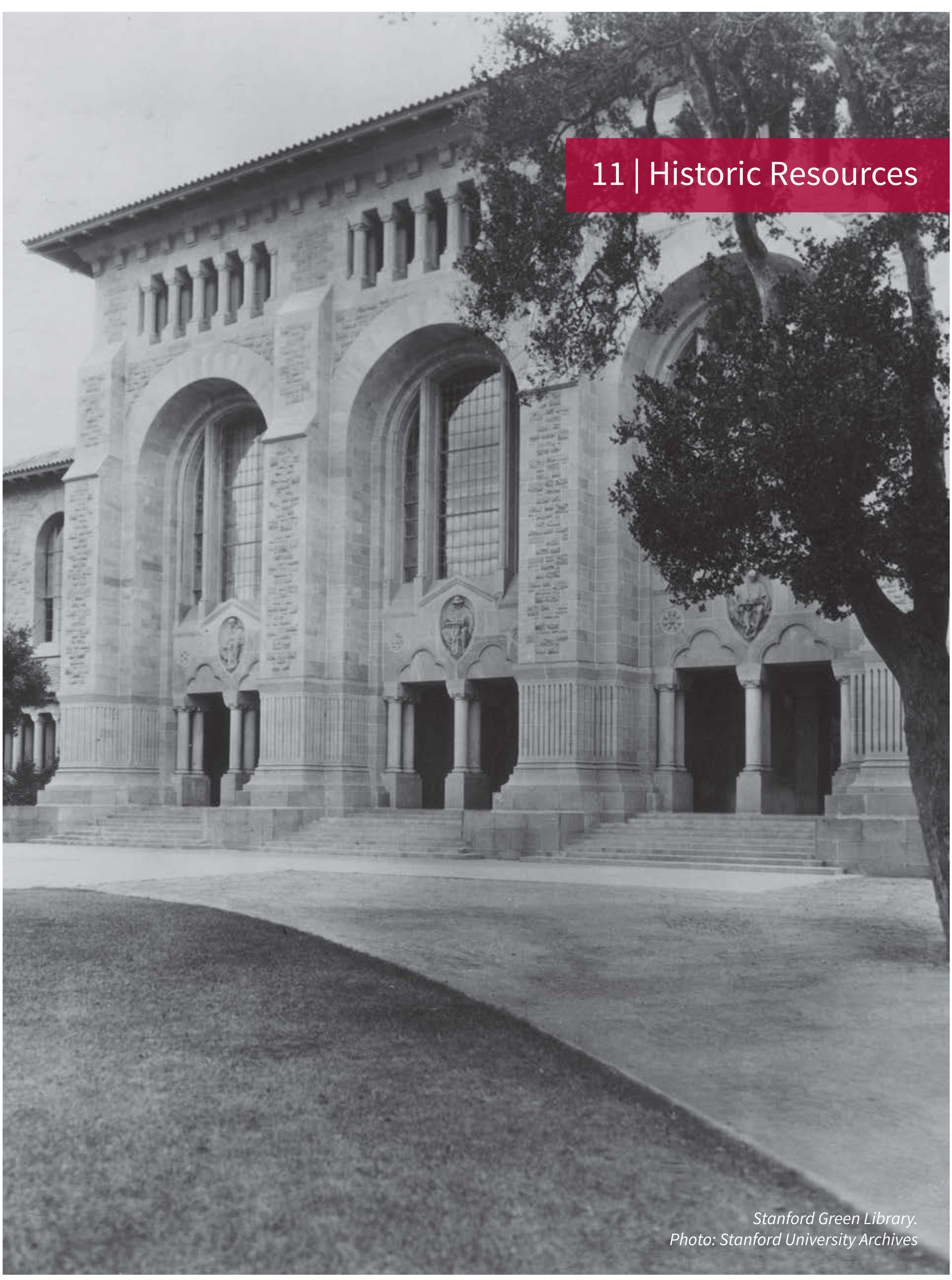

11 | Historic Resources

Stanford Green Library.
Photo: Stanford University Archives

11 | Historic Resources

Summary of Revisions

The April 2017 version of Tab 11 – Historic Resources contains the following content revisions requested by the County of Santa Clara.

- Chapter 1 (Introduction) was revised to include an expanded discussion of criteria 1 and 2: significance for association with events or persons important in history. Two events and four persons are identified as significant, associated with eight properties. Map Figure 1.1 was revised to include labels for areas mentioned in the text (Golf Driving Range, Searsville and Olmsted Staff Housing, Gardiner Apartments).
- Chapter 2 (Historic Setting) has been revised to include information about whether each building mentioned is extant, has been demolished, or partially demolished, indicated by superscript notation for the first instance where the building name appears. For example, Main Quadrangle$^{Ext.}$, Men's Gymnasium$^{Dem.}$, Escondido Village,$^{P.dem.}$.
- Chapter 5 (Findings) was updated to reflect the new findings for criteria 1 and 2 presented in Chapter 1.
- Appendix A (Survey Forms) was updated throughout to consolidate evaluation of criteria 1, 2 and 3 in a single section and to reflect the new findings under criteria 1 and 2.
- Appendix B (DPR Forms) was revised to reflect the findings under criteria 1 and 2 for the six collegiate properties found eligible for more than one criterion.
- Appendix C (Non-collegiate properties) was revised to reflect the findings under criteria 1 and 2 for two agricultural properties found eligible for more than one criterion.

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1: INTRODUCTION

Background

The Stanford University campus is located in unincorporated lands at the northern edge of Santa Clara County. The university operates under a Community Plan and General Use Permit enforced by the County. This permit, most recently renewed in 2000, includes conditions related to historic properties. Specifically, Stanford University is required to evaluate structures more than fifty years old for historical significance prior to receiving a building permit for those structures. The criteria for evaluation are the criteria for listing on the California Register:

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

Since 2000, 70 historic resource evaluation reports for Stanford buildings have been submitted to Santa Clara County, finding 38 buildings eligible for listing on the California Register. One potential historic district (the Row) was evaluated and found not eligible for listing. In preparation for renewal of the university's General Use Permit (expected in 2018) the County of Santa Clara requested a comprehensive historic resource survey to guide future project permitting. This document provides that survey framework, following the Secretary of the Interior's Standards for Preservation Planning, as the basis for identifying historic properties on the Stanford campus. The survey builds upon the lessons learned in the prior individual property evaluations while adding a broader context for understanding why a property may (or may not) be significant on the Stanford campus.

Survey Boundary

Stanford University owns more than 8,000 acres of contiguous lands in six jurisdictions (Santa Clara and San Mateo counties, the cities of Menlo Park and Palo Alto, and the towns of Portola Valley and Woodside). The areas governed by the Community Plan and General Use Permit are the lands in unincorporated Santa Clara County, which include the main academic campus and adjacent foothills shown on Figure 1.1 below. Stanford anticipates that the 2018 General Use Permit will continue to cover all of its lands in unincorporated Santa Clara County. However, the General Use Permit does not apply to land uses within those areas that are permitted as of right. The single-family and two-family residences in the faculty/staff subdivision are permitted as of right, and therefore are not included within the survey boundary. In addition, Stanford does not propose development under the 2018 General Use Permit in two areas zoned for medium-density faculty and staff housing (the Peter Coutts housing area and the Olmsted Terrace housing area). Nor does Stanford propose development within the areas designated as Campus Open Space, or within any areas that are outside the Academic Growth Boundary, including on the Stanford Golf Course. Therefore these areas similarly are not included within the survey boundary.

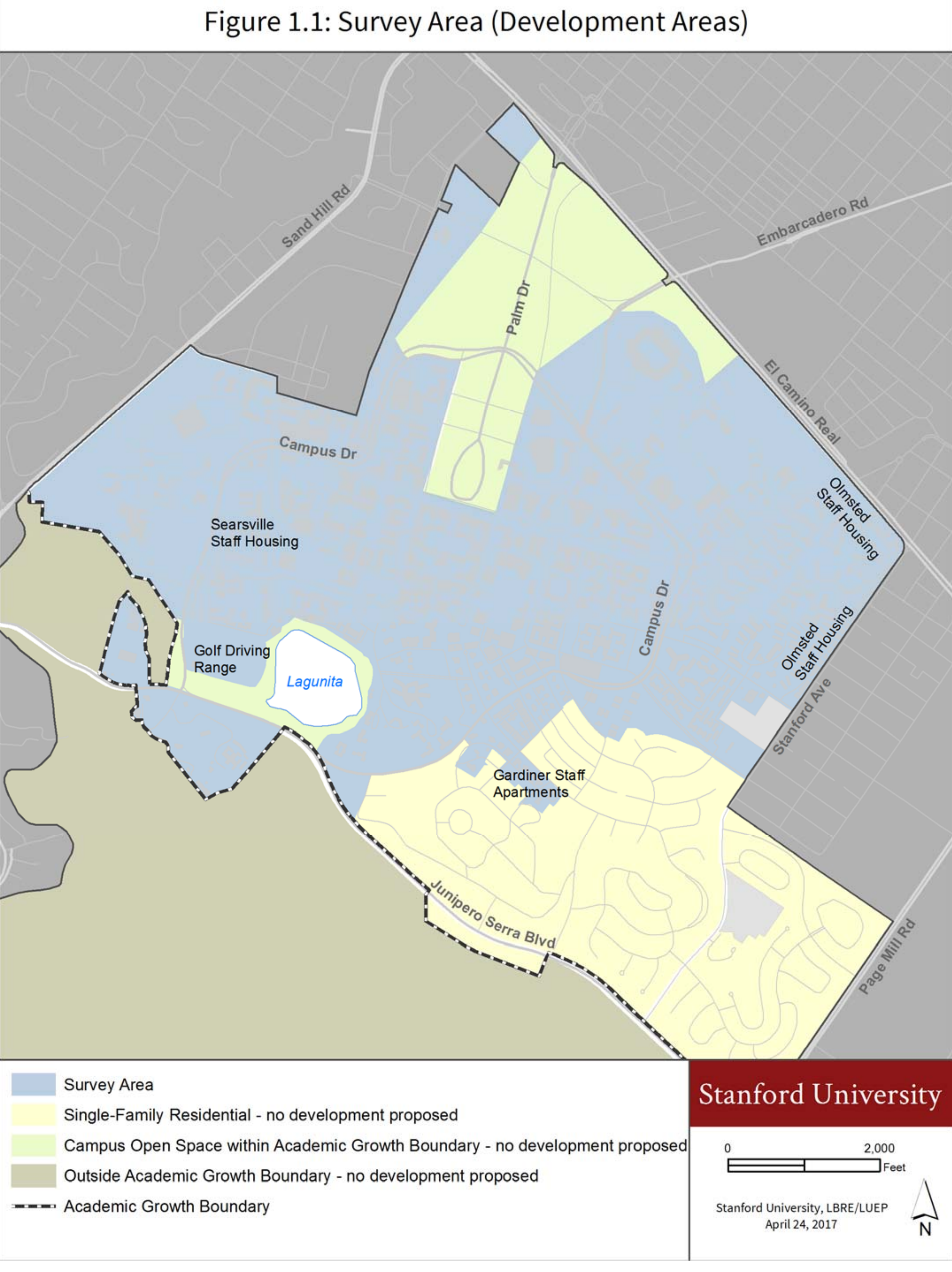
Figure 1.1: Survey Area (Development Areas)
Sand Hill Rd
Embarcadero Rd
Palm Dr
El Camino Real
Campus Dr
Olmsted Staff Housing
Searsville Staff Housing
Campus Dr
Olmsted Staff Housing
Golf Driving Range
Lagunita
Stanford Ave
Gardiner Staff Apartments
Junipero Serra Blvd
Page Mill Rd
Survey Area
Single-Family Residential - no development proposed
Campus Open Space within Academic Growth Boundary - no development proposed
Outside Academic Growth Boundary - no development proposed
Academic Growth Boundary
Stanford University
0
2,000
Feet
Stanford University, LBRE/LUEP
April 24, 2017
N

The survey boundary includes all of the Academic Campus lands, including the Stanford Driving Range, which Stanford proposes to designate as Academic Campus rather than medium density residential

Faculty/staff housing rental units located in the Searsville and Olmsted staff housing subdivisions and the Gardiner Apartments building on Mayfield Avenue are also included in the survey boundary.

