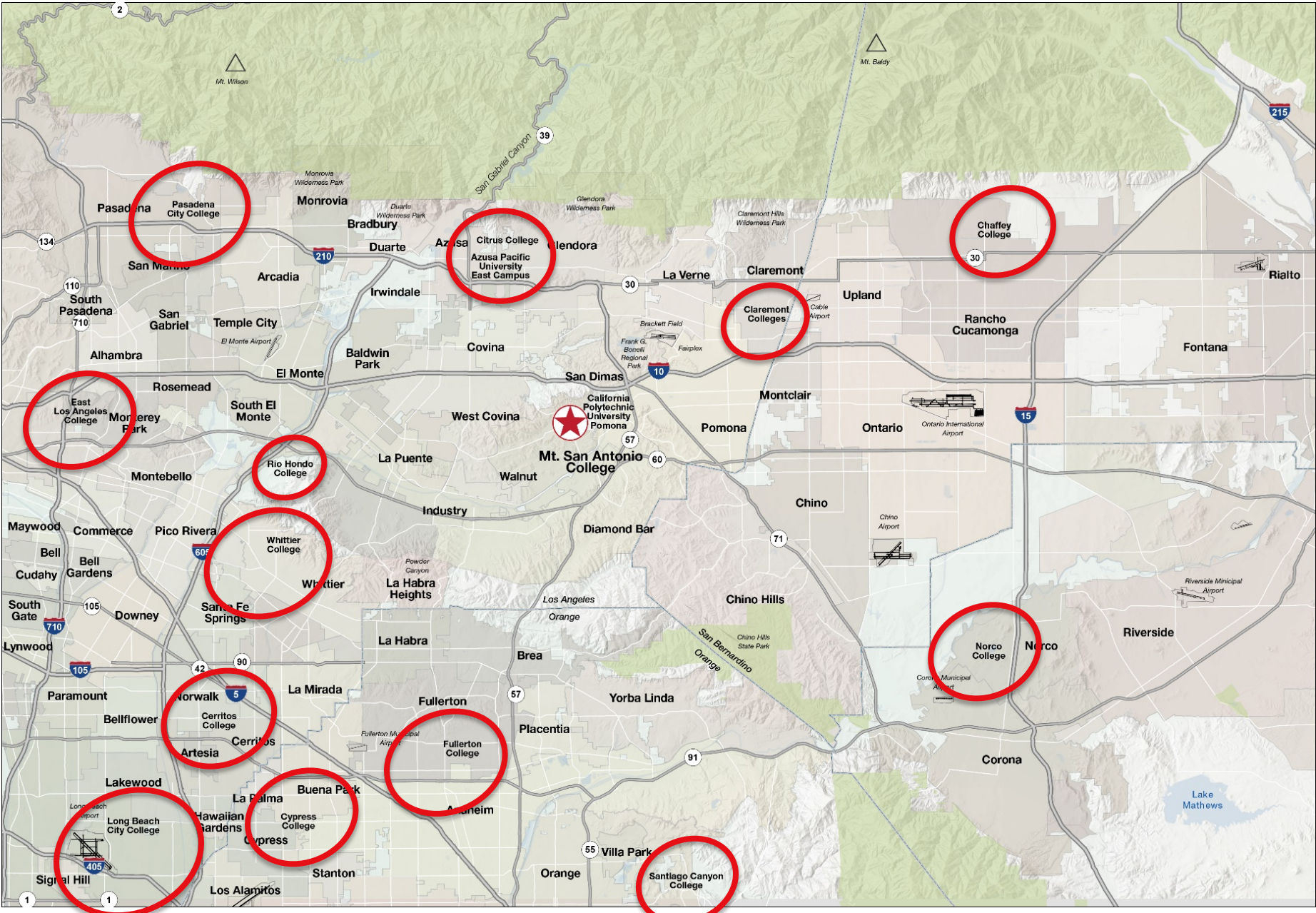
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REGIONAL CONTEXT

OBSERVATIONS:

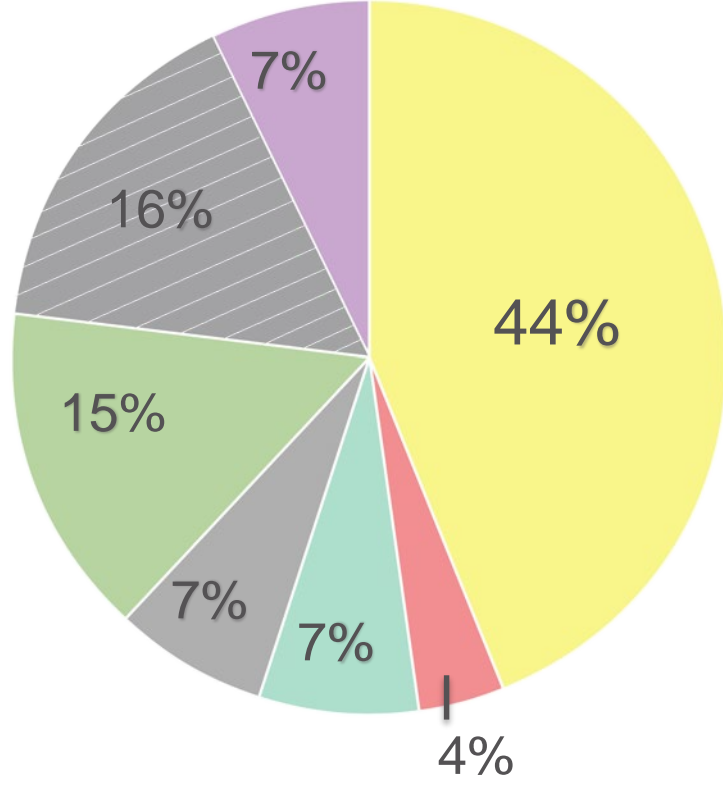
- Surrounding cities: Walnut & Pomona
- Near Ontario & Chino Airports
- Adjacent to Cal Poly Pomona
 - And other regional colleges



SURROUNDING LAND USE: EXISTING

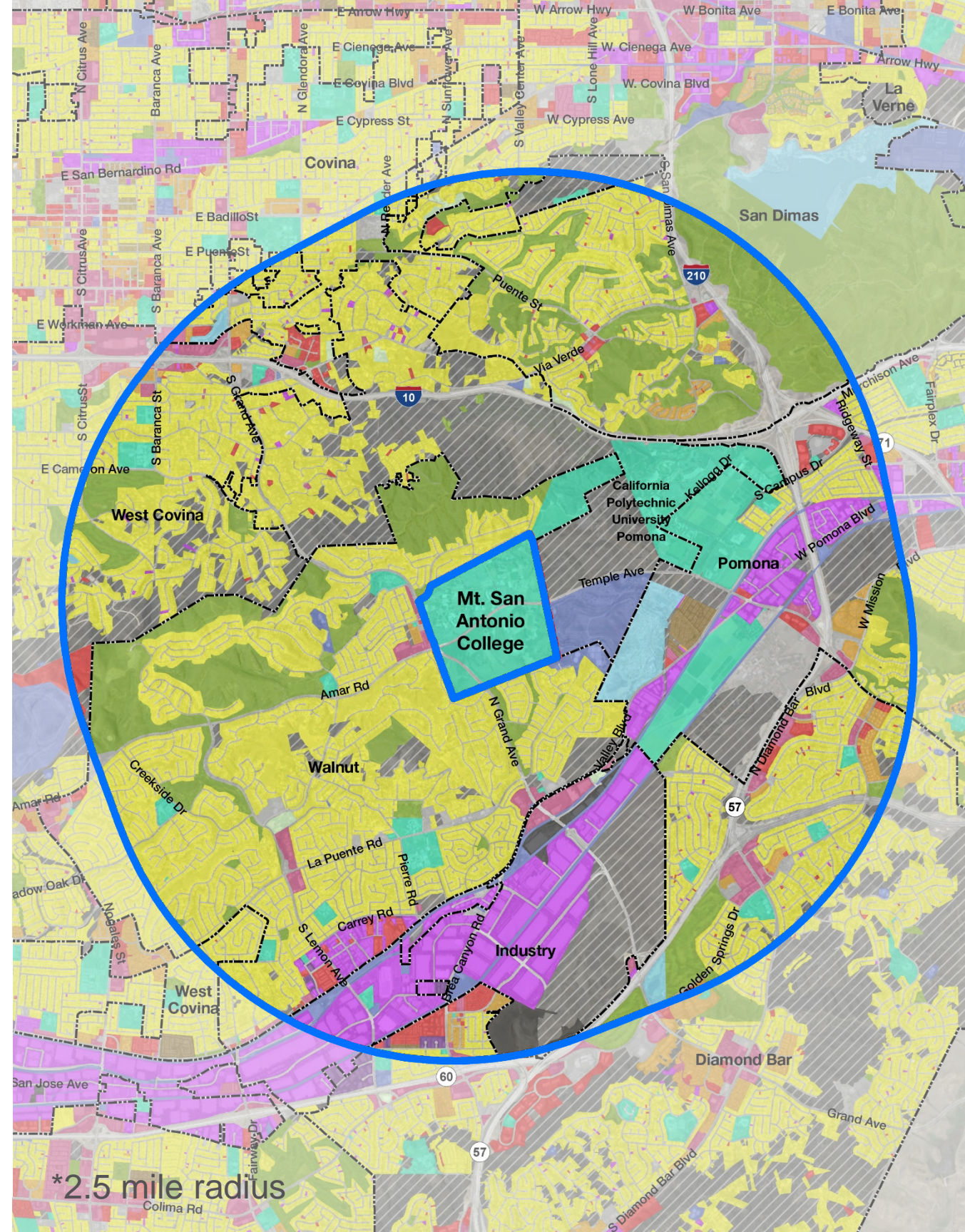
OBSERVATIONS:

- Surrounding existing land uses:
 - 44% Residential
 - 16% Vacant
 - 15% Open Space
 - 7% Education
 - 7% Industrial
 - 7% Other
 - 4% Commercial and Office



LEGEND

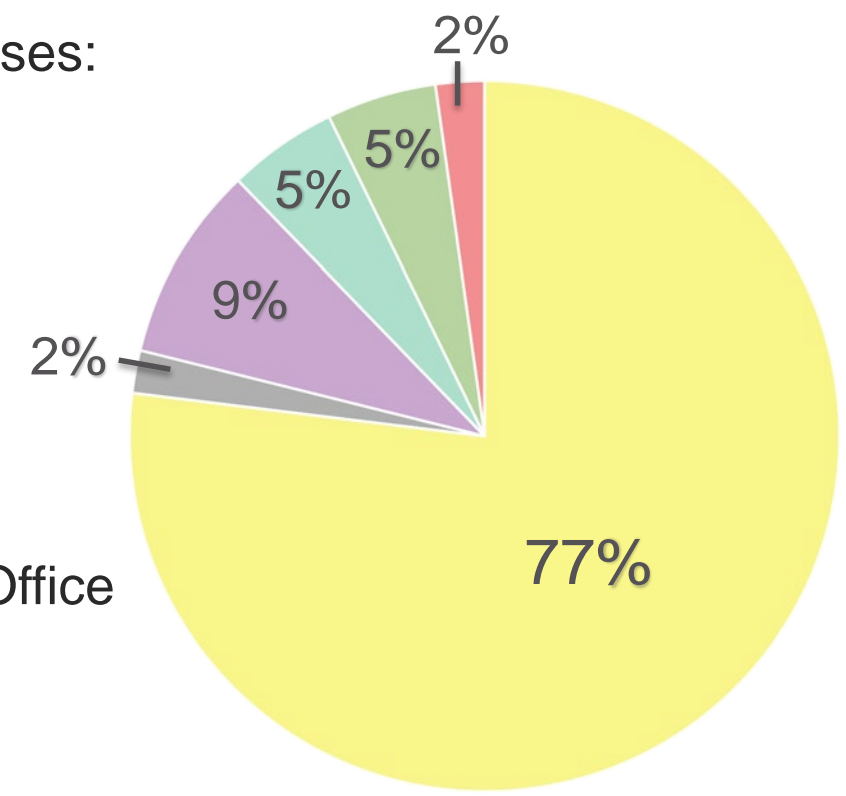
--- NEIGHBORING CITIES ---	INDUSTRIAL
--- MT. SAC ---	TRANSPORT., COMMUN., AND UTILITIES
MIXED RESIDENTIAL	MIXED COMMERCIAL AND INDUSTRIAL
SINGLE FAMILY RESIDENTIAL	MIXED RESIDENTIAL AND COMMERCIAL
MULTI-FAMILY RESIDENTIAL	UNDER CONSTRUCTION
MOBILE HOMES	OPEN SPACE AND RECREATION
MIXED RESIDENTIAL	URBAN VACANT
COMMERCIAL SERVICES	AGRICULTURE
GENERAL OFFICE	VACANT
COMMERCIAL AND SERVICES	WATER
PUBLIC FACILITIES	UNKNOWN
EDUCATION	



SURROUNDING LAND USE: GENERAL PLAN

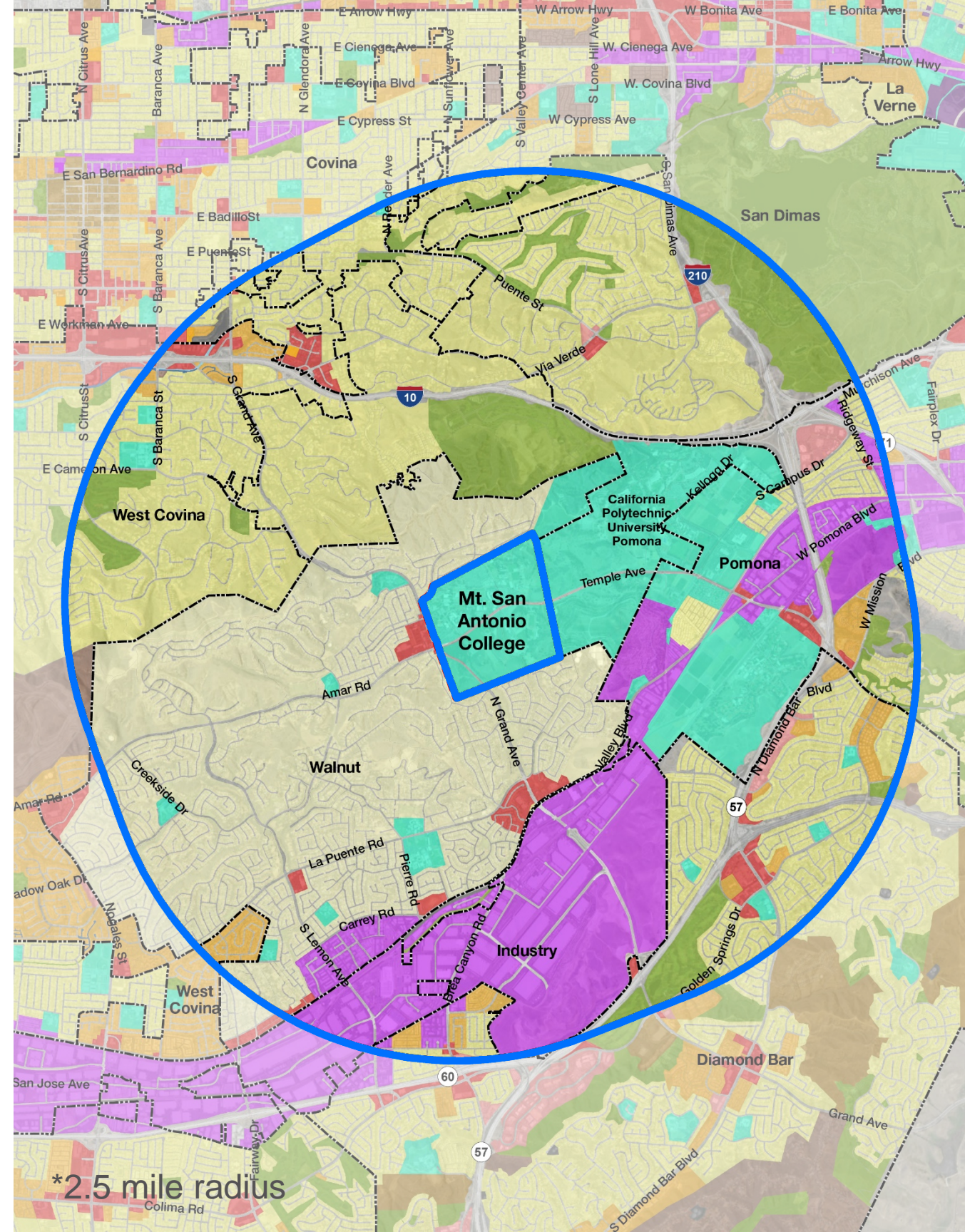
OBSERVATIONS:

- Surrounding planned land uses:
 - 77% Residential
 - 9% Industrial
 - 5% Education
 - 5% Open Space
 - 2% Commercial and Office
 - 2% Other



LEGEND

--- REGIONAL CITIES	EDUCATION
- - - MT. SAC	INDUSTRIAL
MIXED RESIDENTIAL	TRANSPORTATION
SINGLE FAMILY RESIDENTIAL	UTILITIES
MULTI-FAMILY RESIDENTIAL	MIXED COMMERCIAL AND INDUSTRIAL
MOBILE HOME/TRAILER PARK	MIXED URBAN
GENERAL OFFICE	OPEN SPACE AND RECREATION
COMMERCIAL SERVICES	WATER
PUBLIC FACILITIES	