Within the survey boundary there are approximately 400 buildings constructed before 1975. Buildings constructed after 1975 have not been included in this survey. It is too early to evaluate buildings that have not yet reached 40 years in age as too little scholarship is available to assess their potential significance. Prior to 2025, an additional survey of buildings built between 1976 and 1985 will be provided to the County. However, based on available information regarding the campus buildings constructed between 1976 and 1985, it is highly unlikely that any buildings on the Stanford campus constructed during that time period will be found to be eligible for listing on the California Register.

Goals of the Survey Effort

1. Identify major architectural styles that represent the evolution of collegiate architecture in the San Francisco Bay Area
2. Identify academic buildings and student housing properties at Stanford that represent important examples in this context as priorities for preservation
3. Provide a framework for future compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties

Survey Methodology

Review of Prior Historic Resource Evaluations

The survey team reviewed the previously completed historic resource evaluation reports for buildings located on the Stanford campus.[1] For the thirty-eight properties previously found eligible for listing on the California Register the following patterns were observed:

- Thirty-six of thirty-eight were found eligible under Criterion 3 for architectural merit.
- Five properties were also found eligible for association with Leland Stanford, Sr. and Jane Stanford. Four of these properties also met Criterion 3.
- One building was found potentially eligible for association with Nobel prize-winning research but had lost integrity and was ultimately determined not to be an historic resource.
- Two buildings that had been relocated on the campus were found to retain integrity and qualify as historic resources after being moved.

In addition to these individual property reports, a historic district evaluation was performed for an area of undergraduate housing – the remnants of the campus fraternity and sorority "Row". The district evaluation found that while individually eligible properties were present, the area lacked the concentration of resources necessary to form a district.

Due to the span of time in which these resources were evaluated (more than fifteen years), and the number of reviewers (sixteen), the evaluation reports display inconsistencies in format, architectural vocabulary, and level of documentation. The individual reports, nearly all in "DPR" format, range from two pages in length to nearly fifty pages. In addition to these inconsistencies, no overall context has been available for evaluating the properties and understanding their significance relative to each other, to other properties in the region, and to established themes.

Survey Team

The survey team launched an effort to prepare a historic setting describing the physical development of the campus over time and the major influences and patterns of development. This effort was conducted by Heritage Services staff historian Julie Cain, M.A., archaeologist/historian Dr. Laura Jones, and consulting architectural historian Dr. Anthony Kirk. The historic setting is presented in Chapter 2.

The architectural themes and periods of significance presented in Chapter 2 were developed in collaboration with two professional architects with expertise in historic preservation, Elena Angoloti and Sapna Marfatia from the University Architect's Office. The University Architect's Office also prepared the inventory of potential properties (Appendix A), the DPR forms for the properties found significant under the themes (Appendix B) and collaborated with the historian team on the survey of non-collegiate properties (Appendix C). The team has a combined total of more than 120 years of professional experience in historic preservation; brief statements of qualifications are presented in Appendix D.

Themes and Periods of Significance

The context for the survey is Collegiate Architecture in the San Francisco Bay Area. Use of the regional framework for comparison recognizes the specialized property types associated with colleges and universities and provides objective external benchmarks for eligibility by building upon prior work at other college and university campuses. Because each

campus has its own unique timeline, the survey uses uniform 25-year periods of significance, beginning in 1850, following the convention established by the National Register of Historic Places.[2] Each period has an overarching theme which is conveyed by architectural styles popular in the period.

Table 1.1: Historic Context Themes

Period	Themes	Styles
1850 - 1874	Pioneering Campuses	Second Empire
1875 - 1899	Late Victorian	Richardsonian Romanesque with Mission Influence Shingle Neoclassical
1900 - 1924	Arts and Crafts	Beaux Arts - Northern European Influence Beaux Arts - Southern European Influence Craftsman
1925 - 1949	Romance of the West	Mission Revival Colonial Revival
1950 - 1974	Regional Modernism	Brutalist Mid-Century Modern Second Bay Tradition

The themes are presented in detail in Chapter 2, illustrated with examples from campuses in the region and throughout the United States.

Property Types

College and university campuses have a different mix of property types than towns or cities. Most campuses have few commercial or industrial buildings. The mixed-use office-classroom-research laboratory building is the dominant property type on college and university campuses and has no real parallel in commercial research and development (lacking the teaching classrooms) or K-12 schools (lacking the more sophisticated research functions and with drastically reduced private offices).

Nearly all colleges and universities depend on adjacent residential neighborhoods and commercial districts for services, single-family homes and apartment housing. Most campuses do provide student housing in the form of dormitories. Dormitories and fraternity/sorority houses (which may be located on- or off-campus) are special types of "group quarters" (alongside military barracks, prisons, convents, monasteries and asylums), defined as a housing type dependent on communal kitchens. While Stanford does have single-family housing on its lands, leased to university faculty and staff, with few exceptions this housing is located in neighborhoods outside the study boundary. There is accordingly little discussion of single-family housing in this survey, compared to a survey of a town or city. The main focus is on academic buildings and student housing, which are the dominant property types in the study area.

The Stanford campus buildings were assigned property types. The following collegiate property types are present in the survey area:

Academic (AC) Property Types

- Teaching and Research (T/R) Buildings (faculty offices, classrooms, laboratories, libraries) AC-T/R
- Athletics and Physical Education (A/PE) Buildings (gymnasium, stadium, sports pavilion) AC- A/PE
- Museums (M)/Theaters (T)/Concert Halls(CH)/Places of Worship (PW) AC- M/T/ CH/PW
- Service (Ser) Buildings (student unions, bookstore, bank, child care, post office, fire and police station, non-academic staff offices, faculty club) AC- Ser
- Support (Sup) Buildings (shops, storage buildings, utility and infrastructure buildings) AC-Sup

Residential (Res) Buildings

- Multi-family (MF) Apartment Complexes Res-MF
- Group Quarters (GQ) – Houses (H) Res-GQ-H
- Group Quarters (GQ) – Dormitories (D) Res-GQ-D

There are a total of about 400 buildings constructed before 1975 within the study area; due to their utilitarian nature, some support buildings have been determined as a property type to be ineligible under our thematic context. (These structures are however documented in Appendix A.) All other collegiate property types – more than 300 buildings -- are evaluated in the survey.

Certain property types did not fit within the context of collegiate architecture: agricultural properties developed for non-academic uses, single-family residences, and a firehouse. These property types are common within the region but relatively rare on collegiate campuses. These properties are evaluated under other contexts and presented in Appendix C.

Some properties are internally complex, including multiple structures designed as a complex (for example the Main Quadrangle with its thirty-one buildings linked by arcades), or with attached additions made at a later date. These multi-structure properties are evaluated as a single property. Additions are identified as character-defining, non-character-defining but compatible, or non-character-defining and incompatible.

Many campus properties have changed uses over time: for example, single-family residences were converted to student group houses, and to academic offices. In several cases, dormitories were converted to academic use. These changes in use are summarized in the inventories; no support building excluded from the survey had been converted from another use. Each structure is evaluated as the property type for which it is currently used. The property types associated with each building are described on the Inventory Forms in Appendix A.

Thematic Focus on Campus Architecture

The survey team, in its review of prior evaluation efforts, noted a strong focus on the architectural quality of campus buildings. The themes developed for the survey similarly rely upon architecture to represent the accomplishments of the university and its members. However, three other criteria might have offered alternative themes for the survey. Criteria 1 and 2 were considered before making the decision to focus the theme on Criterion 3 (architecture). Criterion 4 was only relevant with regard to archaeological resources, which are beyond the scope of this survey.

The university is an engine of discovery and innovation: the language of research is correspondingly replete with "statements of significance" that promote the importance of nearly every research project and publication. A search for the word "significance" on Stanford's website produced 49,000 results, "significant" yielded 212,000 results.

Criterion 1 (Events)

To be significant in the context of a great research university, an event should stand out as an important event in local, state or national history. For example, Room 307 of Gilman Hall at UC Berkeley was listed on the National Register as the location where the element plutonium was discovered, leading to the development of the first atomic bomb.[3] Stanford's history was investigated for major events in history of comparable importance.[4] The following events appear to qualify as significant:

Table 1.2: Significant Events at Stanford and Corresponding Locations

Year	Event	Location	Note
1891	Opening Day, Stanford University	Inner Quadrangle	Extant.
1937	Invention of the klystron. Critical to air defense in World War II; cornerstone technology for microwave and nuclear physics research.	Outer Quadrangle (Department of Physics was located in Building 380)	Extant. Now occupied by Department of Mathematics.

Other significant events took place outside of the Survey Area, for example in the Stanford family home on Nob Hill in San Francisco, within the Stanford Hospital (located in the City of Palo Alto) or at the Stanford Linear Accelerator Center (SLAC) located in San Mateo County.

Criterion 2 (Persons)

Leland Stanford, Sr. and Jane Lathrop Stanford

Leland Stanford, Sr. (1824-1893) is a significant figure in United States history due to his successful career in business, his political career as California's Governor and U.S. Senator, and as co-founder of Stanford University. Jane Lathrop Stanford (1828-1905) was co-founder of the university and a philanthropist in her own right supporting the Free Kindergarten movement and other charitable endeavors aimed at improving the lives of women and children. Without her commitment and leadership, the university would not have been able to survive the prolonged legal contest over Leland Stanford, Sr.'s estate after his death. Properties in the Survey Area directly associated with Leland Stanford, Sr. and Mrs. Stanford are presented in the table below.

Table 1.3: Significant Persons at Stanford and Corresponding Properties

Construction date	Associated with	Building	Notes
1878	Leland Stanford, Sr.	Palo Alto Stock Farm Stable ("Red Barn")	Extant. Listed on the National Register of Historic Places.
1889	Leland Stanford, Sr.	Brick Stable	Extant.
1891 - 1906	Leland Stanford, Sr. and Jane L. Stanford	Main Quadrangle	Extant.
1891	Jane L. Stanford	Cantor Center (Stanford Museum)	Extant.
1891	Leland Stanford, Sr. and Jane L. Stanford	Encina Hall	Extant.
1903	Jane L. Stanford	Sapp Center (Old Chemistry)	Extant.

The period of significance for each property under Criterion 2 is the construction year until the death of Leland Stanford, Sr. (1893) or Mrs. Stanford (1905). Some other buildings in the Survey Area (support buildings and houses occupied by students or faculty) that were completed during the lifetimes of Leland Stanford, Sr. and Jane Lathrop Stanford have weaker association with the university founders and were not found eligible under Criterion 2.

Herbert Hoover and Lou Henry Hoover

America's 31st president Herbert Hoover (1874-1964) had a lasting association with Stanford University. A member of the founding class, Hoover maintained a home on the campus (the National Register listed Lou Henry Hoover House, outside the Survey Area) and was active in university governance and fundraising efforts. Hoover founded the Hoover Institution on War, Revolution and Peace and raised the funds for its signature tower. Hoover was also directly responsible for the campaign that funded the construction of the Men's and Women's Clubhouses at the Old Union. Mrs. Hoover (1874-1944), also a Stanford alumna, designed the Hoovers' campus home and was active in fundraising efforts as well.

Table 1.4: Buildings at Stanford associated with Herbert Hoover and Lou Henry Hoover

Construction date	Associated with	Building	Notes
1920	Herbert Hoover, Lou Henry Hoover	Lou Henry Hoover House (outside Survey Area)	Extant. Listed on the National Register of Historic Places.
1940	Herbert Hoover	Hoover Tower	Extant.
1915	Herbert Hoover	Old Union -Men's Clubhouse	Extant.
1915	Herbert Hoover, Lou Henry Hoover	Old Union - Women's Clubhouse	Extant.

Stanford Faculty

The university has employed more than 6,000 faculty members since its founding 125 years ago; nearly all of these scholars might be considered "significant" persons in their fields. Indeed, this is a basic requirement for promotion to the rank of Professor at Stanford: "In general, the evidence must show that the person being proposed for promotion is among the very best individuals in the field and not merely the best of a particular experience cohort in the field. The evaluation should address whether the candidate's performance is the kind of innovative, cutting-edge research on important questions in the field that breaks new ground, or changes the way the field is viewed, or broadens our understanding of the field, or opens up new methods or new areas of investigation, and thereby has (or is likely to have) the fundamental impact on the field that is expected from the very best scholars in the field" (Faculty Handbook).

At the rank of Full Professor every Stanford faculty member has received awards and other recognition for their work. A survey of a sample of current full professors yielded single individuals with more than 60 awards. Stanford University grants degrees in more than 70 fields. In the context of a research university such as Stanford, or the more than 70 other colleges and universities in the region, academic accomplishments and honors are not a distinguishing feature; accordingly, this survey concludes that buildings at Stanford are not eligible for listing on the National or California Registers for association with individual members of the faculty.

Discussion of eligibility under criteria 1 and 2 is included in the survey documents in Appendix A, and those properties with integrity to the period of significance associated with Leland Stanford, Sr., Jane Stanford, Herbert Hoover, Lou Henry Hoover, the opening of the Stanford campus, and the discovery of the klystron are found eligible under those criteria. As noted, however, themes based on Criterion 3 (architecture) are more productive and are the focus of the remainder of the survey effort that follows.

Organization of the Survey Document

The survey report has two major components: a narrative history of the development of the campus (Historic Setting), and development of the historic context describing the themes related to collegiate architecture in the San Francisco Bay Area and evaluating Stanford's academic buildings. The survey also presents documentation of all academic buildings built before 1975 in the Inventory (Appendix A), DPR forms for the significant properties (Appendix B), and a separate short inventory of non-collegiate properties (Appendix C). Professional qualifications are included in Appendix D. Following is a brief abstract of what each document contains.

Historic Setting

The Historic Setting presents the history of human settlement in the study area, beginning more than 7,000 years ago with Native American occupation. European exploration and colonization are also briefly discussed. These early eras are represented on the Stanford campus by archaeological deposits.

The American era (post 1848) saw the arrival of a series of ambitious pioneers whose primary interest was in developing California's agricultural economy. Leland Stanford, Sr. was among these pioneers and his Palo Alto Stock Farm remains an important icon in Stanford's identity ("The Farm"). A handful of agricultural properties associated with this era have survived on the campus lands.

The primary focus of the narrative history is on the development of the Stanford University campus after its founding in 1885. The collaboration between Frederick Law Olmsted, Leland and Jane Stanford, and the architectural firm of Shepley Rutan and Coolidge gave rise to the university's masterplan, commonly known as "the Olmsted Plan." The narrative presents the evolution of the Olmsted Plan over the next eight decades as university leadership changed, world events and natural disasters interceded, and technology and society become truly modern.

Historic Context and Evaluation Framework

Following the historic setting, this report presents the regional historic context: Collegiate Architecture in the San Francisco Bay Area. The document begins with a brief discussion of academic architecture at a broader national scale before focusing on the development of colleges and universities in the nine counties of the Bay Area. Each architectural theme, its associated styles, periods of significance and distinctive characteristics are presented and illustrated with buildings that exemplify the theme.

This document also describes how buildings at Stanford were compared to the themes and distinctive characteristics to identity those properties that best exemplify each theme, within this context. We identify collegiate buildings within the region listed on the National Register, California Register, or as local landmarks, and use these recognized historic properties as benchmarks for comparison. Stanford buildings that display an equivalent number of distinctive characteristics to the benchmarks are potential historic resources within the context. These potential resources are also subjected to analysis for integrity and other considerations.

Appendix A: Inventory of Academic Buildings

Appendix A provides a single-page summary for every academic structure – or unified building complex – built in the study area before 1975. Each record presents basic information for the property (name, age, architect, property type, photograph) and the reasons for its determination of eligibility/ineligibility for listing on the California Register under the survey's thematic context. This serves as the record document for the ineligible properties.

Appendix B: Significant Properties

For the subset of buildings found eligible as historic properties in Appendix A, a DPR Form is presented to provide more information on the condition of the property and its character-defining features. This record will be the basis for future consideration of alterations to the properties and to compatibility of new buildings within seventy-five feet of the eligible properties.

Appendix C: Inventory of Non-collegiate Properties

Appendix C provides inventory forms and DPR forms for three broad categories of non-collegiate properties: agricultural buildings, single-family homes and a firehouse.

Appendix D: Qualifications

Appendix D provides professional qualifications of the team members who prepared the survey document.

NOTES

[1] The evaluation reports were prepared by 16 qualified professionals; all were accepted by the County.

[2] See for example the Periods of Significance on the National Register Database at http://npgallery.nps.gov/nrhp/AdvancedSearch.

[3] National Register of Historic Places Nomination Form, viewed at https://npgallery.nps.gov/NRHP/AssetDetail?assetID=ce984ddb-4ed0-46c7-bf22-04df15461e02

[4] The following key reference was consulted for this analysis: *A Chronology of Stanford University and its Founders 1824 – 2000* by K. Bartholomew, C. Brinegar and R. Nilan. Stanford Historical Society 2001.

2: HISTORICAL SETTING

Overview

Stanford University owns 8,180 contiguous acres in northern Santa Clara and southern San Mateo counties. 4,017 acres of this land are located within unincorporated Santa Clara County; these Santa Clara County lands are governed by the county's Stanford Community Plan and the conditions of a General Use Permit.[1] Because Stanford is nearing completion of the academic square footage and housing authorized by the current 2000 General Use Permit, Stanford has applied for an updated General Use Permit: the proposed 2018 General Use Permit.

Stanford anticipates that the 2018 General Use Permit will continue to cover all of its lands in unincorporated Santa Clara County. However, the General Use Permit does not apply to land uses within those areas that are permitted as of right. The single-family and two-family residences in the faculty/staff subdivision are permitted as of right, and therefore are not included in the Study Area for this Historic Resources Survey. In addition, Stanford does not propose development under the 2018 General Use Permit in areas zoned for medium-density faculty and staff housing (the Peter Coutts, Pearce Mitchell, and Olmsted Terrace housing areas). Nor does Stanford propose development outside the Academic Growth Boundary or in Campus Open Space areas, including the Arboretum area and Stanford Golf Course. Thus, these lands also are not included in the Study Area.

This historic setting document provides historical background for the broader Stanford lands in unincorporated Santa Clara County, extending beyond the Study Area. The historic resource survey that follows is focused more narrowly on the properties within the Study Area, which includes the Academic Campus (including the Stanford Driving Range). Area. Thus the historic setting – lands governed by the Santa Clara County Community Plan for Stanford University -- is broader than the Survey Area, which is limited to areas where new development is proposed under the 2018 General Use Permit.

Many of the historic land uses that predate the opening of the university in 1891 cross modern jurisdictional boundaries. This chapter describes the physical development of the campus as a setting for a variety of building types, some now vanished or expressed only as archaeological deposits. When a building is first mentioned in the text, a superscript appears to indicate whether the building is extant,[Ext.] demolished,[Dem.] or partially demolished.[P.dem.] The primary focus is the evolution of the Stanford campus over 125 years as a collaboration between university leaders and talented architects, landscape architects and planners. But first the story begins at the beginning of human settlement in the area.

---

[1] Community Plan for Stanford University, County of Santa Clara. 2000. General Use Permit for Stanford University, County of Santa Clara, 2000. Viewed at https://www.sccgov.org/sites/dpd/Programs/Stanford/Pages/Docs.aspx, January 12, 2017.

Figure 2.1: Stanford Lands in Unincorporated Santa Clara County

Survey Area

Stanford Lands in Unincorporated Santa Clara County

Academic Growth Boundary

Stanford University

0 0.5 Miles

N

Stanford University, LBRE/LUEP
February 28. 2017

Ancestral Ohlone Settlements

The region in which Stanford is located was fully occupied by Native Americans prior to European colonization. Archaeological data suggests at least 7,000 years of continuous occupation by ancestors of tribal members affiliated with the Muwekma Tribe of Ohlone-Costanoan Indians.[2] Villages were located along freshwater streams, including Deer, Los Trancos, Matadero and San Francisquito creeks. Eight archaeological sites associated with Muwekma Ohlone ancestral villages have been recorded by Stanford archaeologists in Stanford's unincorporated Santa Clara County lands. All of the known village sites are located outside the Academic Growth Boundary. In addition to these village sites, other locations representing important Native American land use practices have been recorded as well, including stone tool raw material collection sites, petroglyphs and bedrock mortars, and sacred sites.