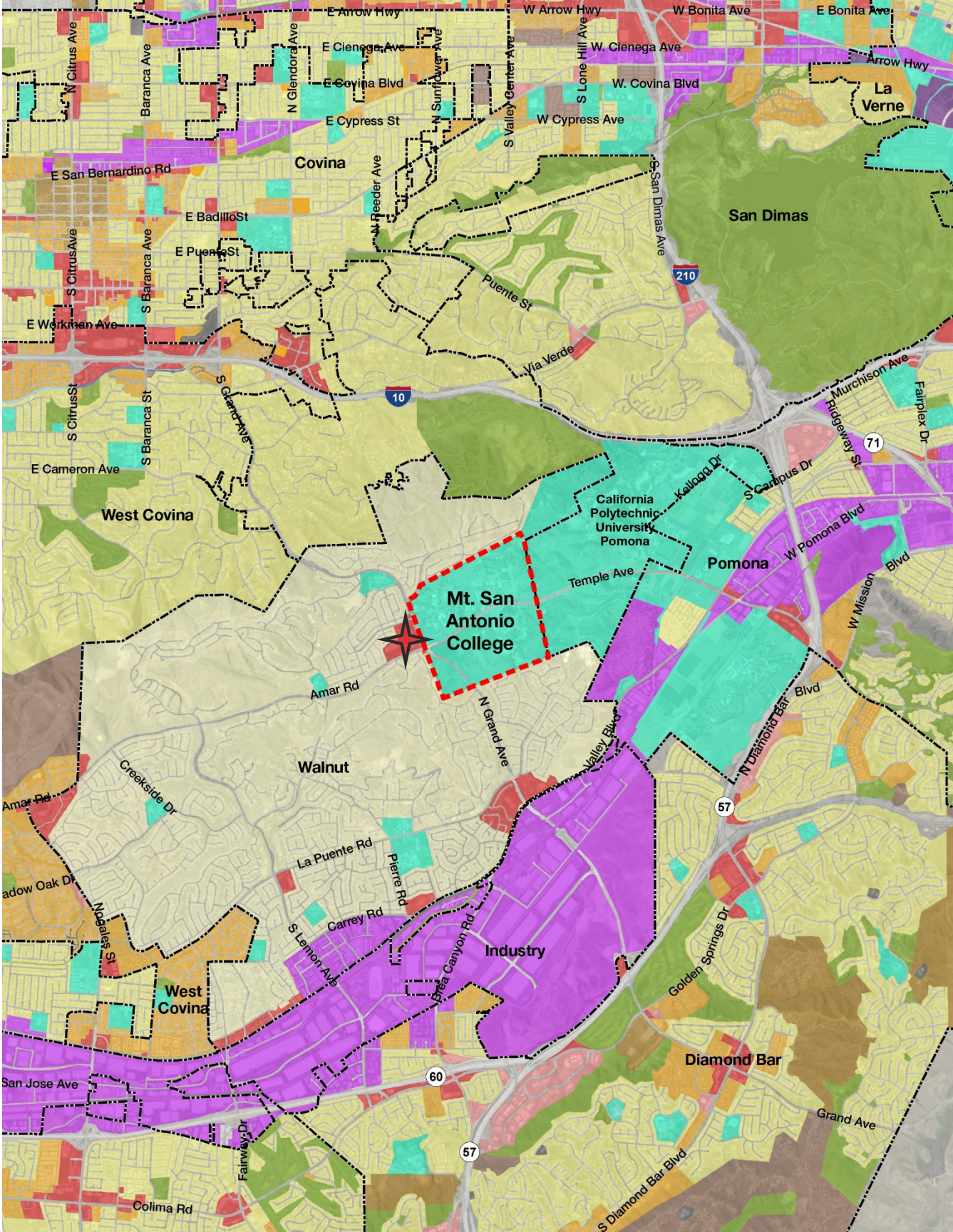
SURROUNDING LAND USE: GENERAL PLAN

OBSERVATIONS:

- City of Walnut General Plan update
 - Anticipated completion September 2017
 - Focus is on key change areas
 - Mt. San Antonio Shopping Center discussed
 - No proposed land use changes
 - Façade improvements
 - Exploring implementation of parking management strategies

LEGEND

--- REGIONAL CITIES	EDUCATION
- - - MT. SAC	INDUSTRIAL
MIXED RESIDENTIAL	TRANSPORTATION
SINGLE FAMILY RESIDENTIAL	UTILITIES
MULTI-FAMILY RESIDENTIAL	MIXED COMMERCIAL AND INDUSTRIAL
MOBILE HOME/TRAILER PARK	MIXED URBAN
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COMMERCIAL SERVICES	WATER
PUBLIC FACILITIES	



CAMPUS PLAN

OBSERVATIONS:

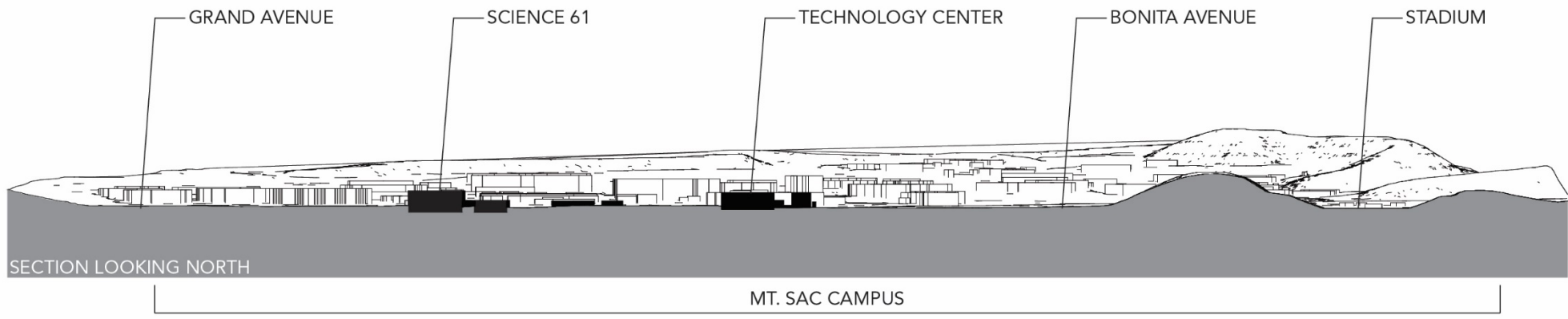
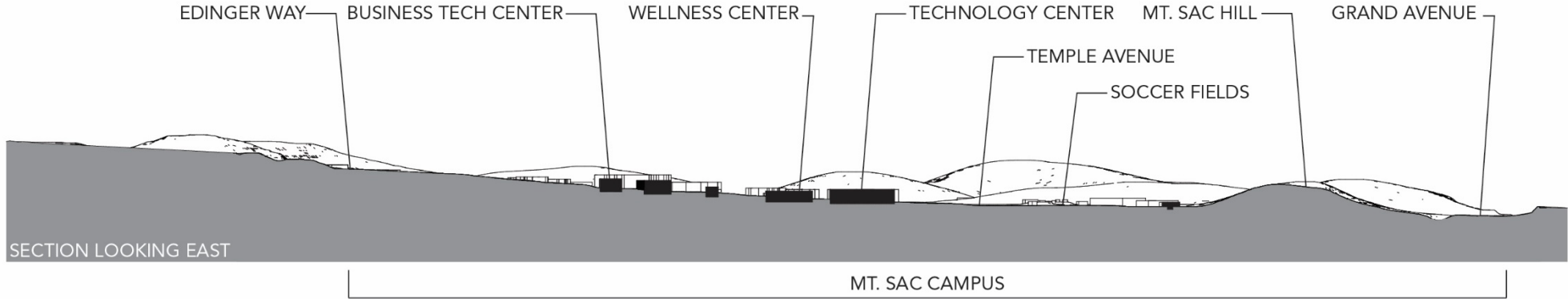
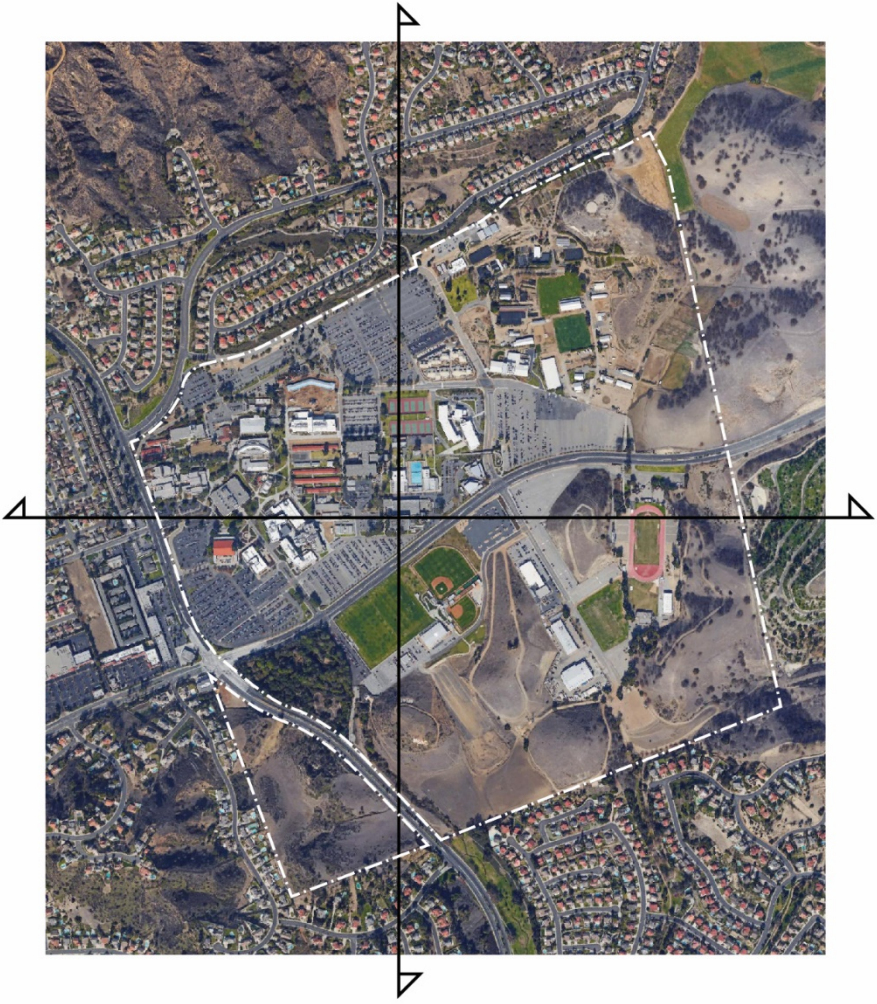
- Large land area—over 400 acres
- Diverse uses & characteristics
- Topography is significant—unique aesthetic
- Public roadways are key elements
- Potential for solar orientation
- Many buildings—including temporary buildings & buildings under construction

LEGEND

- PROPERTY LINE---
- EXISTING FACILITIES
- TEMPORARY FACILITIES
- FACILITIES UNDER CONSTRUCTION
- SITE AREA UNDER CONSTRUCTION
- CROSS COUNTRY COURSE



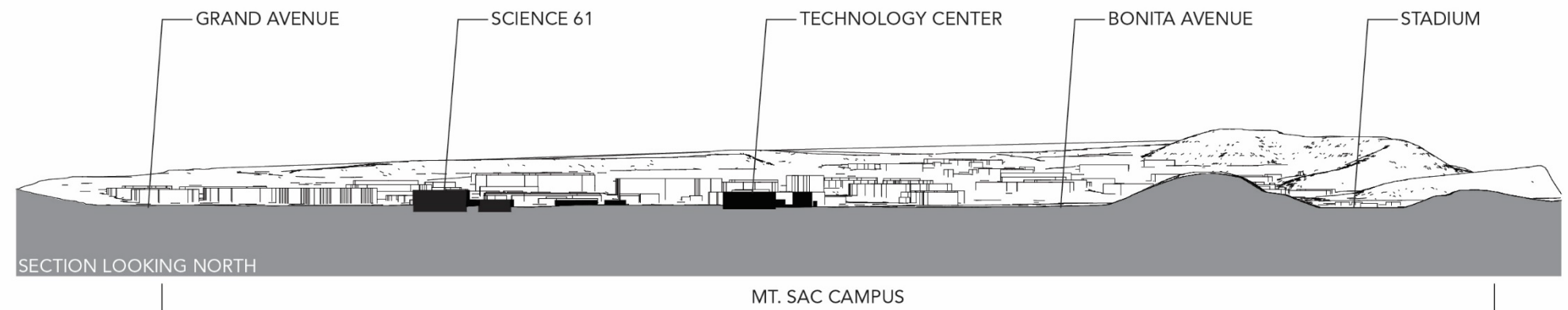
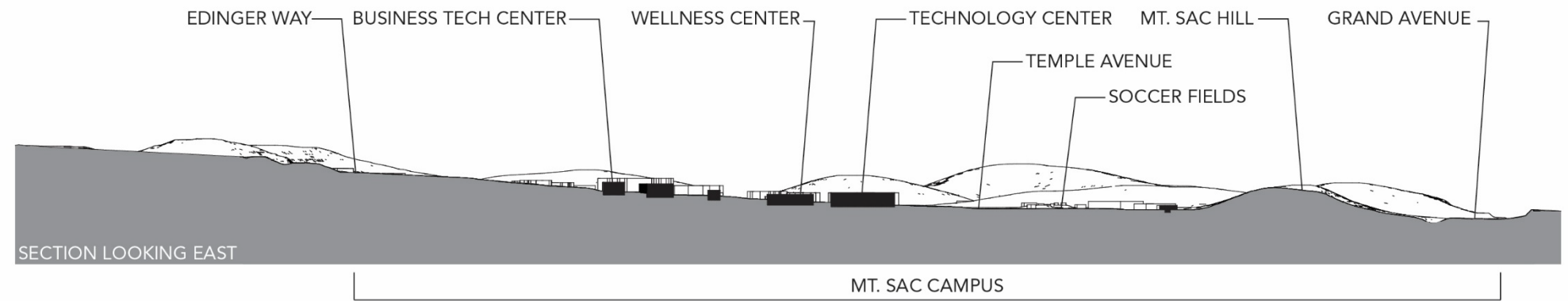
CAMPUS MASSING



CAMPUS MASSING

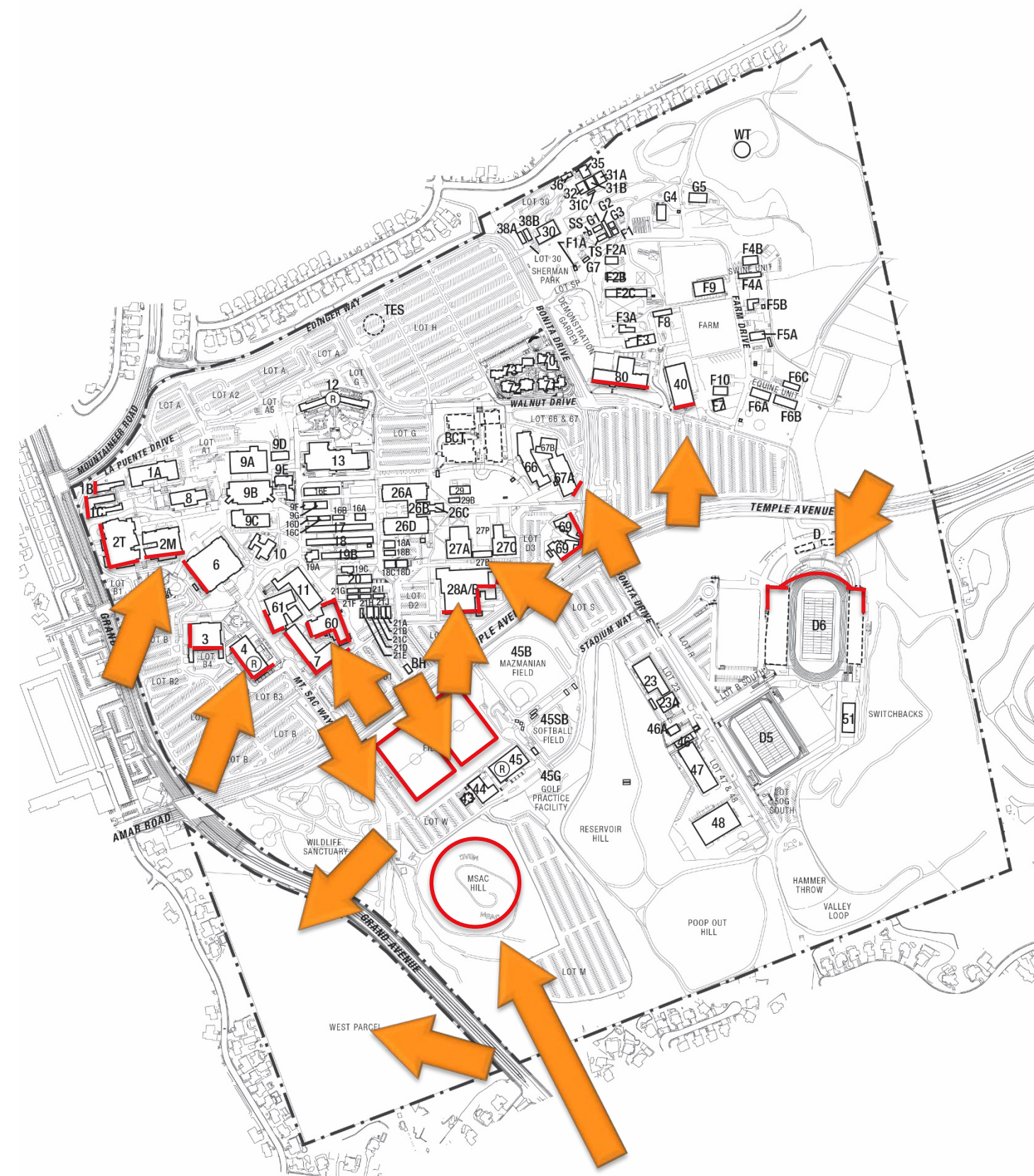
OBSERVATIONS:

- Valley sides and bottom
- Buffered edges: open space
- Building clusters
- Varied massing & scale