Native American settlement was severely affected by European colonization. However, the Muwekma Ohlone people continued to live on their ancestral lands for nearly a century after European contact. Early American era censuses include a number of "Indian" families living in or near the small farming towns of Mayfield, Portola Valley and Searsville, and archaeological remains associated with this later period may be present on Stanford lands. Ancestral Muwekma Ohlone people constructed a variety of structures: houses built by bending flexible willow wood frames into domes, which were covered in tule thatch; larger, semi-subterranean communal gathering houses with conical roofs covered in bark or thatch; shade structures for working or relaxing outdoors, and elevated graineries. There are no buildings or structures known to be associated with the Muwekma Ohlone Tribe still standing on Stanford's lands in unincorporated Santa Clara County, but the Tribe's marks on bedrock, including petroglyphs and bedrock mortars, have survived on the campus in areas outside the Academic Growth Boundary.

Stanford has an active archaeological site survey program and updates its site records regularly. Archaeological site locations are confidential under federal and state laws;[3] a map of recorded sites has been provided to the County of Santa Clara under separate cover and will be updated as new sites are discovered through the ongoing survey program.

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[2] Radiocarbon dating of sites in the vicinity supports continuous occupation from at least 3000 B.C. It is important to note that there may be descendants of these ancient sites who are not currently affiliated with the Muwekma Tribe. The Muwekma Tribe, however, is the only contemporary tribal government whose ancestral homelands include the Study Area.

[3] Section 304 of the National Historic Preservation Act; Section 9(a) of the Archaeological Resources Protection Act; Executive Order 13007; Section 6254.10 of the California Government Code.

Spanish Exploration and Settlement (1770 – 1821)

European explorers made sporadic visits to the California coast in the 16th and 17th centuries, trading with Native Californians mainly to re-supply their ships.[4] European colonization began in earnest in the 1770s with the establishment of Spanish institutions (twenty-one missions, four presidios and three pueblos) from San Diego to San Francisco, and Russian settlements to the north. An expedition led by Spanish captain Gaspar de Portola was the first European group to visit the area that later would become Stanford lands in unincorporated Santa Clara County, following San Francisquito Creek down from the Santa Cruz mountains scouting for good locations to establish mission settlements. While Portola found the San Francisquito Creek watershed an attractive site for settlement, the mission was established further south at Santa Clara in 1777.

Spanish colonization of the San Francisco Bay Area was organized through the institutions of the missions at San Francisco (Mission Dolores), Santa Clara and San Jose, the Pueblo of San Jose and the Presidio of San Francisco. Requiring land and labor to build the missions, the Spanish captured local Muwekma Ohlone people and brought them into mission compounds to be baptized and to work as unpaid laborers.[5] The Muwekma Ohlone resisted conquest and colonization for nearly three decades, raiding Spanish cattle, and attacking Spanish soldiers and converts. Decimated by introduced epidemic diseases (major epidemics occurred in 1795, 1802, and 1806), surviving Muwekma Ohlone populations on the peninsula began surrendering to the missions beginning as early as 1795. During the period of Spanish conquest and rule, the Stanford area was gradually incorporated into the cattle and sheep grazing territory of Mission Santa Clara, but no Spanish colonial settlements were established on Stanford lands in unincorporated Santa Clara County.

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[4] Iris H.G. Engstrand, “Seekers of the ‘Northern Mystery:’ European Exploration of California and the Pacific,” in *Contested Eden: California Before the Gold Rush* edited by Ramon Gutierrez and Richard J. Orsi. University of California Press. 1998. Pages 78-110.

[5] Randall Millken, A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1769-1810. Ballena Press. 1995. M. Kat Anderson, “The Collision of Worlds” in *Tending the Wild: Native American Knowledge and the Management of California’s Natural Resources*. University of California Press. 2005. Pages 62-124.

Mexican Land Grants and Ranchos (1822- 1846)

Mexico gained its independence from Spain in 1821 and the territory known as Alta California, extending as far north as Sonoma County, became part of the Republic of Mexico. The Mexican government encouraged settlement of Alta California by issuing land grants to military veterans. The powerful Franciscan missions lost control of most of their lands after 1833.[6] Some former mission lands were granted to Native Americans who had served in the Mexican army, like the Rancho Polsomi grant to Inigo Garcia in Mountain View near the present site of Moffett Field. Land grants in and near the area that later became Stanford lands in unincorporated Santa Clara County included Rancho Rincon de San Francisquito and Rancho El Corte de Madera. Most of these "ranchos" were dedicated to raising cattle for the hide and tallow trade. (Hides were exported to Spain to use in leather goods; tallow was used to make candles.)

Mexican colonists often constructed their homes using a mixture of clay and straw known as "adobe." Two adobe houses were located within the Academic Growth Boundary: the Buelna-Rodriguez Adobe[Dem.] north of the Stanford Golf Course and the Pena Adobe[Dem.] in the vicinity of Lagunita Reservoir. The Pena Adobe site has not been located and may have been completely destroyed by the building of Lagunita Dam and Reservoir[Ext.] in the 1880s. The Buelna-Rodriguez Adobe stood as a ruin until the 1950s. Archaeological deposits have been recorded in the vicinity of the Buelna-Rodriguez Adobe.

Buelna-Rodriguez Adobe ruin.[7]

[6] Steven W. Hackel, "Land, Labor and Production: The Colonial Economy of Spanish and Mexican California." In Gutierrez and Orsi, pages 111-146.

[7] Source: Stanford University Archives, Reference ID No. 00001528-1587.

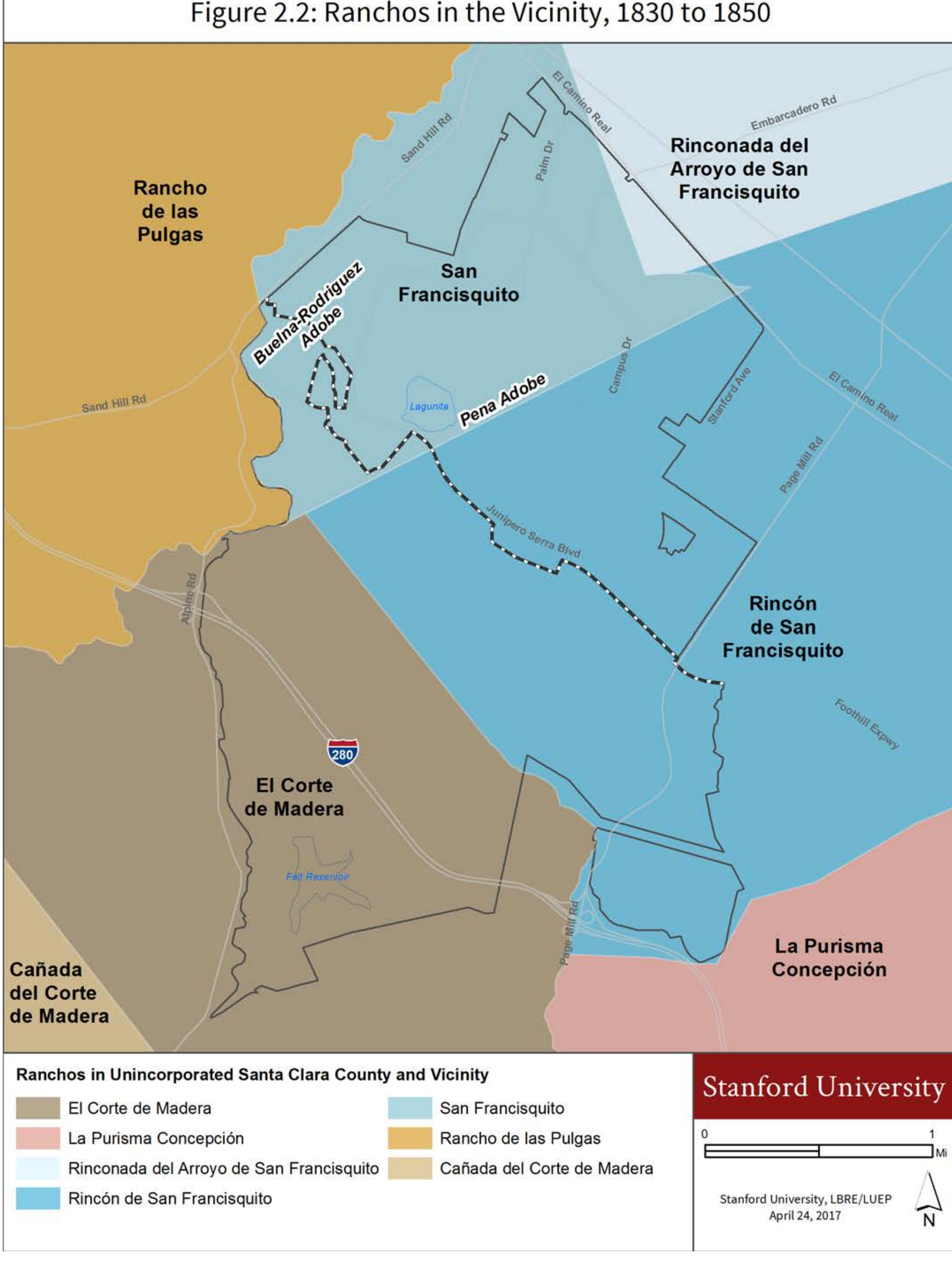
Figure 2.2: Ranchos in the Vicinity, 1830 to 1850
Rancho de las Pulgas
San Francisquito
Rinconada del Arroyo de San Francisquito
Rincón de San Francisquito
El Corte de Madera
Cañada del Corte de Madera
La Purisma Concepción
Buelna-Rodriguez Adobe
Pena Adobe
Lagunita
Felt Reservoir
El Camino Real
Embarcadero Rd
Sand Hill Rd
Palm Dr
Campus Dr
Stanford Ave
Page Mill Rd
Junipero Serra Blvd
Foothill Expwy
Alpine Rd
280
Ranchos in Unincorporated Santa Clara County and Vicinity
El Corte de Madera
La Purisma Concepción
Rinconada del Arroyo de San Francisquito
Rincón de San Francisquito
San Francisquito
Rancho de las Pulgas
Cañada del Corte de Madera
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Stanford University, LBRE/LUEP
April 24, 2017
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Americanization of Alta California

The Americanization of Alta California began as early as 1796, when the flag of Spain still fluttered above Spanish settlements stretching along the coast. Over the ensuing half century, Americans ventured to California in increasing numbers, both by land and by sea, in search of sea-otter furs, beaver pelts, hides and tallow, and later land and gold. Some of these adventurers took up residence, swelling the population of the territory to perhaps as many as 15,000 by the summer of 1846.[8] The war with Mexico led American forces west and they took command following the short-lived Bear Flag Revolt. California became part of the United States with the signing of the Treaty of Guadalupe Hidalgo in February 1848. The discovery of gold at Sutter's Mill the month before precipitated a world-wide rush of Argonauts, raising the California population to more than 90,000 inhabitants by the summer of 1850.[9] Several months later, on 9 September 1850, California became the thirty-first state in the American union.

Gold fever brought countless Americans west, but as the Argonauts quickly discovered, mining was laborious work and though some struck it rich with lucky finds, most did not. Many returned home, but others turned to agriculture and numerous other trades. The Franciscan missionaries had built outposts notable for vast grain fields, orchards, and vineyards. Following secularization in the 1830s, most of the mission lands were granted to settlers, giving rise to the cattle industry and leaving the accomplishments of the Franciscans largely in decay. American agriculture during the early years after the treaty settlement was modeled on earlier Hispanic efforts and relied on grain farming, with additional forays into more diverse fields, notably row crops, orchards, vineyards and dairying.[10]

Pioneer Settlers

Delevan Hoag

The earliest known settler to farm where Leland Stanford's Palo Alto estate would rise was Delavan Hoag. Hoag arrived in San Francisco in August of 1854. He set out for Santa Clara County and purchased land along San Francisquito Creek from David Adams, who had acquired his property from "Uncle Jim" Otterson.[11] Hoag farmed his property, which amounted to 930 acres (see **Figure 2.3**). The Agricultural Census showed the farm valued at $40,000, an unusually large figure for the area. Hoag kept twenty-five milk cows, which produced two thousand pounds of butter in 1870. He also owned thirty horses, sixty beef cattle, and sixty-five swine. Some of the land was planted to wheat, but most of it to barley, a general fodder crop, which had a significantly higher yield than wheat and had surpassed it as a cultivated grain by the end of the 1870s in Santa Clara County.[12] Leland Stanford purchased Hoag's acreage in August 1876 for the headquarters of his Trotting Farm.[13] None of the Hoag Farm buildings have survived.

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[8] Robert Glass Cleland and Osgood Hardy, *March of Industry* (Los Angeles: Powell Publishing Co., 1929), 35.

[9] Historical Census Populations of Counties and Incorporated Cities in California, 1850-2010, http://www.dof.ca.gov/research/demographic/reports_papers/index.php, (accessed 29 March 2016).

[10] Rodman Paul, "The Beginnings of Agriculture in California: Innovation *Versus* Continuity," *Essays and Assays: California History Reconsidered*, ed. George H. Knoles (San Francisco: California Historical Society, 1973), 30.

[11] *History of Santa Clara County,* California (San Francisco: Alley, Bowen & Co., 1881), 582, 259.

[12] U.S. Census, Non-Population Schedule, 1870, Fremont Township, Santa Clara County, California, 3-4, Ancestry.com; and Jan Otto Marius Broek, *Santa Clara Valley, California: A Study in Landscape Changes* (Utrecht: Uitgevers, 1932), 61.

[13] U.S. Census, Tenth Census of the United States, Fremont Township, Santa Clara County, California, 1880, Roll T-9, page 44, Ancestry.com; and *History of Santa Clara County*, 582.

Figure 2.3: Pioneer Landowners in the Study Area, circa 1870

GORDON
HOAG
COUTTS
COON
REYNOLDS
FELT

El Camino Real
Embarcadero Rd
Sand Hill Rd
Palm Dr
Campus Dr
Stanford Ave
Lagunita
Page Mill Rd
Junipero Serra Blvd
Alpine Rd
280
Foothill Expwy
Felt Reservoir

Stanford Lands in Unincorporated Santa Clara County
Academic Growth Boundary

Stanford University

0 0.5 Miles

N

Stanford University, LBRE/LUEP
February 22. 2017

Hoag's home and farm buildings, incorporated into the Stanford Trotting Farm

William Reynolds

In 1857, several years after Hoag purchased land, William Reynolds acquired some 1,500 acres, lying south of San Francisquito Creek and east of Los Trancos Creek, from the Mexican grantee of the Rancho El Corte De Madera, Máximo Martinez. Reynolds appears to have been possessed of significant wealth, and his farm was laid out not only for profit but for pleasure, largely differentiating him from his neighbor Hoag. According to the *Alta California*, Reynolds had divided his land into four fields, "three for pasture, and one for cultivation under grain and hay." The grain field was, in all likelihood, planted to wheat, with possibly some acreage devoted to barley. Water, drawn from natural springs, was piped to reservoirs scattered about the farm.

Reynolds, it is said, was devoted to his cattle and horses. The *Alta California* credited him with introducing the first Devon bull, Narraganset, to California, and his fine horses, particularly Vermont trotters, were exhibited at San Jose and Sacramento. Under the present management, the *Alta California* declared, Reynold's Farm "bids fair to become . . . one of the 'crack' horse and cattle-breeding establishment of [the] State."[14] No sites or structures associated with Reynolds have been identified.

[14] U.S. Department of Commerce, Bureau of the Census, Eighth Census of the United States, 1860, Fremont Township, Santa Clara County, California, M653, roll 65, page 213, National Archives and Records Administration, Ancestry.com; and Máximo Martinez to William Reynolds, 2 August 1862, deed, Santa Clara County Recorder's Office, San Jose; and "Reynolds' Farm," *Alta California* (30 September 1860).

George Gordon

Reynolds' interests and improvements were mirrored to an extent by San Francisco real estate magnate George Gordon, who in 1863 acquired slightly more than 624 acres that ran southwest along San Francisquito Creek from the County Road. Gordon built an impressive country retreat named Mayfield Grange in lands later annexed to the City of Palo Alto.[15] A portion of his property lies within the unincorporated Santa Clara County lands in the Stanford Arboretum.

Little is known about the farm, but it is evident that Gordon planted "a large space of ground" to sugar beets, part of a trial to establish the possibility of growing the plant in California. He also set out an extensive vineyard of "foreign grapes of his own selection from which he expected to make a superior quality of wine."[16]

After Mr. and Mrs. Gordon died, the property passed on to Gordon's brother-in-law, John Clark. Leland Stanford acquired the property from Clark's widow in June 1876. By that time the San Francisco to San Jose Railroad was complete and the property was conveniently close to the Menlo Park Station. The Stanford family occupied and improved the Gordon house and enlarged its gardens, orchards and vineyard. One structure, a carriage house, survives from the Gordon estate. It is located in the City of Palo Alto.

Job J. Felt

Job Felt, who purchased the Reynolds Farm, was a Forty-niner, one of the many Americans who rushed west when news of the discovery of gold in California electrified the nation. Despite his acquisition of the Reynolds Farm, Felt continued to maintain his Rincon Hill address in San Francisco as his primary residence, leaving the management of the property to a younger brother, Jonathan. Like other San Franciscans with country homes, he and his family would have spent lengthy periods at their rural retreat, taking the train to Menlo Park and then proceeding by carriage to Felt Ranch.

The Felt house (photo courtesy Portola Valley Historical Archives)

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[15] Once the San Francisco to San Jose Railroad line was completed in 1864 numerous wealthy people who lived in San Francisco created summer retreat properties along the San Francisco Peninsula to escape the prevalent dank summer fogs. Most of the estates were large in acreage—300 acres and up—and combined ornamental landscaping with agricultural, viticultural, horticultural and dairying pursuits.

[16] Sacramento Daily Union (12 May 1864); and Albert Shumate, The California of George Gordon, and the 1849 Sea Voyages of His California Association: A San Francisco Pioneer Rescued from the Legend of Gertrude Atherton's First Novel (Glendale, CA: Arthur H. Clark Co., 1876), 181.

Felt Ranch was one of the largest and most important agricultural properties in an area known as Fremont Township.[17] In 1879 Felt testified that he "had houses, barns, etc., and the stock" and that he continued to use the pipe laid by William Reynolds to provide water "for his house and for his animals." His cattle and horses ranged in number from fifty to three hundred head, and he raised wheat and some alfalfa. He also leased a portion of his land at times, with one or two fields used by lessees for raising grain and pasturing stock.[18] In the spring of 1881 he expanded the scope of his interests as a gentleman farmer into viticulture, planting some twenty-five acres along Los Trancos Creek to Pinot and Charbono cuttings, which two years later bore "a fair crop of very fine grapes," according to the *San Francisco Merchant*.[19] Felt built a reservoir on his property, later much enlarged by Stanford University, but still known today as Felt Reservoir.

Felt's estate was purchased by the Stanfords in 1887. Mrs. Stanford later leased the property to local farmers. The house was torn down shortly after the 1906 earthquake and no buildings associated with Felt Ranch have survived. Archaeological deposits associated with the estate have been recorded outside of the Academic Growth Boundary.

Henry P. Coon

In March 1870 Felt sold 300 acres at the confluence of the San Francisquito and Los Trancos Creeks to a former mayor of San Francisco, Henry P. Coon. In the spring of 1872 Coon began to lay out his farm, which like those of Gordon, Reynolds, and Felt was more a country estate than a working farm. Coon himself stated that he lived in the nearby village of Mayfield in the summer of 1872, while his house was under construction, driving his buggy up to view the builder's progress.[20] He continued to work in San Francisco for some years, taking the train from Menlo Park station. Coon's three hundred acres were given over chiefly to the raising of grain and hay, though two fields were enclosed as pastures for horses, and an orchard was set out and a small vineyard planted.[21] In 1873 he added an additional twenty acres to the southern edge of his farm, purchasing the land from J. J. Felt. In June 1886, a year and a half after Coon's death, his farm was purchased by neighbor Joseph Macdonough, who in turn sold it for $50,000 to Leland Stanford.[22]

The Coon house, Adelante Villa, was briefly used as a boarding house for students (Herbert Hoover lived there when he first arrived on campus in 1891), and then by the Faculty Women's Club and other campus organizations. The house was demolished sometime after the 1906 earthquake. Archaeological deposits and remnants of Coon's fish pond survive on the site today, which is outside the Academic Growth Boundary.

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[17] The US Public Lands System established a 6-by-6 mile square grid system of "townships" across the United States to facilitate land surveying. The survey was initiated in 1785. https://nationalmap.gov/small_scale/a_plss.html

[18] J. J. Felt, testimony, In the Supreme Court, 195-96; Alta California (30 April 1872) and Pacific Rural Press 5 (25 January 1873), 61.

[19] Fremont Township, Santa Clara County, California, Federal Census Non-Population Schedules of the United States, 1880, National Archives and Records Administration, online database, ancestry.com; and *San Francisco Merchant* (12 October 1883), 2.

[20] Mayfield was a village founded in 1855 and centered at today's California Avenue and El Camino Real; it was annexed by Palo Alto in 1925. J. J. Felt to H. P. Coon (30 March 1870), deeds, bk. 17:201; and Bailey Millard, *History of the San Francisco Bay Region*, (Chicago: American Historical Society, 1924) 2:41-42; and *Sacramento Union* (4 June 1872); and H. P. Coon, testimony, *In the Supreme Court*, 258.