ANALYSIS

VIEWS INTO CAMPUS



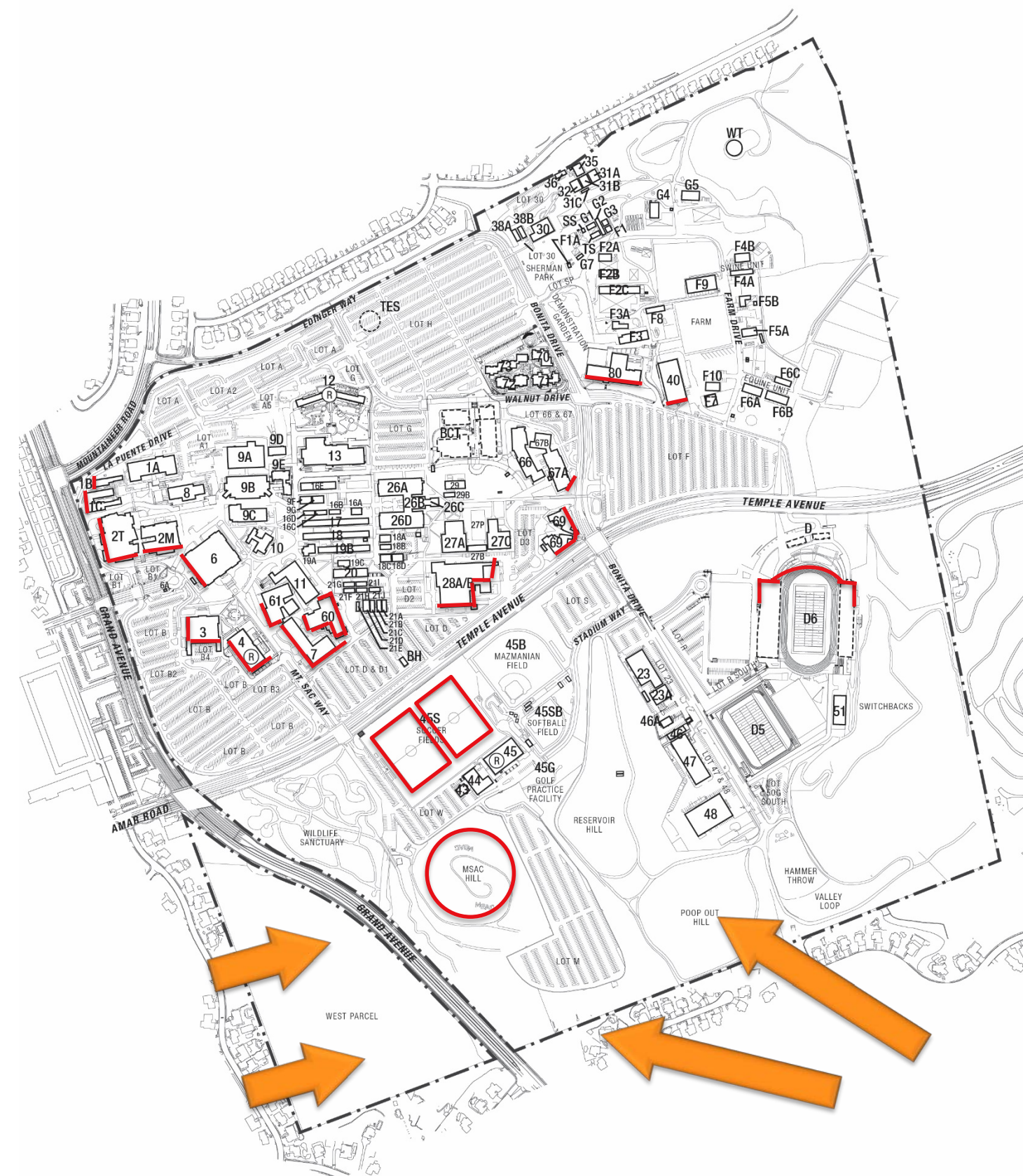
ANALYSIS

VIEWS INTO CAMPUS



ANALYSIS

VIEWS INTO CAMPUS



VIEWS INTO CAMPUS

OBSERVATIONS:

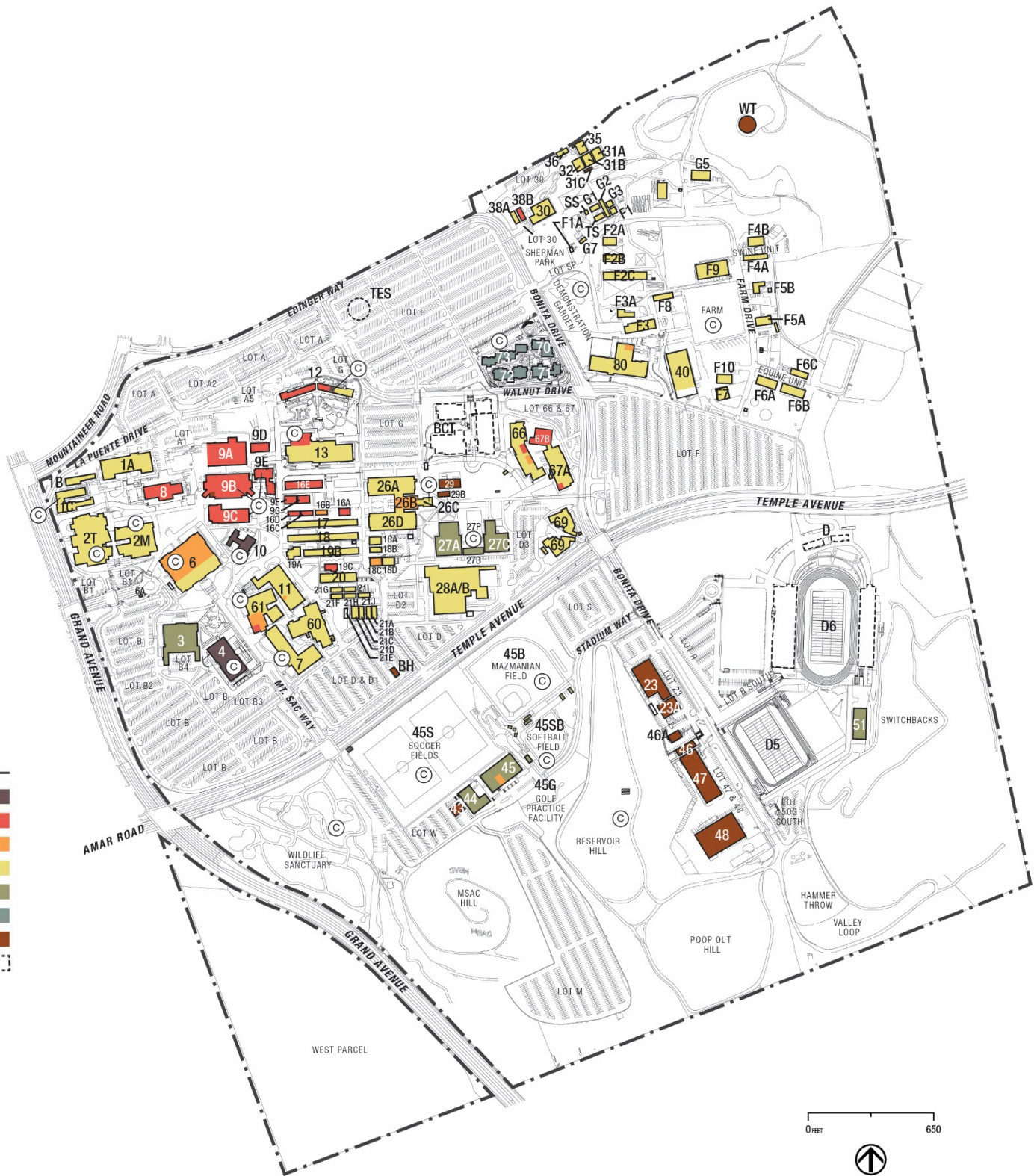
- Neighborhood homes overlook campus
- Views from Temple and Grand Avenues:
 - Landmarks—Mt. SAC Hill, Stadium, soccer fields, and the PAC
- Also parking lots & backs of buildings



CAMPUS ZONING

OBSERVATIONS:

- Well organized & logical
- Administration & Library/LRC up front
- Distributed tutoring centers—close to related instructional programs
- Student Services & Activities clustered—many temporary buildings
- CDC—good public access and separation
- The Farm—well located
- Continuing Education—separated & many temporary buildings
- PE & Athletics—rezoning in progress



LEGEND

- PROPERTY LINE ---
- ADMINISTRATION
- STUDENT SERVICES & ACTIVITIES
- LIBRARY/LEARNING RESOURCES
- INSTRUCTION - GENERAL
- INSTRUCTION - PHYSICAL EDUCATION
- INSTRUCTION - CHILD DEVELOPMENT
- CAMPUS SERVICES
- FACILITIES UNDER CONSTRUCTION ---
- © COMMUNITY USE
- CROSS COUNTRY COURSE ---

SPACE INVENTORY

OBSERVATIONS:

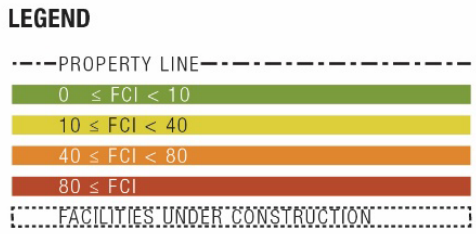
- Recent (2016) space inventory update
- Total gross building area
- Total assignable (usable) building area
- Assignable area categories
- Buildings under construction

SPACE TYPE	CURRENT INVENTORY (ASF)
Lecture + Lab	475,946
Office	189,487
Library	78,080
Instructional Media	10,066
Other	432,982
TOTALS	1,186,561

FACILITIES CONDITION

OBSERVATIONS:

- Recent (2016) assessment
- Many facilities are in good condition
- Many higher than 40% (some over 100%)—renovate or replace
- Not many in between



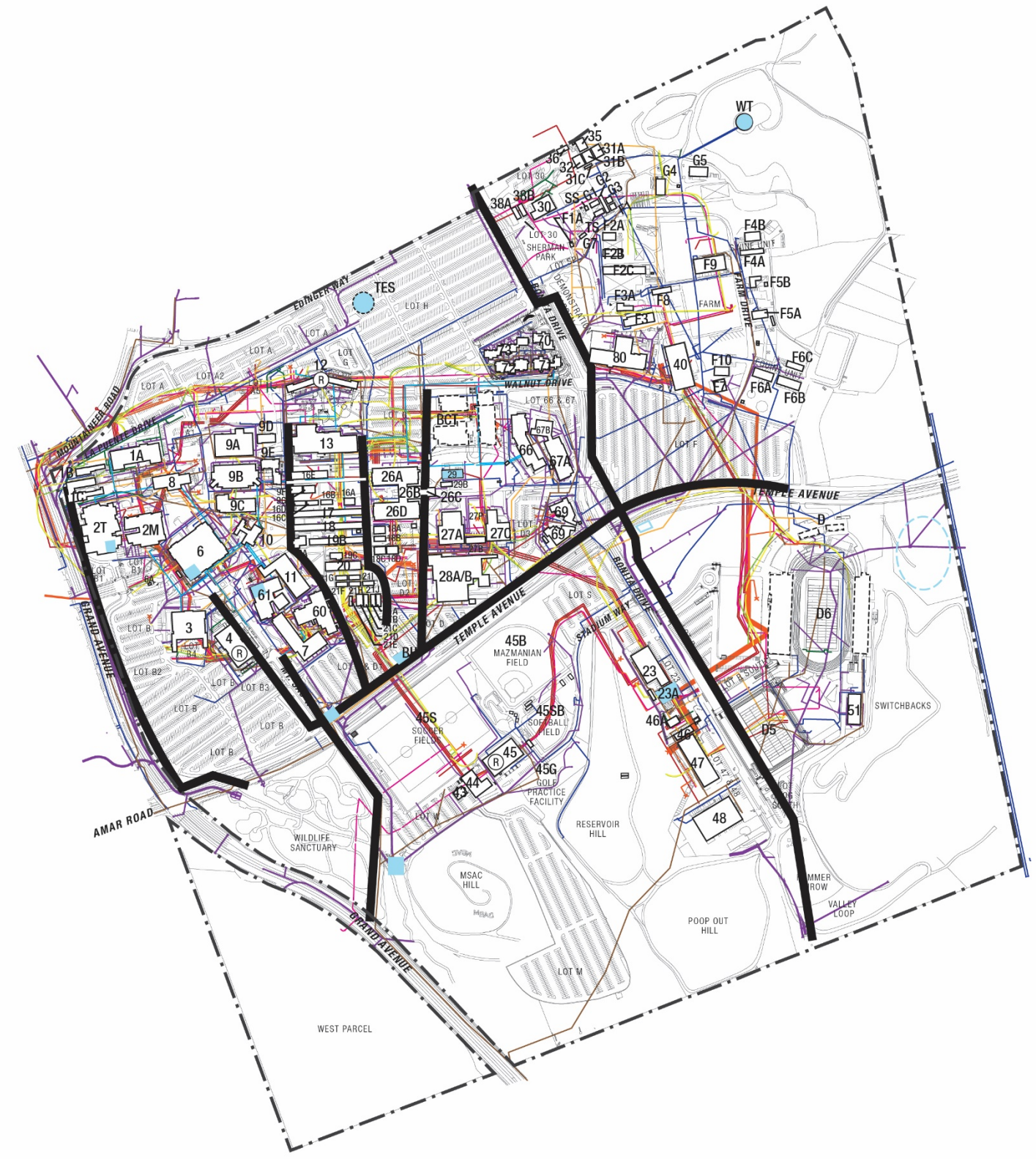
FCI - FACILITIES CONDITION INDEX

The estimated total cost of repairs as a percentage of the cost to replace a facility. Source: 2016 Facilities Condition Assessment Report, prepared by R.G. McClung, FUSION Assessor

UTILITIES INFRASTRUCTURE

OBSERVATIONS:

- Complex existing systems
- Sub-standard in the Farm.
- Cost and disruption
- Upgrades needed



LEGEND

- PROPERTY LINE
- CHILLED WATER
- ELECTRICAL
- ELECTRICAL HIGH VOLTAGE
- GAS
- IRRIGATION
- SEWERS
- STORM
- WATER
- TELECOM - CONDUIT
- TELECOM - COPPER
- TELECOM - FIBER
- ROUTES FOR SEWER AND STORMWATER
- INFRASTRUCTURE FACILITIES

CAMPUS DEVELOPMENT HISTORY



CAMPUS DEVELOPMENT HISTORY

OBSERVATIONS:

- Mt. SAC CCD est. 1945—after WWII
- Former US Naval Hospital leased (1946) then purchased
- Building boom: 1960-1973
- Mainly renovations: 1974-1992
- Building again: 1993-present
- Different eras—styles & scales
- Gradual replacement of oldest
- Successful renovations—Founders Hall, Science South

LEGEND

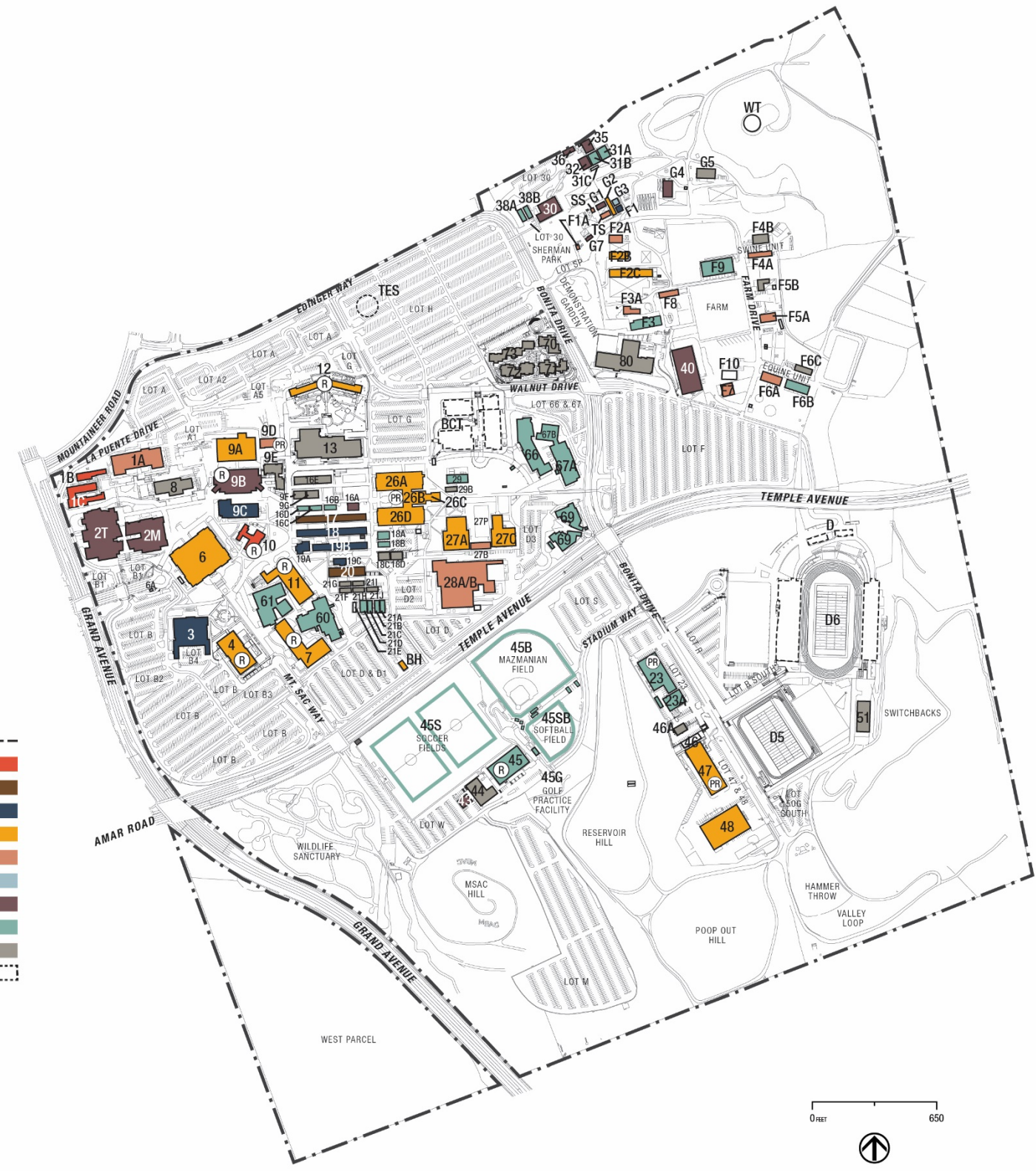
--- PROPERTY LINE ---

- 1930 - 1939
- 1940 - 1949
- 1950 - 1959
- 1960 - 1969
- 1970 - 1979
- 1980 - 1989
- 1990 - 1999
- 2000 - 2009
- 2010 - 2017