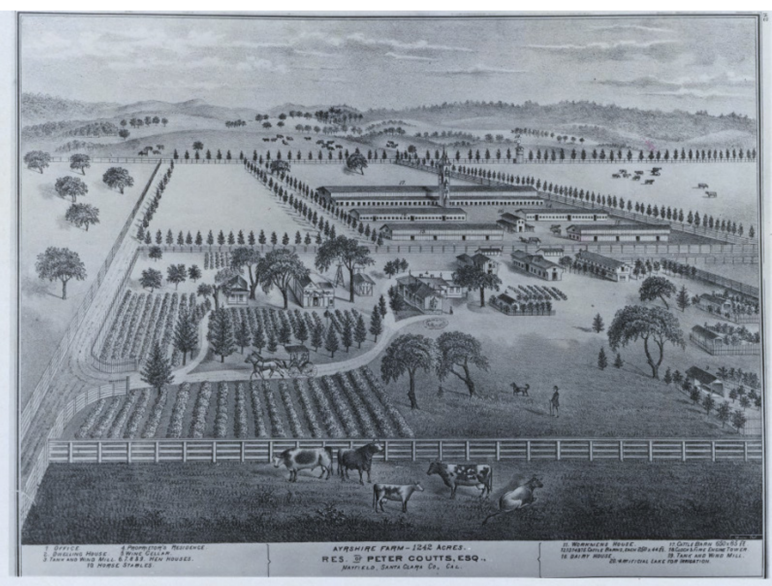
[21] [Coon], *Life of Henry P. Coon*, 13. Last Will and Testament of Henry P. Coon (16 November 1877), holographic copy, box 8, folder 10, Stanford Ranches and Land Records, 1838-1896, SC0003, SUA, Stanford University (hereafter; Lucy Fletcher Brown, "Annex Pioneers," *Radcliffe Quarterly* 24 (November 1940): 14; and Jane L. Stanford and Antonio George, lease, 2 January 1896, box 23, folder [1], Palo Alto Stock Farm Records, 1875-1913, SC0006, SUA.

[22] *Alta California* (5 December 1884); and Norman Tutorow, *The Governor: The Life and Legacy of Leland Stanford, a California Colossus* (Spokane, WA: Arthur H. Clark Co., 2004) 1:422-23, 429.

Peter Coutts

Adjoining Felt Ranch on the north was Ayrshire Farm, assembled through four purchases over the years 1875 to 1876 by Peter Coutts, the pseudonym adopted by the Frenchman Jean-Baptiste Paulin Caperon after seeking refuge in the United States. Arriving in San Francisco in 1874, Coutts began searching for a place to settle his family permanently. By spring of the following year he had selected the fertile plain west of the village of Mayfield as an ideal location to establish a grand country estate. In three purchases in mid-April he acquired 1,242 contiguous acres, part of two former ranchos, Rincón de San Francisquito and Rinconada del Arroyo de San Francisquito. He laid out a farmyard close by a dusty lane that would later become known as Coutts Avenue (modern-day Stanford Avenue), and under his direction a force of workmen constructed a handsome house and an assortment of outbuildings, as well as an extensive waterworks that included, a half mile or so to the southwest, a stone reservoir capable of holding five million gallons of water. At the outset of autumn 1876 Coutts purchased a fourth parcel, enlarging his domain to 1,402 acres.[23]

Sometime earlier in the year, a full-page lithograph depicting his Ayrshire Farm appeared in the *Historical Atlas Map of Santa Clara County, California*, which described the property as “almost exclusively devoted to dairying and viniculture.” The proprietor’s “herd of ‘Ayrshires’ and ‘Holsteins’ cattle,” asserted the volume in its brief review, is the finest in the State, many of them coming directly from the best herds in Europe.” Coutts was visited at his farm in 1878 by Flora Haines Apponyi, while she gathered material for her book *The Libraries of California*. Coutts, the sophisticated young author admiringly wrote, was “his own engineer, architect, draughtsman, and general superintendent.” He was, moreover, in the fuller sense of his place in the world and his pursuits, “a gentleman of means and culture, devoted to scientific agriculture, the improvement of the breed of domestic animals, and the collection of rare books.”[24]



Lithograph of the Coutt’s Estate, 1876

Even while Coutts was distinguishing himself as a dairyman, his restless energy led him to a new enthusiasm, the breeding and training of race horses, which in time came to eclipse his former interest. As early as June 1877, Coutts

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[23] T*he San Francisco Directory* (San Francisco: Henry G. Langley, 1875), 213; and Caperon, “History of Jean-Baptiste Paulin Caperon,” 2-3; and Thompson & West, *Historical Atlas Map of Santa Clara County, California* (1876; repr., San Jose, CA: Smith & McKay Printing Co., 1973), 15¾; and Bilson, “Peter Coutts,” 1.

[24] Flora Haines Apponyi, *The Libraries of California* (San Francisco: A. L. Bancroft Co., 1878), 76, 75.

took a broodmare for the service of Stanford's great Standardbred stud, Electioneer, paying Stanford a fee of $100. Over the following years he continued to make use of his neighbor's stallions in the breeding of horses for both harness and flat racing.[25] In March 1880 he began construction of "a first-class mile track" at his farm and announced his intention to cross the Atlantic "to procure several thousand dollars' worth of the best blooded horses in Europe." It was reported that "the animals selected will be a variety of the most valuable strains and all for breeding purposes, making a most desirable addition to the horse stock of the State."[26]

In late spring 1881, Peter Coutts and his family left Ayrshire Farm for what was thought would be a relatively brief trip to England and Europe. In September 1882 his ranch superintendent received a letter from Ignatz Steinhart of the Anglo-California Bank, informing him that he had sold that day, "upon instructions received from Mr. P. Coutts from London" the entire estate, including "all the personal property thereon, without reserve to Gov. Leland Stanford."[27] Stanford paid $140,000 for Coutts's land, building, and stock.

View of the Coutt's farm with his library ("Tower House") to the left. The tower would lose its steeple in the 1906 earthquake. (Photo courtesy Stanford University Archives)

The Coutts house (Escondite Cottage), his library (Tower House), and his Buttery have survived in good condition and are located on Stanford lands within the Academic Growth Boundary. In addition, the ruins of "Frenchman's Lake" are located in the faculty housing area and a brick water tower ("Frenchman's Tower") has survived along Matadero Creek, outside the Academic Growth Boundary.

The handful of structures associated with Peter Coutts are the only surviving structures from the Early Pioneer era within the Academic Growth Boundary. Archaeological deposits have been recorded for sites associated with Job J. Felt, Henry P. Coon, and the Buelna-Rodgriguez family.

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[25] Untitled ledger of stud fee payments, 1877-81, pp. 22-23, box 25, Palo Alto Stock Farm Records, SC0006, SUA.

[26] *Pacific Rural Press*, 19 (20 March 1880), 180.

[27] Ignatz Steinhart to Cornelius Van Buren (26 September 1882), all box 1, folder 1, Peter Coutts Collection, 1881-1956, SC0202, SUA.

Leland Stanford's Palo Alto Stock Farm

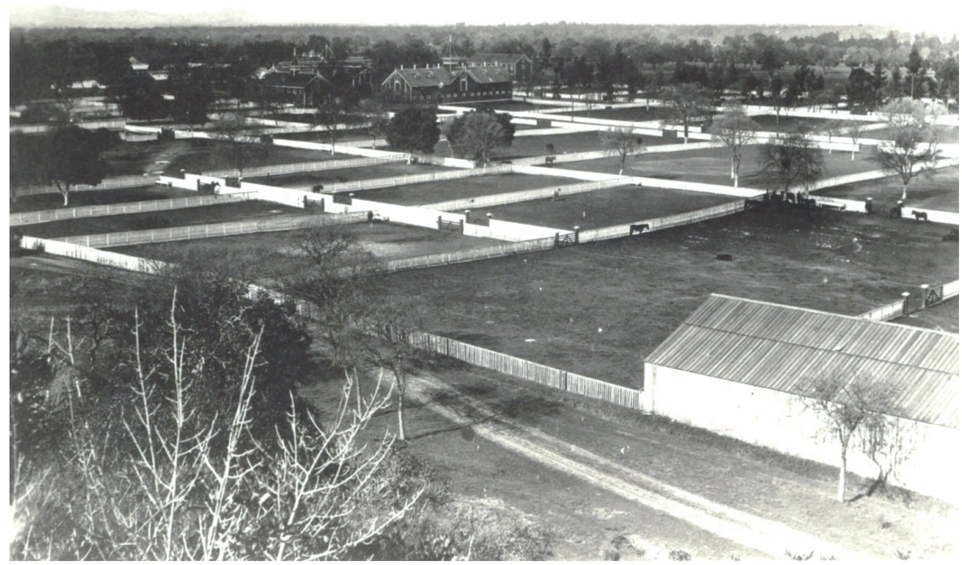
Stanford's Vision

Leland and Jane Stanford made a multi-million dollar fortune building and investing in the first successful transcontinental railroad which was completed in 1868.[28] They moved from Sacramento--Leland Stanford had served as California's first Republican governor during the Civil War--to San Francisco in 1873 and began building an ostentatious Gilded-Age mansion on Nob Hill in San Francisco. They also began purchasing properties in both Santa Clara and San Mateo counties that ultimately formed their country estate in June 1876. Stanford maintained a deep interest in agriculture throughout his life, and the development of the Palo Alto Farm afforded him ample opportunity to practice agriculture on the highest level. As was noted a few years after acquiring Gordon's estate, "Governor Stanford seems to have had a double object in view in the location of his farm, one being the formation of a country residence and the other being his propensity to indulge in useful and experimental farming and the rearing and training of blooded turf stock." The grounds had been substantially improved since Gordon's day. A rolling lawn surrounded the house, and statuary was "scattered negligently here and there."

The Stanford residence at the Palo Alto Stock Farm

[28] Stanford had served as California's governor during the Civil War (1861-1865) from 1862-1863; the California governorship was a biennial term at that time and was later changed to four years. Stanford was elected a United States senator in 1885 and served in the Senate until his death in 1893. He answered to either Governor or Senator Stanford in the latter years of his life. When he was in residence in California, the use of Governor as an honorific was most commonly used.

A thousand or so acres of grain had been planted, chiefly wheat and barley, along with 118 acres of alfalfa. Stanford was “an enthusiast in experimental farming,” and it was his intention to use “his magnificent tract of land in testing some of the theories advanced by the leading minds and experimenting with different varieties of grain and fruits, to see what can be learned in their cultivation.” A mile or so to the southwest, a significant start had been made on the stock farm at the former Hoag Farm, with a large stable, a trotting track, and ultimately 700 horses, “some of them among the celebrated flyers of the day.”[29]



Palo Alto Farm Trotting Department, ca. 1890

In time, the Palo Alto Farm was broken into four departments: Trotting Horse, Running Horse, Farm, and House and Grounds, of which the Trotting Horse department was easily the best known. The House and Grounds section comprised 299 acres of the former Gordon estate and on it “more money has been expended than anywhere else.” Stanford intended the grounds to contain “every known species of tree that would grow in this climate,” and in 1884 alone, 12,000 trees were planted. A mile and a half to the east, on Peter Coutts’s old Ayrshire Farm, was the Running Farm, its stock consisting of two stallions, thirty brood mares, and some twenty colts. Much of the Palo Alto Farm was given over to pasturage at the time, with some 2,500 acres planted to wheat, barley, and rye, as well as to hay. It was farm superintendent’s intention to increase the acreage plowed by 4,000 to 4,500 acres the following year.[30]

Leland Stanford died in June 1893, a year and a half after Stanford University opened its doors to the first class of students. His estate was tied up in probate court as the country descended into the economic turmoil of the Panic of 1893. The university entered into what the first registrar, Orrin Leslie Elliott, characterized as “a period of hardship and grave peril.” “The farms,” as he noted, “were producing a great deal less than they cost,” and, accordingly, much of the land controlled by the Farming department was leased to farmers and ranchers.[31]

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[29] “Palo Alto,” clipping from unidentified newspaper, ca. 1878, from Stanford Scrapbooks, box 4, folder 8, Dorothy Regnery Papers, 1980-1991, M0479, SUA.