--- FACILITIES UNDER CONSTRUCTION ---

(R) RECENTLY RENOVATED FACILITIES

(PR) PARTIALLY RENOVATED FACILITIES



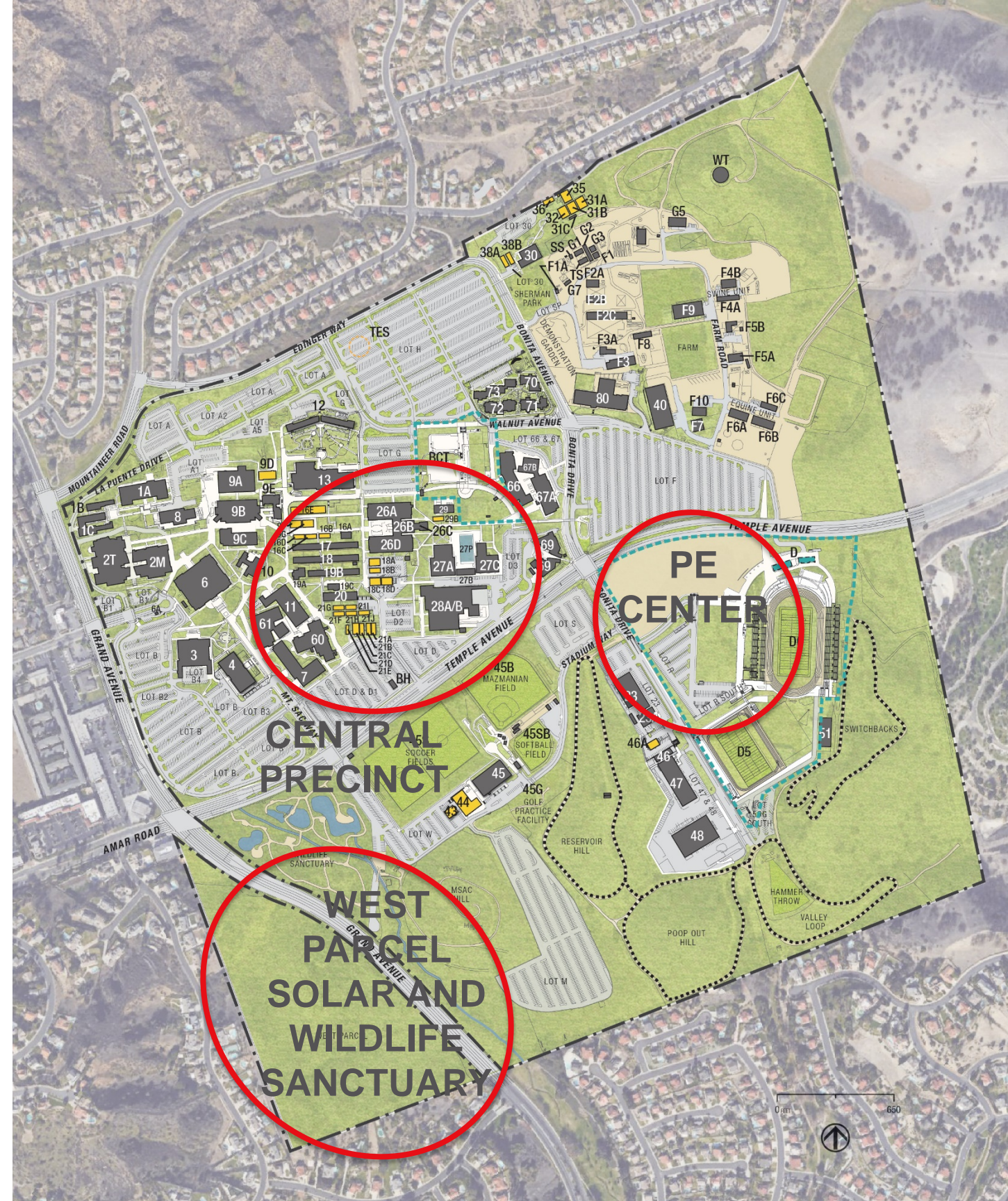
CURRENT PLANNING

Continuous planning

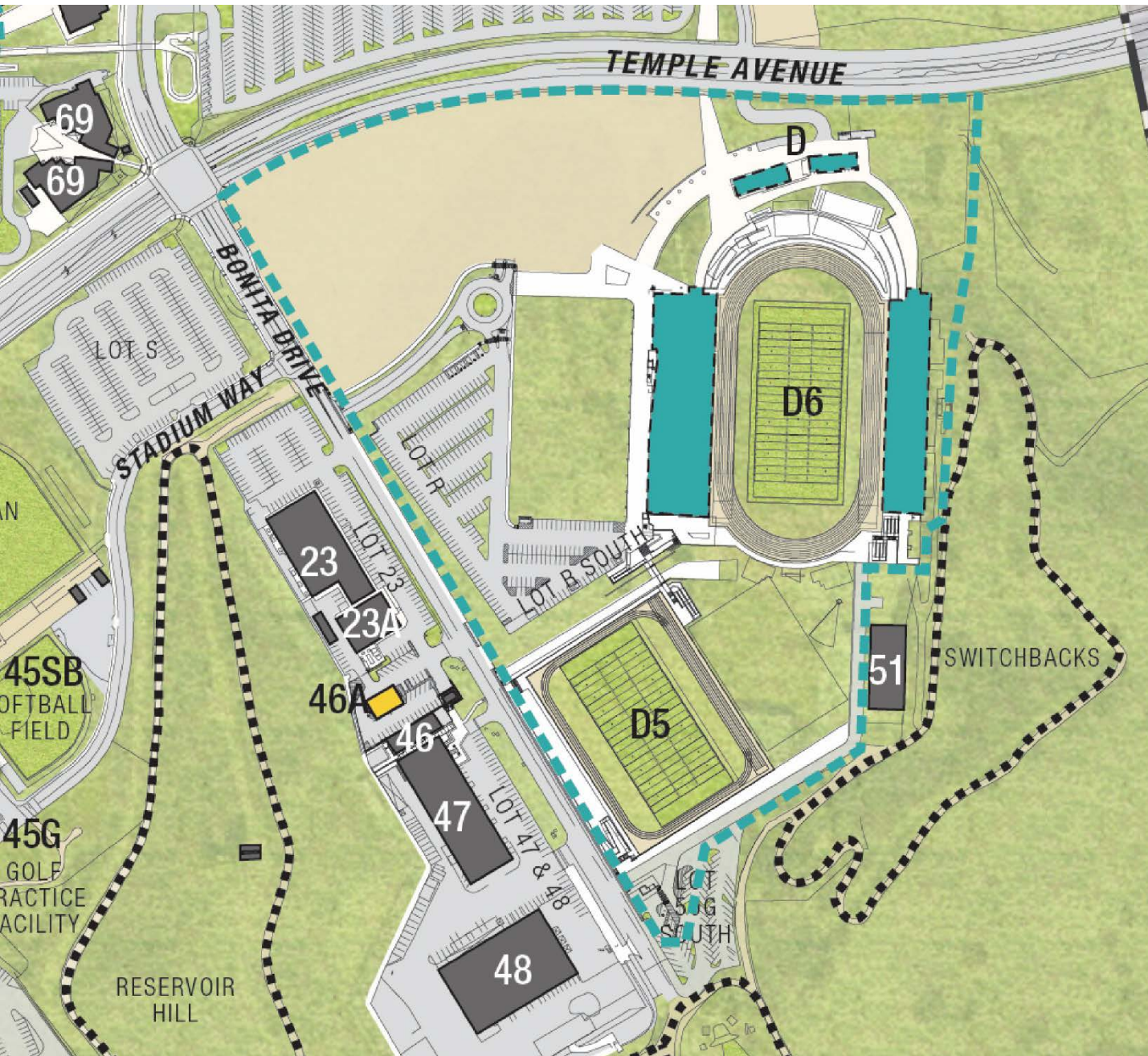
- Educational and Facilities Master Plan
- 5-year Construction Plan
- Precinct and project plans
- California Environmental Quality Act reporting

2018 Educational and Facilities Master Plan— validate and/or adjust ongoing planning

- Campus Zoning
- Physical Education Complex
- West Parcel Solar Project
- Central Precinct Plan



CURRENT PLANNING: PE CENTER



CURRENT PLANNING: PE CENTER



CURRENT PLANNING: CENTRAL PRECINCT

ANALYSIS



Challenges and Opportunities

CHALLENGES + OPPORTUNITIES: **CONTEXT + FACILITIES**

CHALLENGES:

- Community sensitivity to Mt. SAC's traffic and development
- Buildings vary in age, style, scale, condition, and quality as learning environments
- Many small, single-story and temporary buildings occupy space in the campus core
- Outgrown permanent facilities (such as classrooms, Continuing Education, & Student Services)
- Infrastructure varies in age, adequacy, and condition across the campus

OPPORTUNITIES:

- Engage the community and do good planning
- Show a more welcoming face to the public and be sensitive to community concerns
- Current plans make better use of land at the center of campus
- Support for flexible, well-equipped, smart classrooms and labs

CHALLENGES + OPPORTUNITIES: **CONTEXT + FACILITIES**

CHALLENGES:

- Spaces not necessarily well used (not enough places to sit in campus café, for example) – wayfinding/circulation
- Try to keep façades attractive, include greenery
- As we create new space, make sure they are functional... Be sensitive to whether we can teach in spaces we build
- Need master vision for what campus should look like – be purposeful, don't just place buildings randomly

OPPORTUNITIES:

- Corner lot at Grand and Temple (move center of campus back to where it's "supposed to be." Eliminate choke point – think about getting on and off campus quickly in event of emergency)

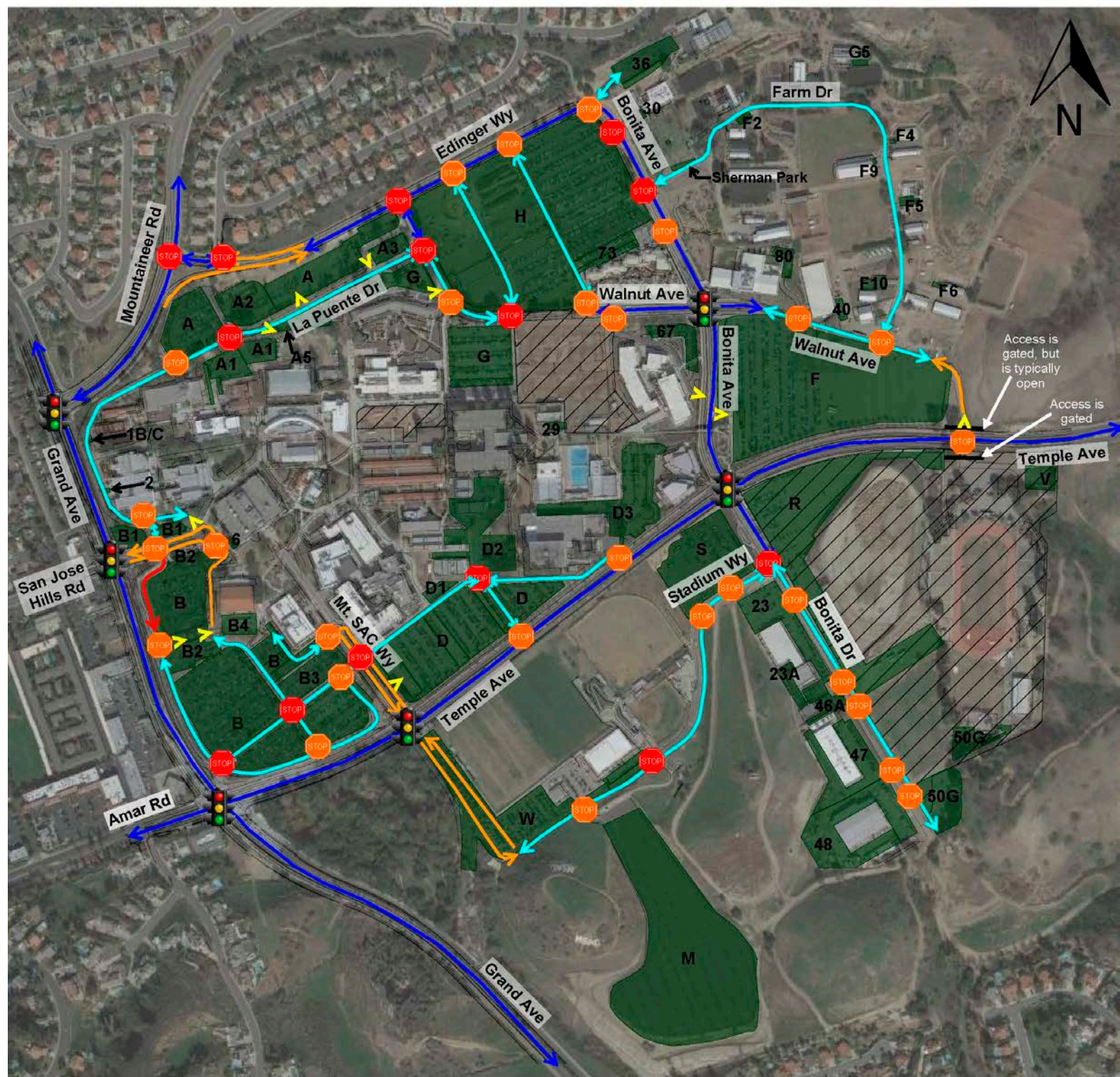
VEHICULAR CIRCULATION

OBSERVATIONS:

- Good access from major cross streets
- High capacity intersections at Temple / Grand and Grand / San Jose Hills
- Well-served by public transit
- Confusing on-campus circulation

LEGEND

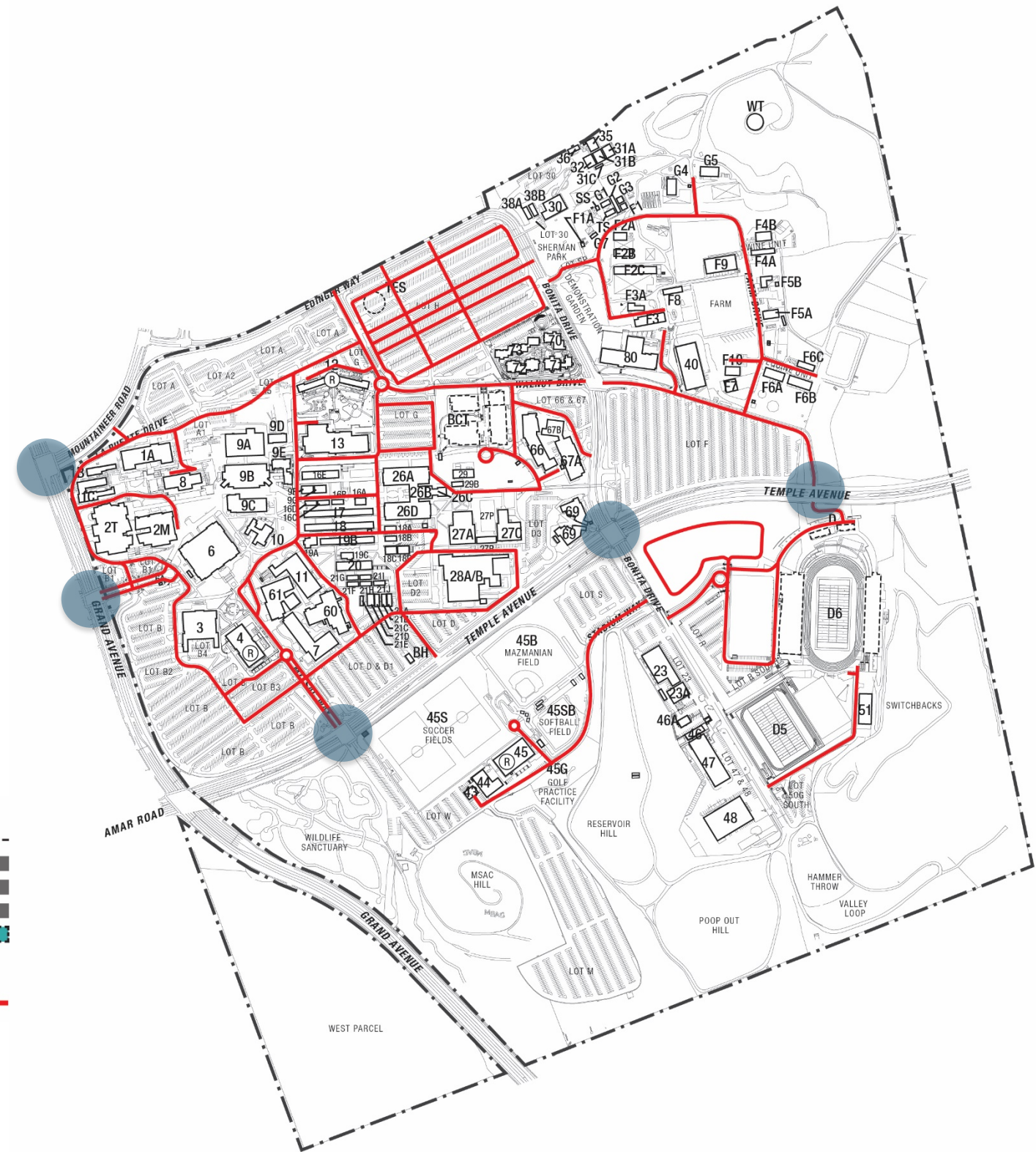
- Two-Way, Two Lanes
- Two-Way, Four Lanes
- One Way, One Lane
- One Way, Two Lanes
- Access - Signalized
- Access - All Way Stop
- Access - Two-Way Stop
- Access - Two-Way Stop, Right-in, Right-out only
- Access - One Way (Entrance or Exit Only)
- Areas under construction or starting construction soon
- Parking lots (see Existing Parking figure for additional information)



EMERGENCY ACCESS

OBSERVATIONS:

- Not all fire access routes are wide enough
- Too much time to evacuate the campus during emergencies



LEGEND

- PROPERTY LINE ---
- EXISTING FACILITIES
- (R) RECENTLY RENOVATED FACILITIES
- (PR) PARTIALLY RENOVATED FACILITIES
- FACILITIES UNDER CONSTRUCTION
- CROSS COUNTRY COURSE
- FIRE ACCESS ROUTES

BICYCLE CIRCULATION

OBSERVATIONS:

- Minimal bike parking facilities
- Fragmented & disconnected bike infrastructure
- Challenging topography



— Class II Bike Lanes
● Bike Rack Locations
■ Public Transit Stops
--- Proposed Transit Center
LEGEND
 PROPERTY LINE
 LANDSCAPE UNDER CONSTRUCTION
 CROSS COUNTRY COURSE



PEDESTRIAN CIRCULATION



- Primary
- Secondary
- Trails
-  Transit Stops
-  Campus Shuttle Stops
-  Future Transit Center
-  Crosswalks
-  Passenger Drop-off - Designated
-  Passenger Drop-off - Not Designated

LEGEND

-  PROPERTY LINE
-  LANDSCAPE UNDER CONSTRUCTION
-  CROSS COUNTRY COURSE



PEDESTRIAN CIRCULATION

OBSERVATIONS:

- Walkable scale, impaired by design & topography
- Circulation hierarchy not strongly defined
- Weak connections between campus core & other areas
- Areas of campus lack defined pedestrian circulation
- Fragmented off-campus pedestrian circulation

- 1/8 Mile Radius
- 1/4 Mile Radius
- 1/2 Mile Radius



UNIVERSAL CIRCULATION

OBSERVATIONS:

- Universal circulation is incomplete
- Shuttle service fills gaps
- Inconsistent aesthetic character of ramp infrastructure



— Accessible Routes
 🚐 Accessible Van Services
 ♿ Accessible Parking Spaces

LEGEND

--- PROPERTY LINE ---
 // LANDSCAPE UNDER CONSTRUCTION //
 ⚙️ CROSS COUNTRY COURSE



WAYFINDING



- Campus Gateway/Identity Signage
- Campus Map/Directory
- Information Kiosk/Bulletin Board
- Site Identity Signage
- Directional Signage
- Primary Circulation
- Secondary Circulation
- Trails
- Off-Campus Bike Lanes

WAYFINDING

OBSERVATIONS:

- Consistent character of campus gateway identity signage
- Inconsistent character of site identity signage
- Campus map placement could be enhanced
- Clarified circulation design will enhance wayfinding

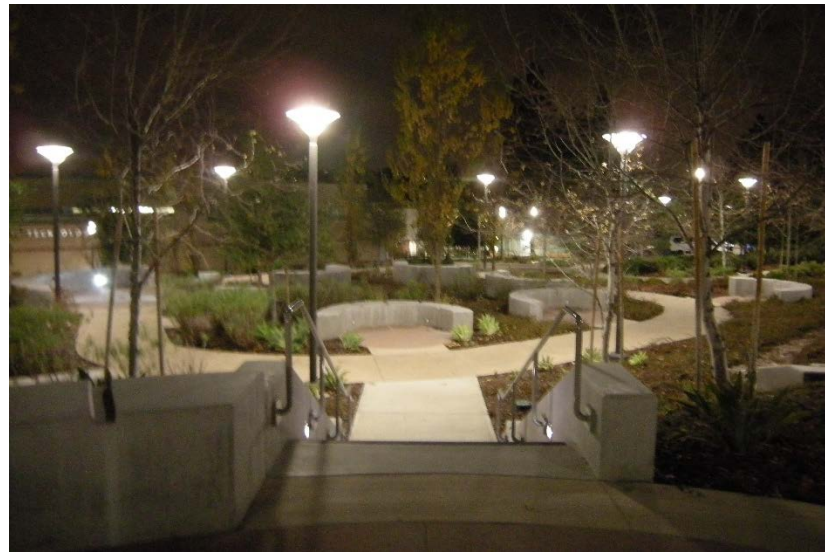
 Campus Gateway/Identity Signage	 Primary Circulation
 Campus Map/Directory	 Secondary Circulation
 Information Kiosk/Bulletin Board	 Trails
 Site Identity Signage	 Off-Campus Bike Lanes
 Directional Signage	



SITE LIGHTING

OBSERVATIONS:

- Lack of campus lighting standards
- Inadequate lighting affects safety and education
- Desire for LED lighting as new standard



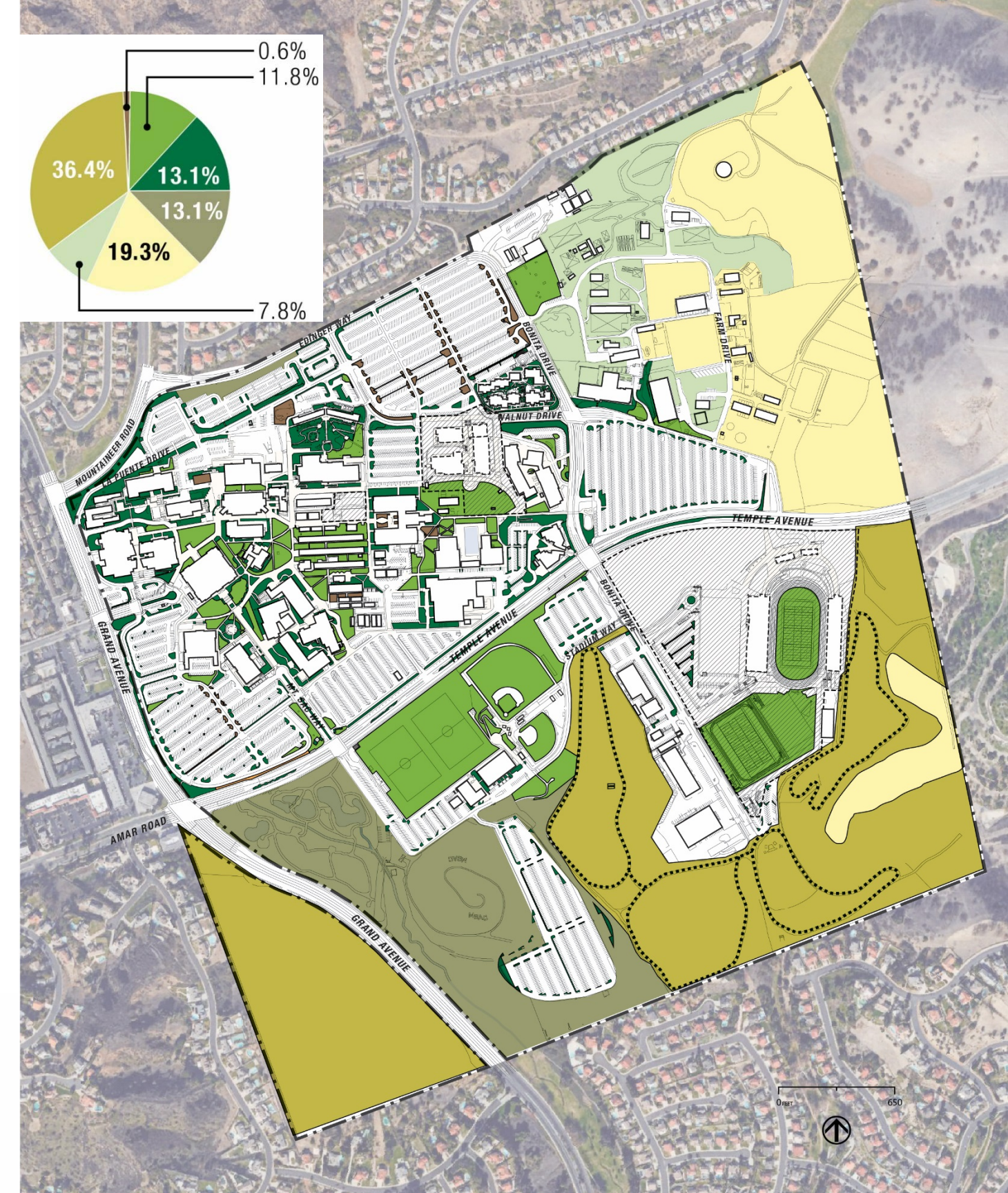
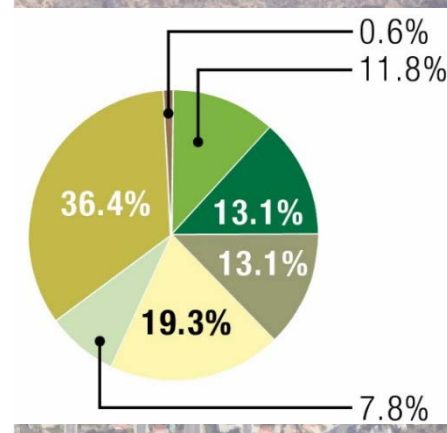
- Areas with insufficient lighting
- High-maintenance areas
- Areas with LED lighting
- Flags without lighting fixtures

LEGEND

- PROPERTY LINE
- //// LANDSCAPE UNDER CONSTRUCTION
- ⊘ CROSS COUNTRY COURSE



ANALYSIS SOFTSCAPE

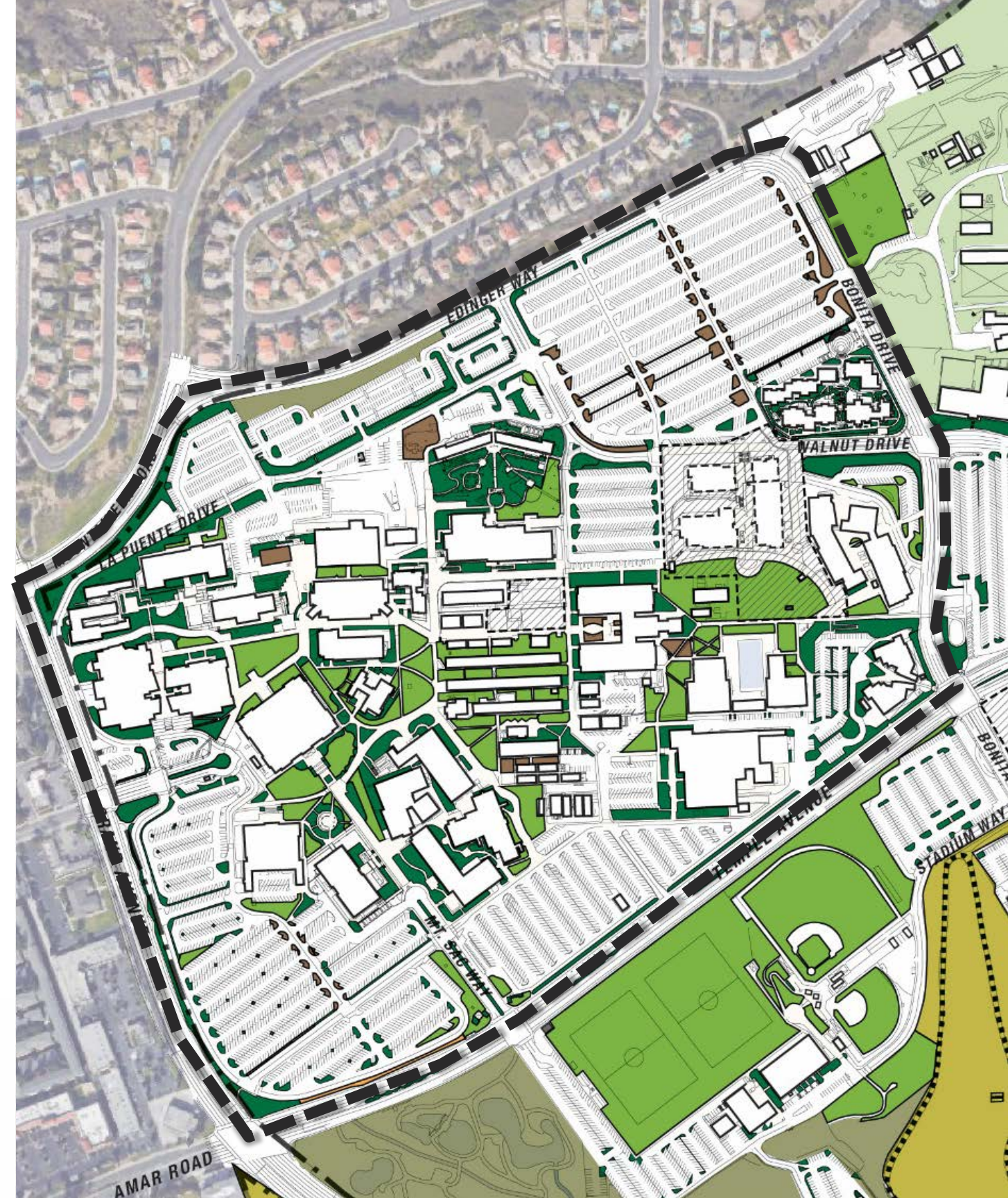


- Turf
- Mixed Plantings
- Natural Plantings
- Grazing + Farm Animal Support (Refer to Farm Enlargement)
- Horticultural Production + Demonstration (Refer to Farm Enlargement)
- Natural Plantings with Grazing
- Unplanted

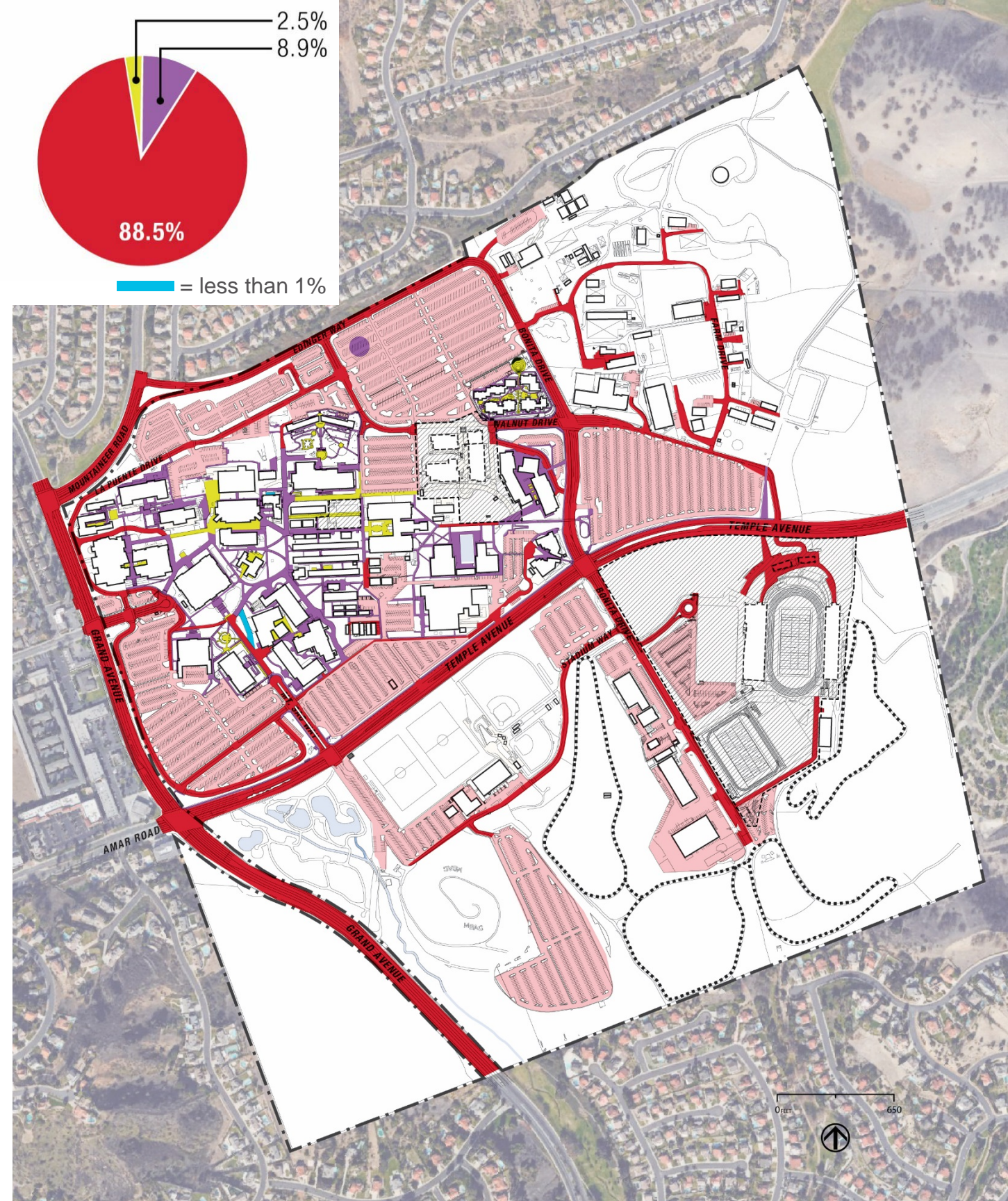
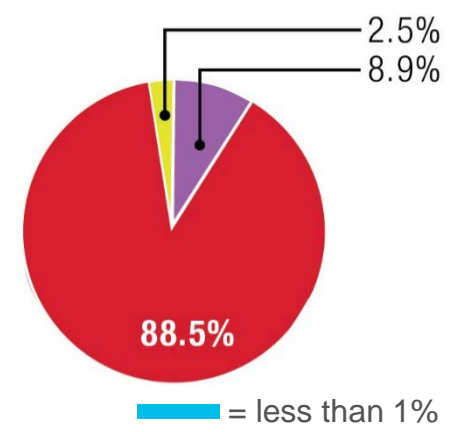
SOFTSCAPE