[30] Unidentified newspaper clipping [*San Francisco Post*?], 1886, vol. 20, Stanford Family Scrapbooks, 1865-1894, SC0033F, SUA.

[31] Tutorow, *The Governor*, 735, 906-07; and Orrin Leslie Elliott, *Stanford University: The First Twenty-Five Years* (Sanford: Stanford University Press, 1937), 255, 258.

Agricultural Leaseholds in Support of the University

As early as 1885, Leland Stanford had entered into agreements with farmers established on property he had acquired, typically permitting use of a house and a small parcel of surrounding land for an annual rent. Early contracts were made between the widowed Jane Stanford, as surviving Founder of the Leland Stanford Junior University, and tenant farmers. Leases were written for a period of a year, with the right of renewal for subsequent years. Contracts typically mentioned only the portion of the harvest that went to Jane Stanford, with no mention of the actual crops. For the most part, it would appear that oat, wheat and barley hay were the chief crops, though some lessees also raised barley and oat grain. On a few leases, Jane Stanford also reserved the straw, which usually was used as bedding for farm animals. After Mrs. Stanford's death in 1905 the university continued to lease out vast portions of campus lands for agricultural purposes, with the Board of Trustees assuming responsibility for how the land was used.

The remnants of Stanford's farming operations include the National Register listed Palo Alto Stock Farm Stable[Ext.] ("Red Barn"), the adjacent Brick Stable[Ext.], and Superintendent's House.[Ext.] All the agricultural properties within the Study Area (inside the Academic Growth Boundary) are documented and evaluated in Appendix C.

Founding of the University (1884-1893)

The Stanford family in 1880, four years before Leland Stanford, Junior's death

From Tragedy to Inspiration

Leland and Jane Stanford lost their only son, Leland Stanford, Junior, at the age of fifteen when he died of typhoid fever while the family was traveling abroad in Florence, Italy, on 13 March 1884. The Stanfords vowed to use their vast wealth to create a fitting memorial for their child. They considered several options before settling upon a university and a museum.

Leland Stanford wanted to create a co-educational and nonsectarian school that focused on "the highest education," but rather than the classical education typically offered at the time, he wanted to provide "a practical education" that prepared young men and women "to go out into the world equipped for useful labor, with such knowledge as will be of service to them in the battle for bread."[32] Stanford was particularly impressed with the Massachusetts Institute of Technology's president, General Francis M. Walker, who within three years had transformed a bankrupt school into an expanded "model of technical education."[33] Governor and Mrs. Stanford offered the presidency of their proposed university to Walker repeatedly but to no avail. Walker did, however, agree to consult with the Stanfords and would ultimately recommend both Frederick Law Olmsted as landscape architect and the firm of Shepley, Rutan and Coolidge as architects. While the subsequent design is referred to as "the Olmsted Plan," the result was a collaborative process that in the end better reflected Stanford's strongly held ideas than Olmsted's early proposals.

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[32] San Francisco *Argonaut* (21 June 1884), reprinted in Elliott, *Stanford University*, 17-18; and Elliott, *Stanford University*, 132-136; and Karen Bartholomew, Claude Brinegar and Roxanne Nilan, *A Chronology of Stanford University and its Founders, 1824-2000* (Stanford: Stanford Historical Society, 2001), 32, 61; and Ellen Coit Elliott, *It Happened This Way: American Scene* (Stanford, Stanford University Press, 1940), 207.

[33] Paul V. Turner, "The Collaborative Design of Stanford University," in Paul V. Turner, Marcia E. Vetrocq and Karen Weitze, *The Founders and the Architects: The Design of Stanford University* (Stanford: Department of Art, 1976), 21.

General and Mrs. Walker traveled to the Stanfords' Palo Alto estate in late August 1885. Shortly after this three-week visit, the San Francisco *Chronicle* reported: "The buildings at Palo Alto will be constructed on the general plan of the parallelogram," and "The plan of the buildings will be such as to admit of expansions and additions."[34] In other words, the two fundamental principles of the Olmsted Plan—the use of the quadrangular form and the intent to allow for orderly expansion—were already in place well before Stanford contacted Olmsted.

The memorial aspect of the university was of key significance to both Governor and Mrs. Stanford and would drive most of the decisions they made in regards to both the founding and the design of the university. Leland and Jane Stanford were equal co-founders of the institution and were, according to the terms of the November 1885 Founding Grant, to retain the ability to modify the grant and to also retain "the right to exercise all the functions, powers and duties of the Trustees" as long as they lived.[35]

The Stanfords and Frederick Law Olmsted

Leland Stanford contacted landscape architect Frederick Law Olmsted early in 1886. Olmsted at the time had already earned a national reputation for transforming cities by designing parks for them, the best known being Central Park in New York City.[36] His style, usually described as "naturalistic" or "picturesque," eschewed the formal. He had also designed several college campuses, starting in 1865 with the College of California (later the University of California, Berkeley). Although his plan for UC Berkeley was not realized, it reflected Olmsted's thinking that a college campus was a community that required not only educational buildings, but also housing for both faculty and students "in an integrated landscape that adapted to the climate and soils of the region."[37] He believed that students were better served living in nearby small cottages or houses, not in large dormitories or off-site boarding houses.

By June 1886 Olmsted had decided to accept the job of planning the Stanford campus, fully intending to deal "with California conditions in another spirit from that which is usual, growing out of admiration for English gardening."[38] He may have been persuaded by the unprecedented $10,000 fee Stanford paid him; Olmsted had a large family to support and was always concerned about having adequate funds.[39] But he was also excited by the challenge of creating a campus landscape appropriate to the climate, and perhaps hoped to see his plans for the Berkeley campus realized

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[34] San Francisco *Chronicle* (10 November 1885), reprinted in Turner, *The Founders and the Architects*, 22.

[35] The Board of Trustees, created in November 1885, would not actively assume their roles until 1 June 1903, when Jane Stanford chose to relinquish her role as founder. By that time, only five of the original twenty-four men were still active. The Founding Grant was amended in 1899 to reduce the number to fifteen. Jane Stanford was elected as a member of the board and, on 6 July 1903, was made president of the board. She retained this role until her death on 28 February 1905. Elliott, *Stanford University*, 466; and Bartholomew, *Chronology*, 38.

[36] Olmsted was responsible for also elevating the role of landscape gardener into two new professions, that of landscape architect and landscape contractor. He was self-educated in landscape architecture, observing while traveling throughout much of America, England and Europe and writing about his experiences. He believed in a design aesthetic that would evoke an immediate and visceral response from the viewer.

[37] Ethan Carr, Amanda Gagel and Michael Shapiro, *The Papers of Frederick Law Olmsted: The Boston Years, 1882-1890*, Volume VIII (Baltimore: Johns Hopkins University Press, 2013), 23.

[38] Frederick Law Olmsted to Charles Eliot (8 June 1886), Architecture of Stanford University, 1886-1937, SC125, B.2, F.1, SUA.

[39] Henry Codman, an apprentice at the Olmsted firm who would make partner in 1889, as well as being a close family friend, urged a reluctant Olmsted to ask for the large fee, which he did. Stanford readily agreed and sealed the deal with a hand shake, forgoing a written contract with Olmsted's firm. Laura Wood Roper, *FLO: A Biography of Frederick Law Olmsted* (Baltimore: John Hopkins University Press, 1973), 406-407, 414.

instead at the Stanford campus. Henry Sargent Codman, a particularly gifted apprentice who had a strong background in formal design, also contributed to the Stanford campus design and traveled often to Palo Alto in place of Olmsted.

As Olmsted began grappling with Stanford's quite different ideas concerning landscaping, Stanford himself was telling the newspapers that he would be the final arbiter on the design of the university: "…the fundamental idea for building [will] be his own" and "Senator Stanford said he proposed to be his own architect in the matter of outlining the buildings. He would take suggestions from all quarters, but he himself would finally decide the form of the structures."[40]

One newspaper article noted that the Palo Alto site was distinctive for its "Spanishness," as opposed to the "Englishness" of Oxford or Cambridge.[41] While Olmsted was focused on respecting the California landscape, Stanford maintained he wanted California-style architecture. He told the San Francisco *Examiner*: "When I suggested to Mr. Olmsted an adaptation of the adobe building of California with some higher form of architecture, he was greatly pleased with the idea…creating for the first time an architecture distinctively Californian in character."[42] This style would typically be referred to interchangeably in the newspapers as Spanish, Moorish and Mission. The referenced adobe structures were the twenty-one missions built in California by the Spanish Franciscan order of Catholic priests between 1769 and 1833 when California was part of Spain's colonial empire. Charles H. Rutan of Shepley Rutan and Coolidge would later write about Stanford University: "With reference to the style of architecture, we have always called it Mission Style. The details are Romanesque."[43]

Olmsted's preference for a naturalistic design that would allow smaller individual buildings to be scattered about the foothills amid trees and shrubbery prompted him to lobby for a site near or on the foothills that lay on the southeast edge of the Palo Alto estate. The Stanfords wanted a formal and structured set of buildings on the plain between their house and stables. Intent on expressing the memorial nature of the design, they wanted impressive buildings that were suitably grand and monumental in scale. By the end of September 1886, Leland Stanford had decided firmly upon the plain, which would also better allow for the systematic expansion he required. Olmsted wrote: "The site is settled at last, not as I had hoped…"[44]

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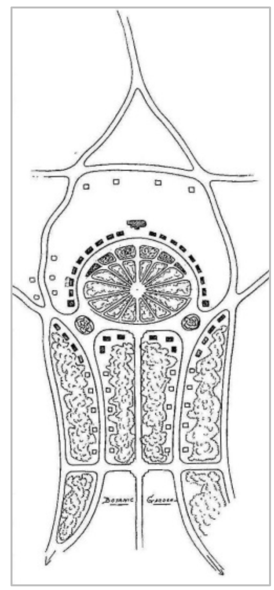
[40] *Evening Post* (21 June 1886); and unidentified newspaper clipping (20 June 1886), reprinted in Turner, "The Collaborative Design," 22.