OBSERVATIONS:

- 60% of the campus is softscape (planting)
- 18% of campus core is softscape
- Planting type impacts irrigation water needs
- Planting types contribute to campus character
- Plantings support educational objectives



ANALYSIS HARDSCAPE

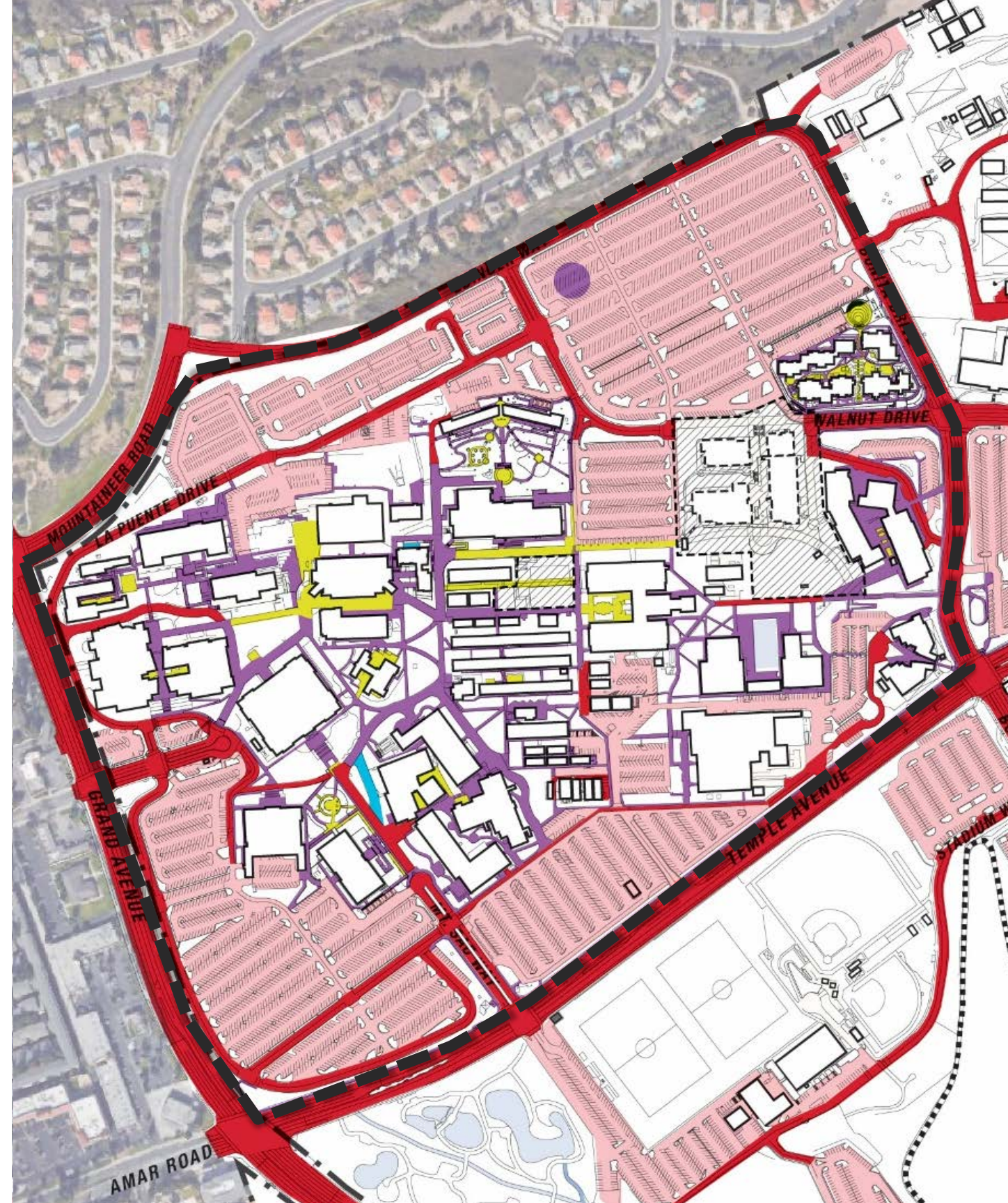


- Asphalt Roadways
- Asphalt Parking Lot
- Concrete
- Decorative Paving
- Permeable Paving
- Buildings

HARDSCAPE

OBSERVATIONS:

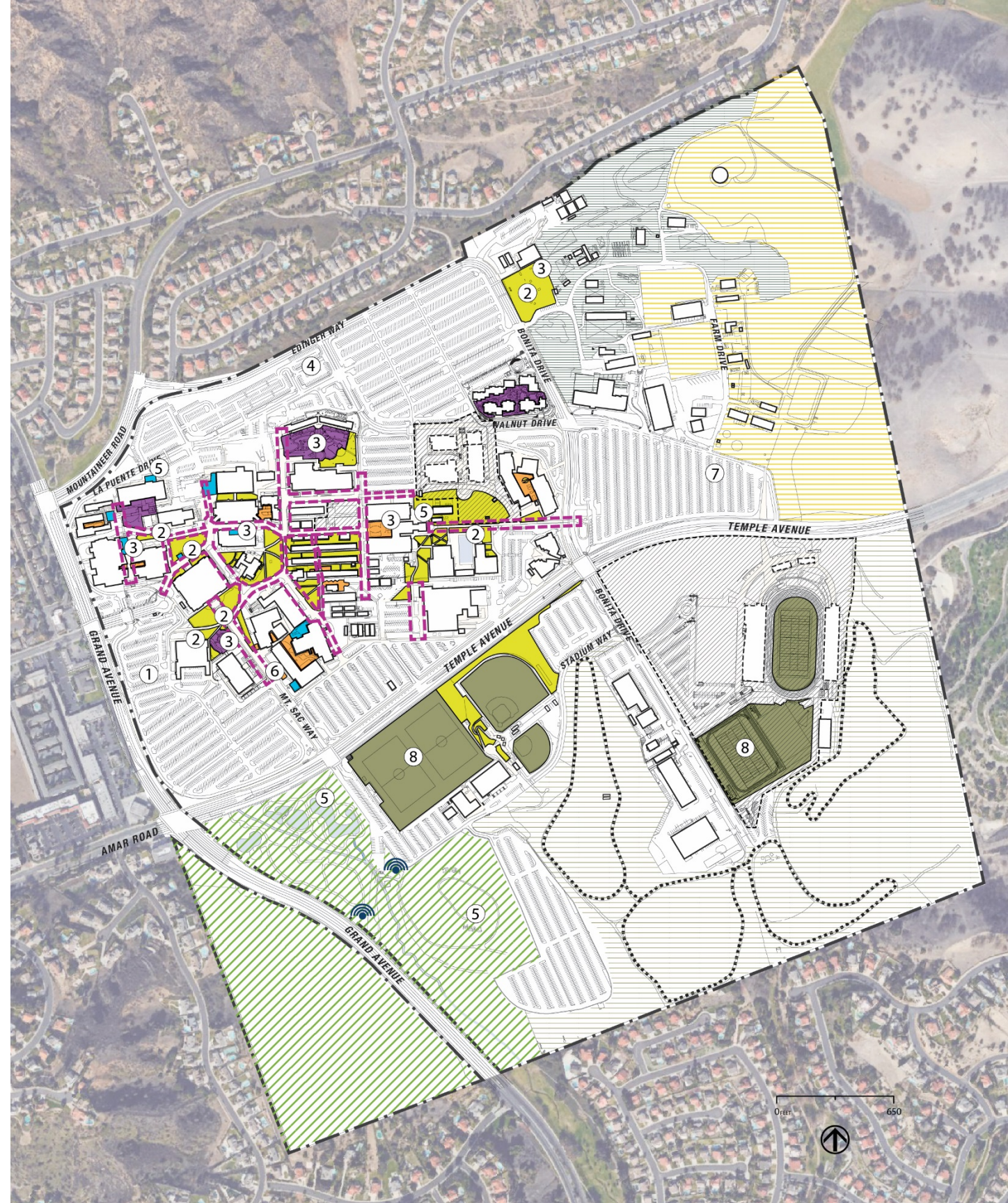
- 30% of overall campus is hardscape
- 74% of campus core is hardscape
- Inconsistent use of paving types



ANALYSIS OPEN SPACE TYPOLOGY + PROGRAMMING



- Lawn
- Sports Fields
- Courtyards
- Garden
- Plazas
- Corridors
- Habitat
- Shared Use Open Space
- Farm Horticultural Sciences (Refer to Farm Enlargement)
- Farm Animal Sciences (Refer to Farm Enlargement)
- Amphitheater



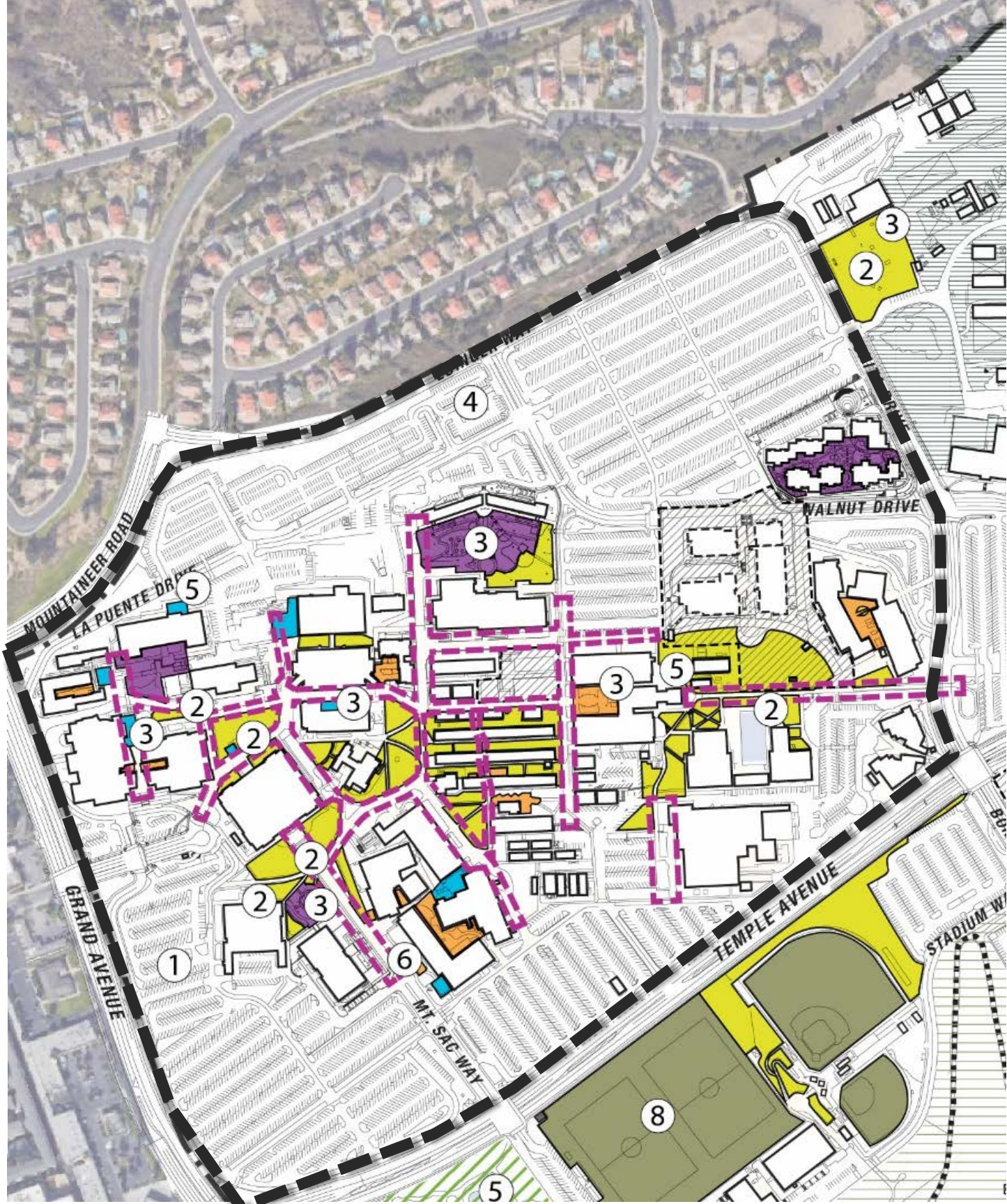
OPEN SPACE TYPOLOGY + PROGRAMMING

OBSERVATIONS:

- Lack of variety in open space types outside of core
- Campus open space supports a variety of uses
- Lack of large, central outdoor gathering space
- Lack of intentional plan & cohesive concept
- Loss of open space with new building construction

Events + Uses:

- | | |
|----------------------------------|--------------------------------------|
| 1. Weekly farmer's market | 5. Outdoor lessons/experiments |
| 2. Lawn lounge area | 6. Biology native plant ID area |
| 3. Events/student gathering area | 7. Motorcycle course |
| 4. College for Kids summer camp | 8. Emergency helicopter landing site |



FARM PROGRAMMING – ANIMAL SCIENCES



- Retail
- Employee Area
- Parking
- Pesticide Prep Rinse Area
- RV Spots for Students
- Tool Storage
- Bulk Material + Nursery Material Storage
- Power Equipment Storage
- Hay Barn
- Infrastructure/Utilities
- Indoor Classroom/Lab
- Circulation
- Vegetated Buffer

- Animal Sciences**
- Demonstration
 - Pasture
 - Sheep
 - Cattle
 - Equine
 - Swine
 - Dog

- LEGEND**
- PROPERTY LINE
 - LANDSCAPE UNDER CONSTRUCTION
 - CROSS COUNTRY COURSE



FARM PROGRAMMING – HORTICULTURE



- Retail
 - Employee Area
 - Parking
 - Pesticide Prep Rinse Area
 - RV Spots for Students
 - Tool Storage
 - Bulk Material + Nursery Material Storage
 - Power Equipment Storage
 - Hay Barn
 - Infrastructure/Utilities
 - Indoor Classroom/Lab
 - Circulation
 - Vegetated Buffer
-
- Horticulture Sciences Shadehouse
 - Greenhouse
 - Full Sun/Outdoor Growing Area
 - Demonstration
 - Propagation House

- LEGEND**
- PROPERTY LINE
 - LANDSCAPE UNDER CONSTRUCTION
 - CROSS COUNTRY COURSE



FARM FACILITIES

OBSERVATIONS:

- Inadequate infrastructure: drainage, irrigation, circulation, & lighting
- Functional facilities, declining fitness
- Lack of overall plan for facility locations & improvements
- Need for more efficient organization of space & facilities



ANALYSIS

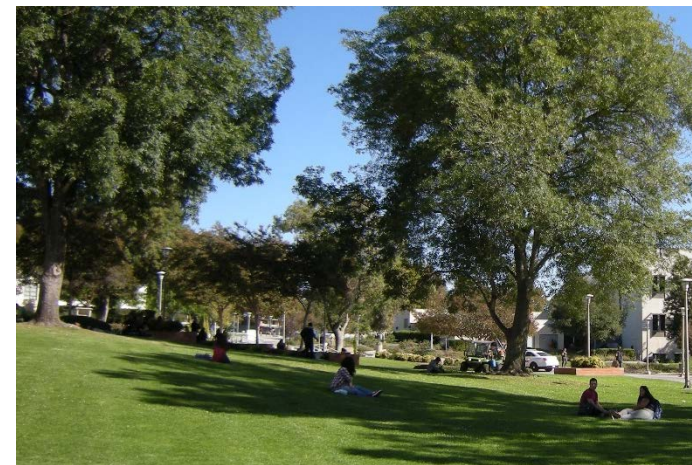
LANDSCAPE CHARACTER



LANDSCAPE CHARACTER

OBSERVATIONS:

- Views, trees and plantings, open space design, & site furnishings contribute to campus character
- 6 bike rack styles
- 4 bollard styles
- 13 site lighting styles
- 8 receptacle styles
- 34 bench / seating styles



Challenges and Opportunities

CHALLENGES + OPPORTUNITIES: **OPEN SPACE**

CHALLENGES:

- Lacks a cohesive, intentional design concept for open space
- Lacks an open space program that balances many uses and functions
- Losing outdoor space and trees to new building construction
- Certain spaces are under-used, and are not supporting current needs
- Weak and inaccessible circulation connections in certain parts of the campus
- Wayfinding is not clear and intuitive
- Sloped topography, bisecting public roads complicate connectivity and accessibility.

OPPORTUNITIES

- Support for preserving and maximizing the use of open space for learning and engaging students
- To connect all parts of campus with strong and universally accessible paths
- Many beautiful places, plants and trees, artwork, habitats and microclimates, and views

Break



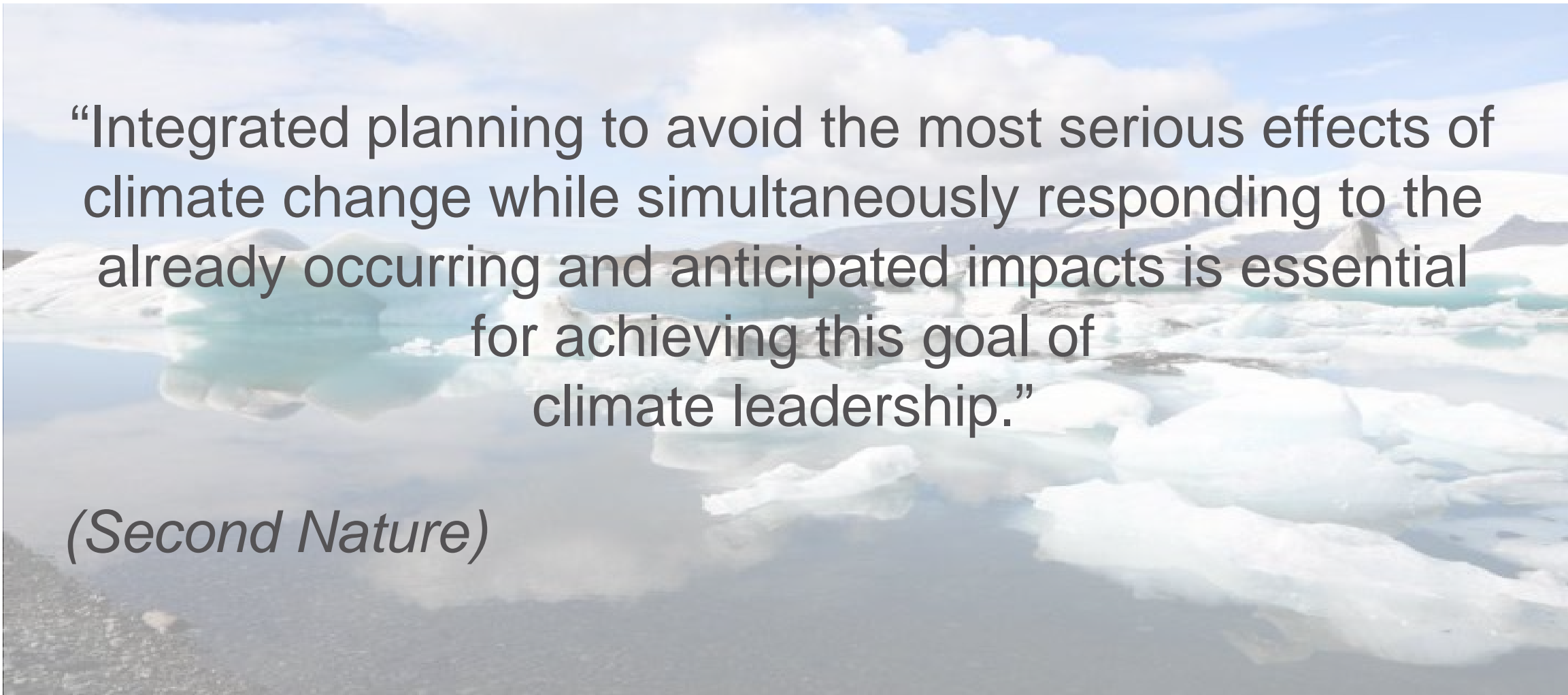
Environmental Analysis

CLIMATE COMMITMENT COMMITTEE MEETING

Sustainability Accomplishments of Mt. SAC



MASTER PLANNING FOR SUSTAINABILITY



“Integrated planning to avoid the most serious effects of climate change while simultaneously responding to the already occurring and anticipated impacts is essential for achieving this goal of climate leadership.”

(Second Nature)

EUI = Energy Use Intensity

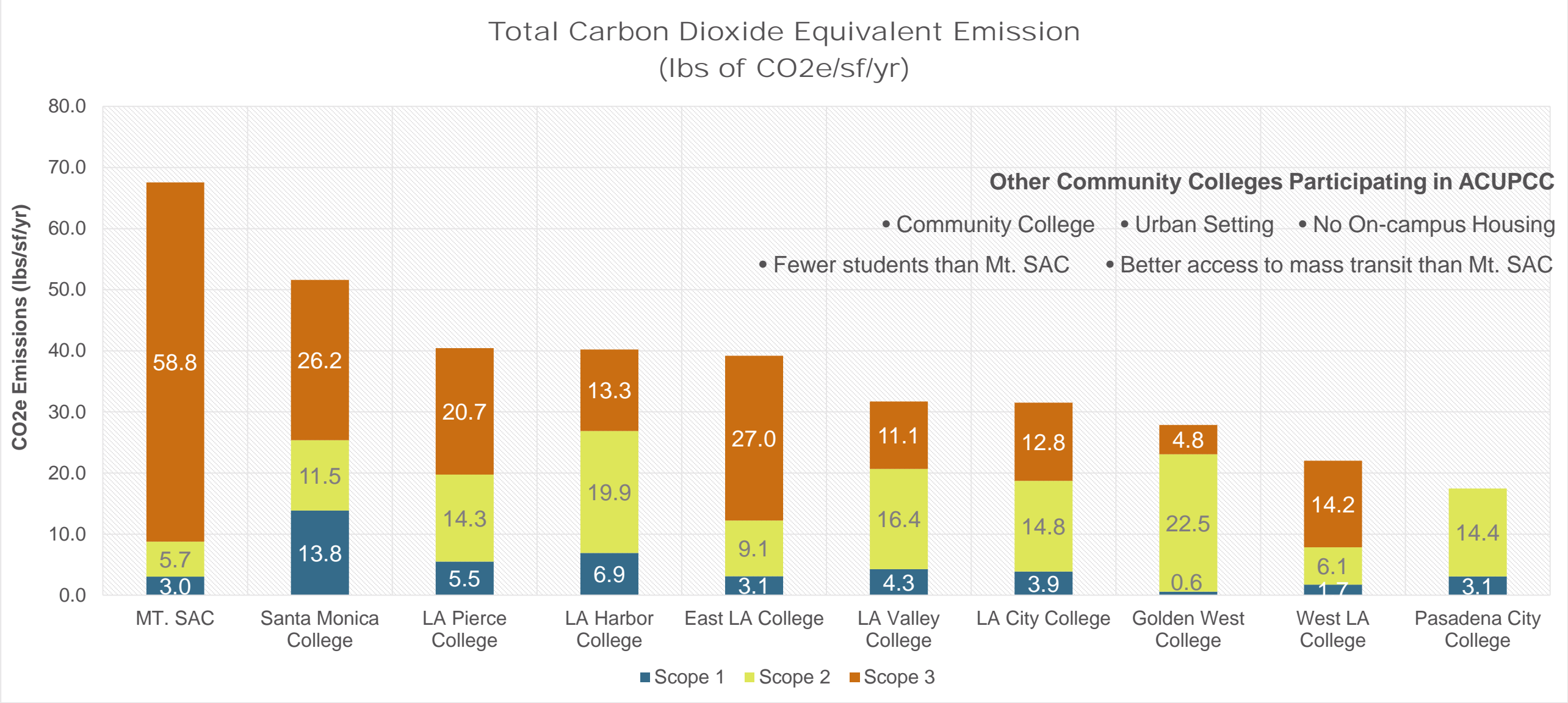


Reduce emissions from energy, water, waste, transportation

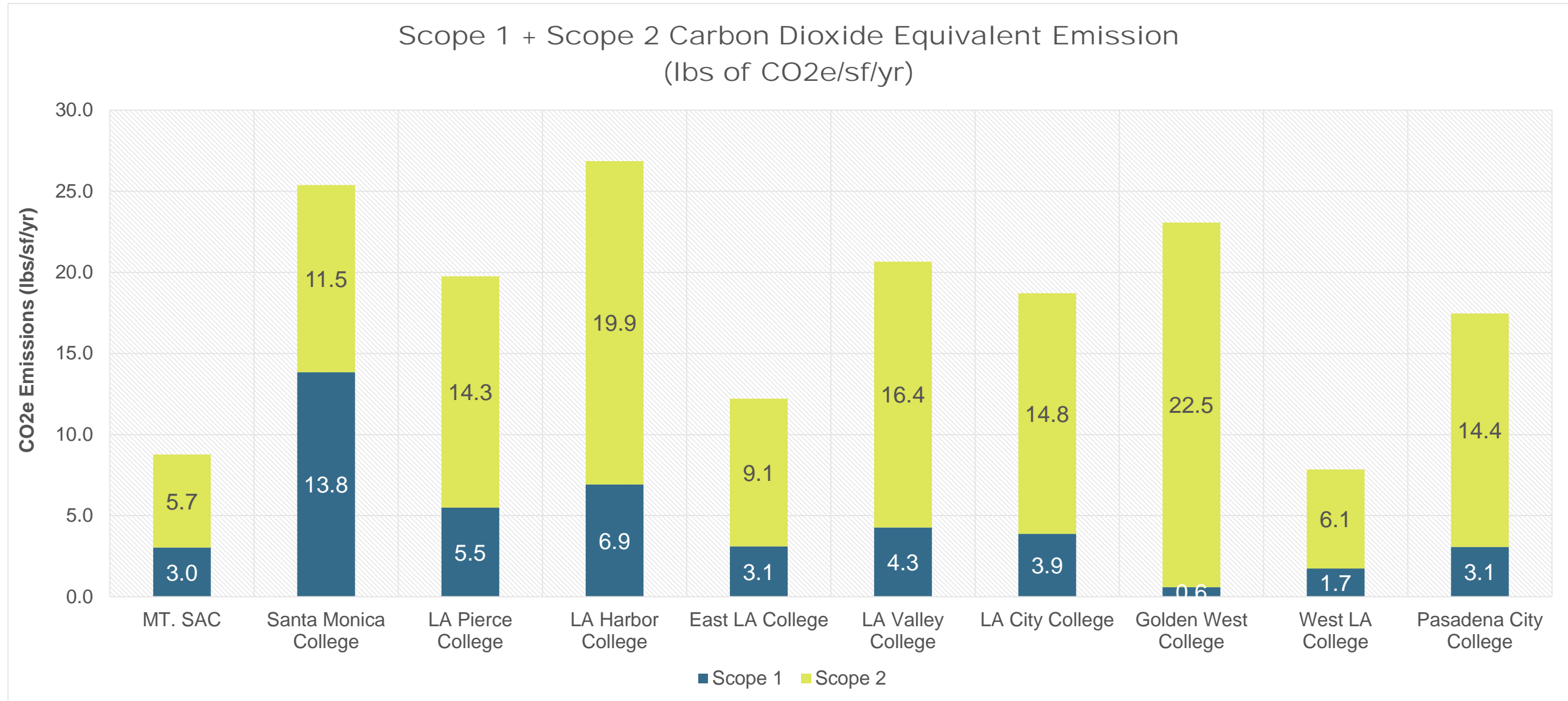
$CO_2e = \textit{Carbon Dioxide}$
 $\textit{equivalent}$

Measures how much global warming a given type and amount of greenhouse gas may cause.

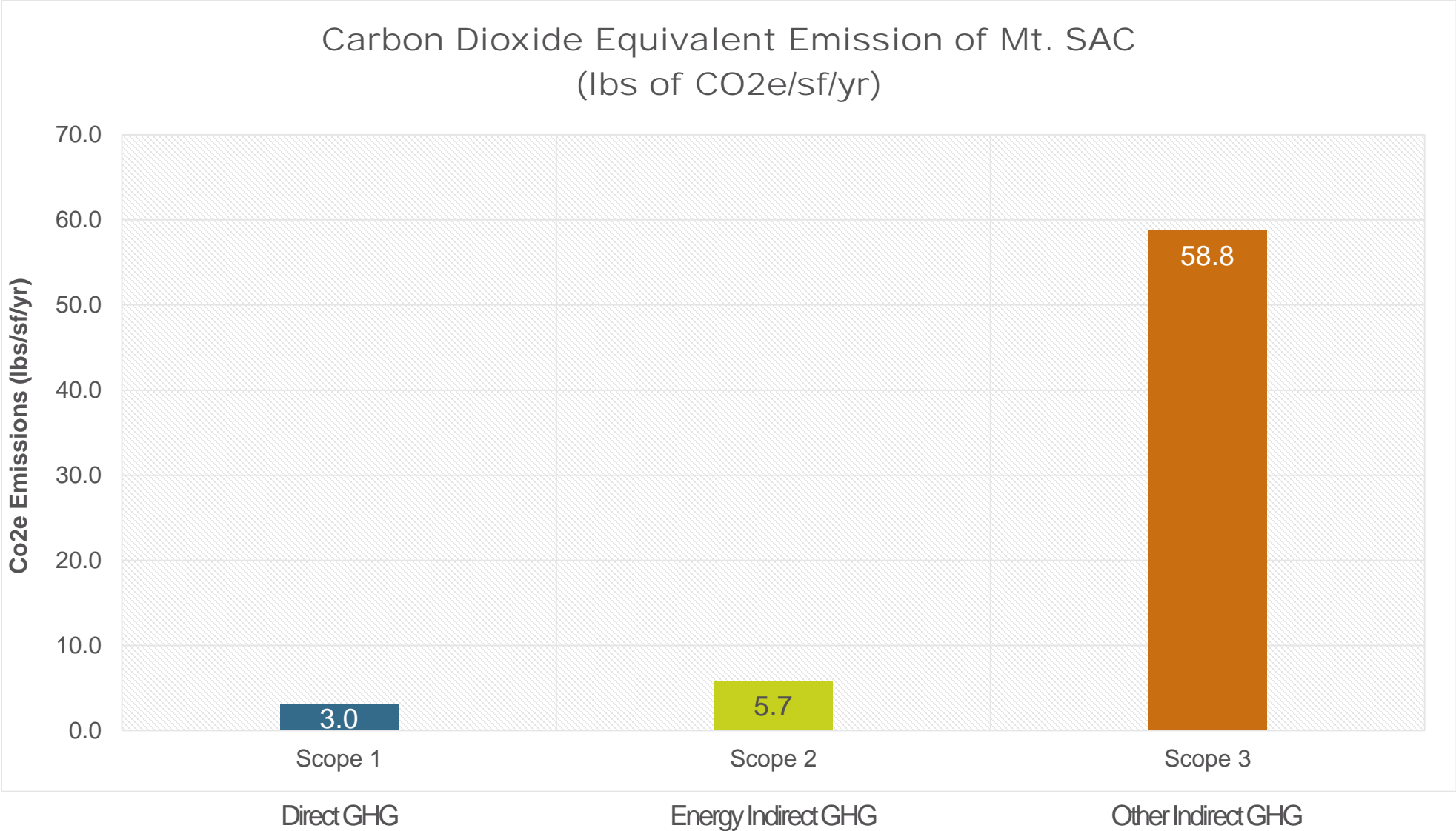
CARBON FOOTPRINT: SCOPE 1, 2, + 3 COMPARISON



ANALYSIS CARBON FOOTPRINT: SCOPE 1 + 2 COMPARISON

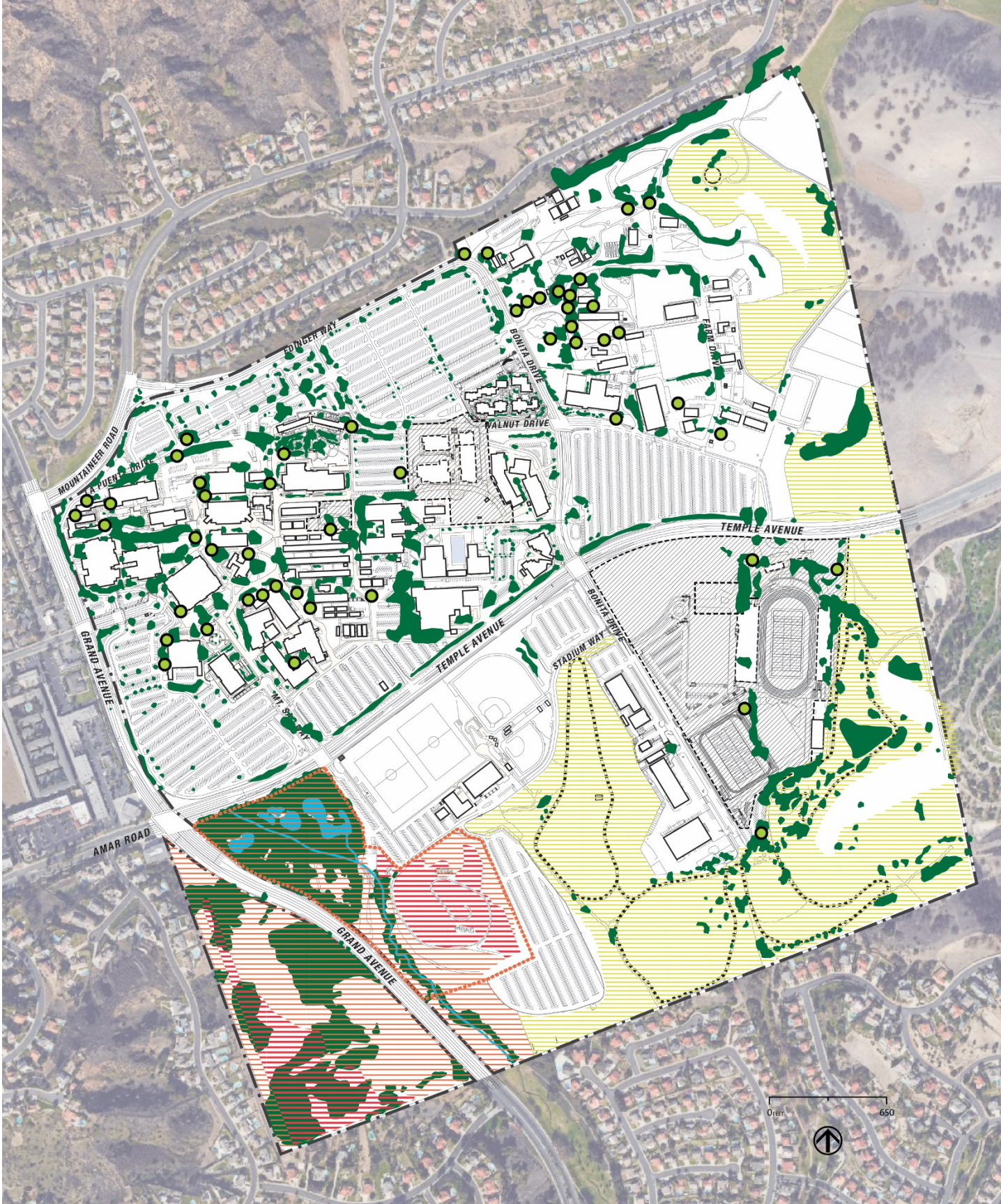


CARBON FOOTPRINT: MT. SAC SCOPE 1, 2, + 3 EMISSIONS



ANALYSIS

CAMPUS NATURAL HABITAT + CAMPUS FOREST



- Specimen Tree
- Tree Canopy
- Natural Habitat - Restrictive Covenant, Restricted Access
- Natural Habitat - Not in Restrictive Covenant, Restricted Access
- Natural Habitat - Livestock Management
- Natural Habitat - Water
- Wildlife Sanctuary

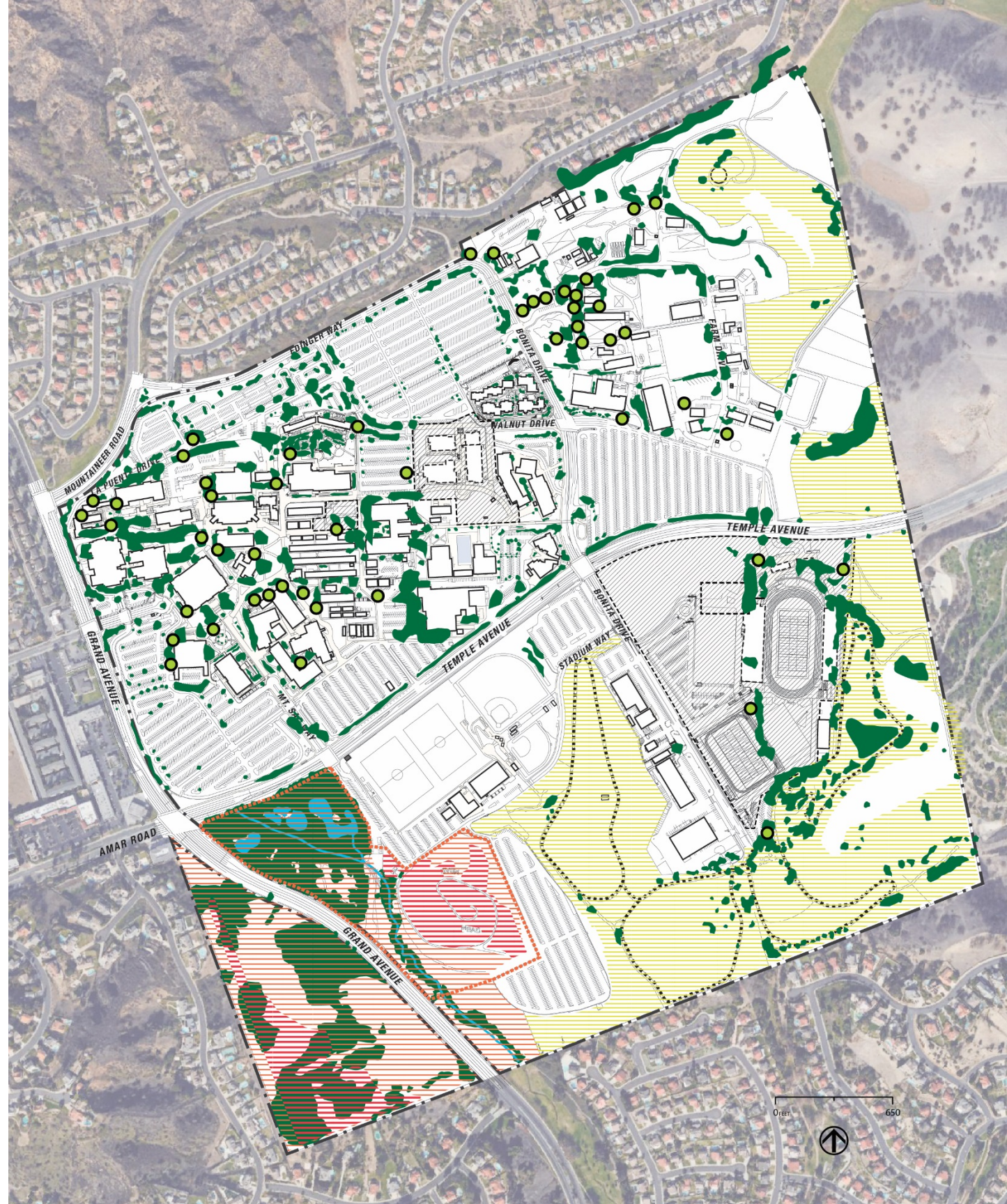


CAMPUS NATURAL HABITAT + CAMPUS FOREST

OBSERVATIONS:

- 24.5% of the campus is natural habitat
- 12.6% of the natural habitat is not publicly accessible
- Adequate fencing & signage is needed
- Campus forest provides environmental, educational, & aesthetic benefits
- Campus lacks complete tree inventory
- Campus forest is fragmented
- Mature trees lost/damaged during construction activities

● Specimen Tree	▨ Natural Habitat - Not in Restrictive Covenant, Restricted Access
■ Tree Canopy	▨ Natural Habitat - Livestock Management
▨ Natural Habitat - Restrictive Covenant, Restricted Access	■ Natural Habitat - Water
	▨ Wildlife Sanctuary



HEAT ISLAND

OBSERVATIONS:

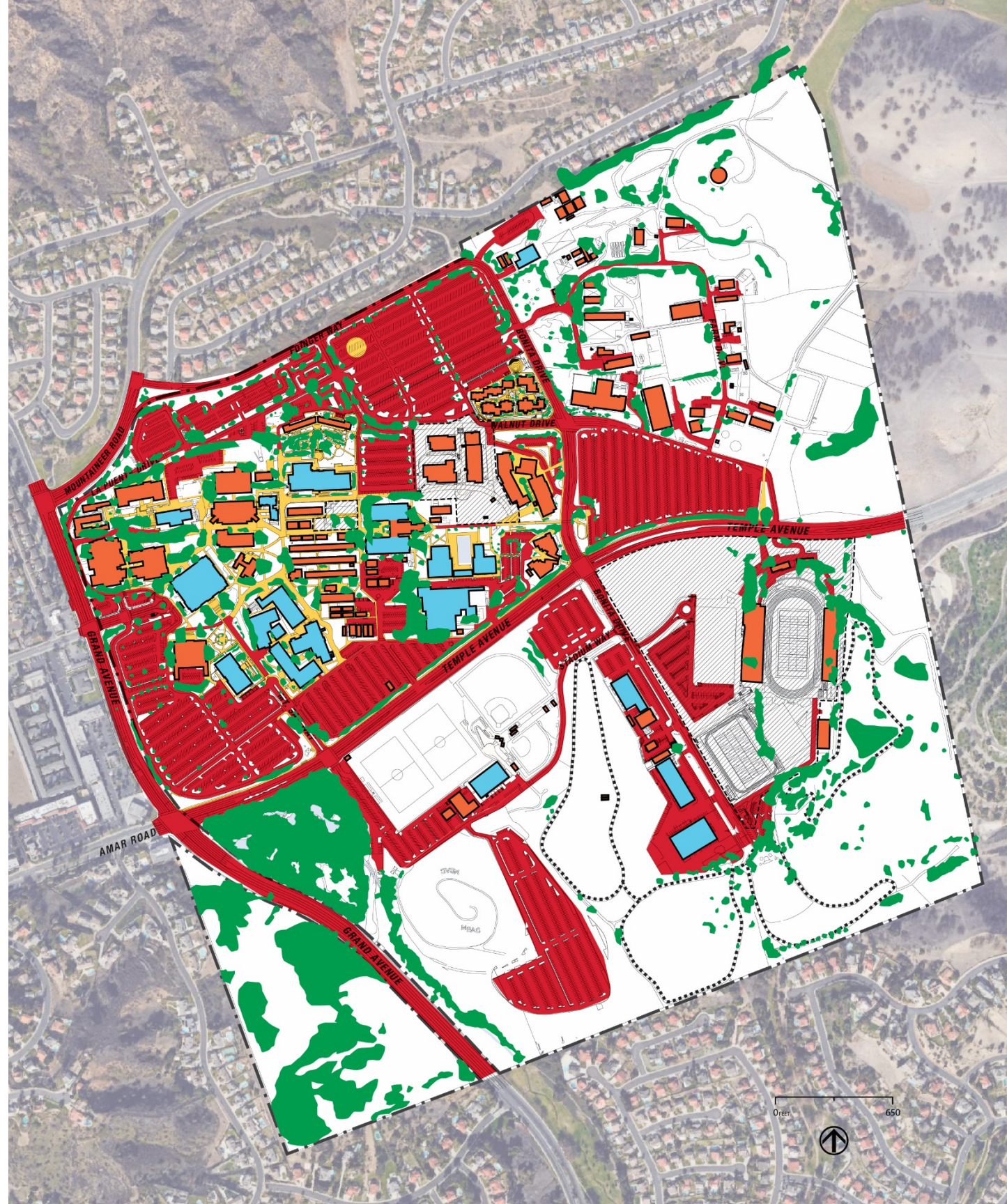
- 88% of campus hardscape is asphalt
- Large areas of paving lack tree canopy coverage
- 37.5% of roof surface area has cool roof materials



- Exposed Asphalt
- Exposed Concrete/
Decorative Paving
- Roof Tops - Traditional
- Roof Tops - Cool Roof
- Tree Canopy

LEGEND

- PROPERTY LINE ---
- //// LANDSCAPE UNDER CONSTRUCTION ///
- ⊘ CROSS COUNTRY COURSE



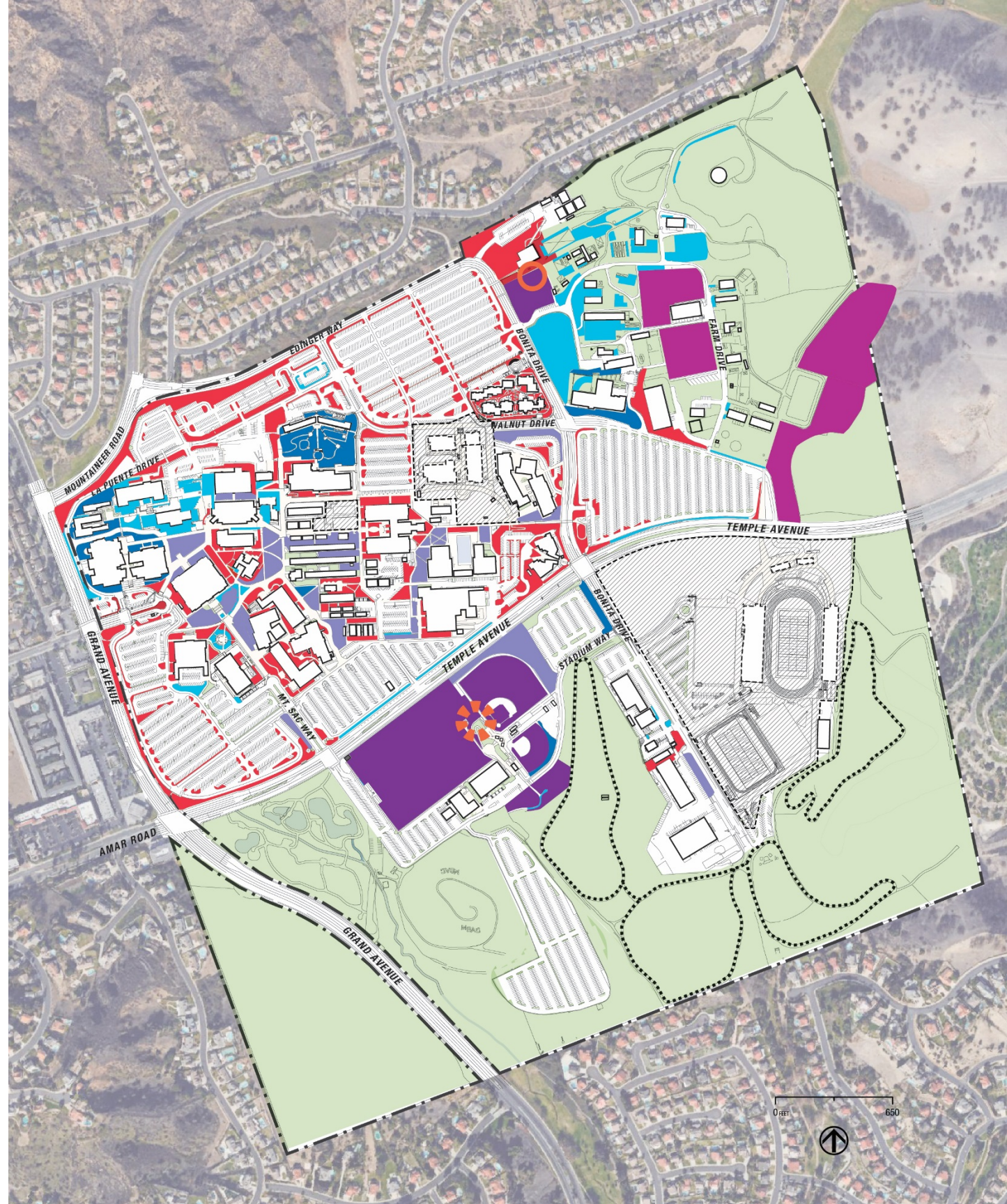
LANDSCAPE IRRIGATION INTENSITY

OBSERVATIONS:

- Irrigation conversion in process
- Planting type & open space use impacts water needs
- Multiple campus microclimates challenge irrigation efficiency

- Drip Irrigation (most efficient)
- Rotary Nozzles
- Rainbird 5000 Rotor
- Rainbird 6500 Rotor
- Hunter I-90 Rotor
- Spray Nozzles (least efficient)
- Softscape without irrigation
- Current Weather Station
- ⊙ Future Weather Station

- LEGEND**
- PROPERTY LINE
 - //// LANDSCAPE UNDER CONSTRUCTION
 - ⊙ CROSS COUNTRY COURSE



Challenges and Opportunities

CHALLENGES + OPPORTUNITIES: **SUSTAINABILITY**

CHALLENGES:

- Environment impacts of a large campus, include water pollution, waste, energy use, water use, heat-island effect
- Difficulty for a commuter college to reduce Scope 3 GHG emissions from transportation

OPPORTUNITIES

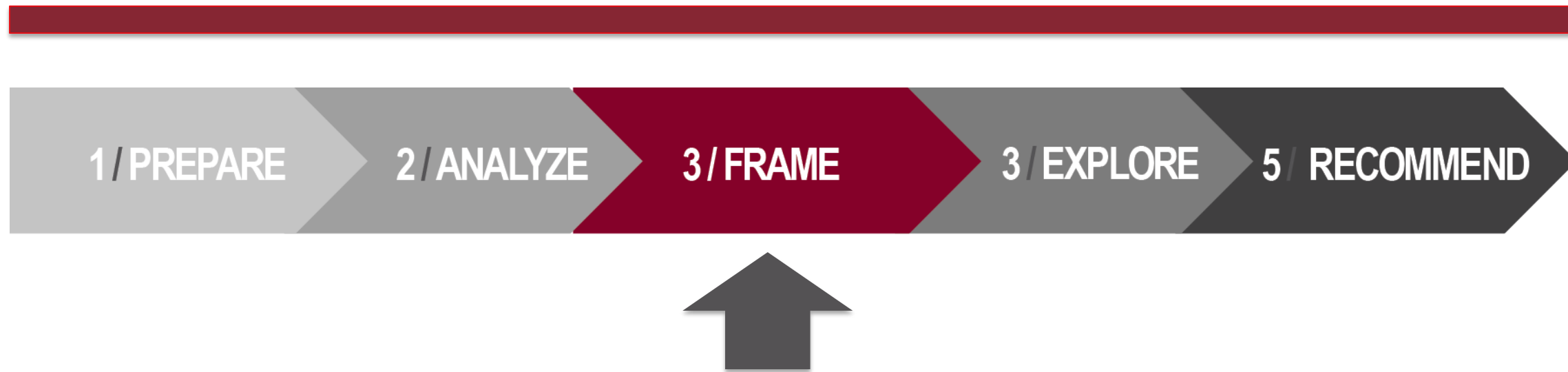
- Integrate sustainability in curriculum and model sustainable campus management
- A dedicated Wildlife Sanctuary, black Walnut restoration areas, and other habitat
- Input and ideas from Mt. SAC's Climate Commitment Committee
- History of accomplishments and institutional support for sustainability

Next Steps

Next Steps: **Frame**

SEPTEMBER
2016

DECEMBER
2017



Next Steps

- / USE FEEDBACK TO REVISE DATA PORTFOLIO
- / MEET WITH PROGRAM LEADERS TO REVIEW DRAFT #2 DESCRIPTIONS
- / EMP IMPLICATIONS FOR FACILITIES
- / SPACE ANALYSIS
- / PLANNING PRINCIPLES
- / FACILITIES DEVELOPMENT OPPORTUNITIES

Next Meeting

MARCH WORKSHOP (MARCH 20, 10AM – 12PM)
/ FOUNDERS HALL CONFERENCE CENTER

www.mtsac.edu/efmp