[41] *Record Union* newspaper clipping (3 July 1886), reprinted in Turner, "The Collaborative Design," 24.

[42] San Francisco *Examiner* (28 April 1887), reprinted in Turner, "The Collaborative Design," 66.

[43] Charles H. Rutan to John K. Branner (30 June 1910), 2, SC125, B.1, F.5, SUA.

[44] Frederick Law Olmsted to John Charles Olmsted (27 September 1886), 1, SC125, B.2, F.1, SUA.



The first Olmsted conception of the campus, dated 26 September 1886

Walker and Olmsted, who conferred with each other once they returned to Boston, sent reports to the Stanfords summarizing their recommendations in November 1886. Walker recommended one-story academic buildings "made of massive rough stone, connected by an arcade" that would exhibit "proper architectural treatment" and be "in a high degree uniform in structure," albeit in three different sizes.[45] He noted that Olmsted had proposed "a second quadrangle, around which could be built up a second system of buildings (the Inner and Outer Quadrangles, which would ultimately form the Main Quadrangle) which would allow for initial expansion. Thirteen buildings were required to open the university (twelve for instruction and research and one for administration); these buildings would form the Inner Quadrangle. As the university grew, the additional similar buildings would be constructed as the Outer Quadrangle. Walker suggested which buildings should be constructed first and how to combine subjects within them to best utilize the space.

Walker also recommended that students be housed within "the Cottage system," placing the boys on one side of the campus and the girls on the other, with the academic buildings each sex would primarily use being placed in accordance to their location. This pattern was followed for dormitories and recreational facilities for decades at Stanford, with the men's facilities to the east of the Quadrangle and the women's to the west. Academic buildings never followed this scheme.

The Architects: Shepley, Rutan and Coolidge

Leland Stanford hired the firm of Shepley, Rutan and Coolidge during the fall of 1886. The firm was created by former employees of noted Boston architect Henry Hobbs Richardson, who had recently died on 27 April 1886. Charles A. Coolidge was the principal architect for the Stanford project, drawing heavily on both the design characteristics of the Richardsonian Romanesque style and on specific drawings left behind by Richardson as his inspiration. Both Coolidge

[45] The report also reflected the Stanfords' thinking that the campus would include primary, grammar and preparatory schools which would funnel students into the university. These plans were later dropped once the Stanfords began coping with the realities of building the Inner Quadrangle. Francis A. Walker to Leland Stanford (30 November 1886), 2, 6, SC125, B.2, F. 2, SUA.

and Charles H. Rutan would visit the Palo Alto estate at various times during the design and construction process. At some point Coolidge visited the Santa Barbara mission with the Stanfords, and from "there sprang the motif for our university buildings."[46] The firm would also send two draftsmen to live on site during the construction process, Charles D. Austin and Charles Edward Hodges.

Mission Santa Barbara in the 1880s, as seen by the Stanfords and Coolidge

Coolidge and Olmsted worked together in Boston in the early part of 1887 and grappled with various designs trying to solve the problem of systematic expansion while also taking other issues such as grading and views into account. Olmsted shipped plans and a model to the Stanfords on 16 April 1887 while Coolidge and Rutan made their way to California to discuss the drawings in person. This plan placed the church off to the west side of the quadrangle with an open vista running north and south towards the foothills. Although largely formal, the asymmetrical placement of the church and the focus on the far distant view were emblematic of Olmsted's naturalistic thinking. The Stanfords, quite simply, hated it. Once they observed the potential buildings staked out, they objected to the short end north-south orientation of the central quadrangle and wanted the church to be the focal point, not the foothills. A chagrined Coolidge wrote to Olmsted that the Stanfords also wanted to maintain the east and west vistas on either side of the central quadrangle, and thought "the main entrance should be a large memorial arch with an enormously large approach and in fact the very quietness and reserve which we like so much in it is what they want to get rid of."[47]

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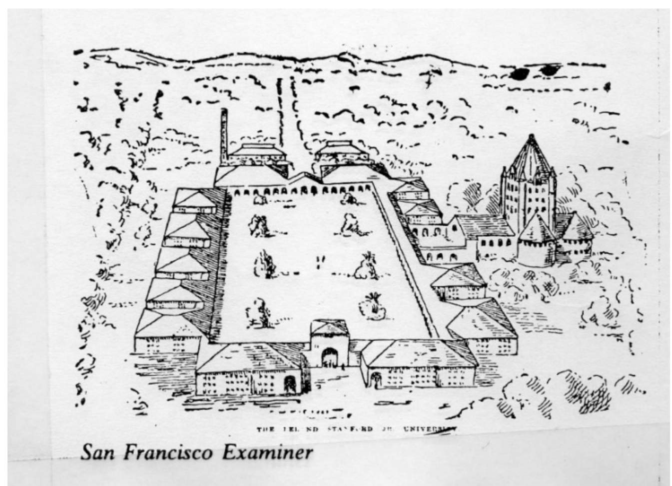
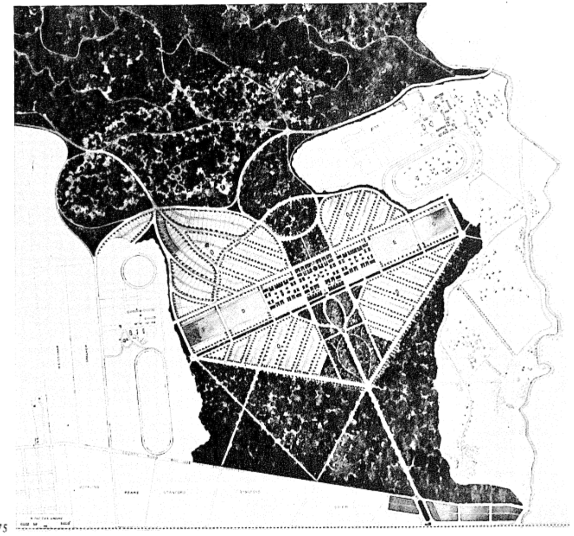
[46] Olmsted and John Charles Olmsted wrote a letter to site engineer John McMillan in June 1889 asking about "the mission survey." This survey has been lost over time. However, in addition to the visit to Santa Barbara, the Stanfords were also very familiar with the Carmel mission, which they used as the culmination point of the famed 17-Mile-Drive in Monterey, a scenic drive they created as a recreational aspect of their lavish Hotel del Monte. In 1884 Mrs. Stanford donated funds towards the Carmel mission restoration and later arranged to have a statue of mission founder Father Junipero Serra erected at the Monterey Presidio on 3 June 1891. Charles Edward Hodges, "Reminescences [*sic*]of Stanford University and Its Founders," undated typescript, 2499, Charles Edward Hodges, Series 2, B. 41, SUA; and Karen Weitze, "Stanford and the California Missions," in *The Founders and the Architects* (Stanford, Department of Art, 1976), 70, 81; and Charles Edward Hodges, "The Growth of the Quadrangle," *Stanford Quad* (1902), 15-16; and Charles Edward Hodges, "The Architects and Architecture of Stanford University," *Architect and Engineer* (December 1919), 115.

[47] Charles A Coolidge to Frederick Law Olmsted (3 May 1887), 1-2, SC125, B.2, F. 5, SUA.



Olmsted and Coolidge's plan depicted in the San Francisco Examiner on 28 April 1887

At Stanford's insistence that "he was going to have the buildings the way he wanted them," despite the additional work this decision would create, Coolidge "simply turned the Quad ¼ way round on its axis."[48] He immediately began work on new drawings to accommodate Stanford's demand that the cornerstone be laid on 14 May 1887, the day that would have been Leland Junior's nineteenth birthday if he had lived. Stanford, in poor health and very much wanting to see the university opened before his death, intended "to put on a gang of 100 men on the foundations and will probably make a contract for the upper portion." He had already arranged to purchase from the Greystone Quarry in San Jose the field stone from which the university would be built.



The "General Plan," circa mid-1888

[48] Stanford was concerned not only with design aesthetic but with sound construction as well. Rutan would later credit him with insisting that all of the two-story building footings be six feet wide, and builder Richard Keatinge noted: "He was extremely anxious about the huge sixty foot columns in the portico of the Museum and insisted that they should be monoliths and that work should be carried on day and night so that there should be no joint in them. It was the same with Roble Hall and he reminded me frequently of the lives that would be endangered by poor work." Charles A. Coolidge to Frederick Law Olmsted (3 May 1887), 1-2, SC125, B.2, F. 5, SUA; and Charles H. Rutan to John K. Branner (30 June 1910), 2, SC125, B.1, F.5, SUA; and Richard Keatinge, "Stanford Built for Earthquakes," *Stanford Alumnus* (May 1906), 45-46.

The Stanfords' insistence that the long side of the central quadrangle face the north, which would be distinguished by a grand entrance avenue leading up to an enormous memorial arch, determined once and for all the formal and monumental nature of the university they felt appropriately befitted the memory of their only son. Olmsted, who was disappointed but not surprised, accepted the design changes as final and began work on the landscaping, roads, sewers, housing quarters and other peripheral areas of the campus, including siting a Stanford family mausoleum within an arboretum already planted by Stanford.

Building the Campus

Clearing the land to begin construction of the Inner Quadrangle

The First Campus Buildings

Building of the Inner Quadrangle

The immediate mandate was the completion of the thirteen buildings of the Inner Quadrangle.[Ext.] These were a nearly identical series of one-story boxes, connected by a shaded arcade. The thick masonry walls, tile roofs, sheltering arcades and high ceilings were perfectly suited to a warm climate. A railroad spur line was laid to the site and sandstone quarried in the southern Santa Clara valley was shipped in to be dressed on site by an army of stone masons. Steam technology was also used to provide heat to the campus buildings through an extensive network of stream tunnels and a boiler plant.

Inner Quadrangle

The university was originally set to open on 14 May 1889, a sentimental date (Leland Stanford, Junior's birthday) that made little sense as it was virtually the end of the academic semester. However, the issue was moot as only six academic buildings had been completed by then and no housing for either faculty or students had even been started. Another opening date of October 1890 was set but this too passed with much work still remaining to be done. In November 1890, the Stanfords returned from Washington, DC determined to make decisions regarding final details, with Mrs. Stanford particularly focused on choosing which buildings would host which subjects.[49]

Encina Hall

While the remainder of the Inner Quadrangle building and stone carving was taking place, construction of four-story Encina Hall[Ext.] began in mid-1889. The Stanfords had ultimately decided to utilize two large dormitories rather than the recommended groups of small cottages, or may have never given serious consideration to the notion of cottages in the first place.[50] Stanford wanted well-built and attractive buildings that would provide comfort for the students. Each dormitory was sited within the proposed adjacent quadrangles to what was then the central or Inner Quadrangle.

The men's dormitory, Encina Hall, was inspired by the Stanfords' visit to the then modern Hotel-Kursaal de la Maloja in Maloja, Switzerland [some ten miles south of St. Moritz] in July 1888.[51] They brought home photographs for Coolidge

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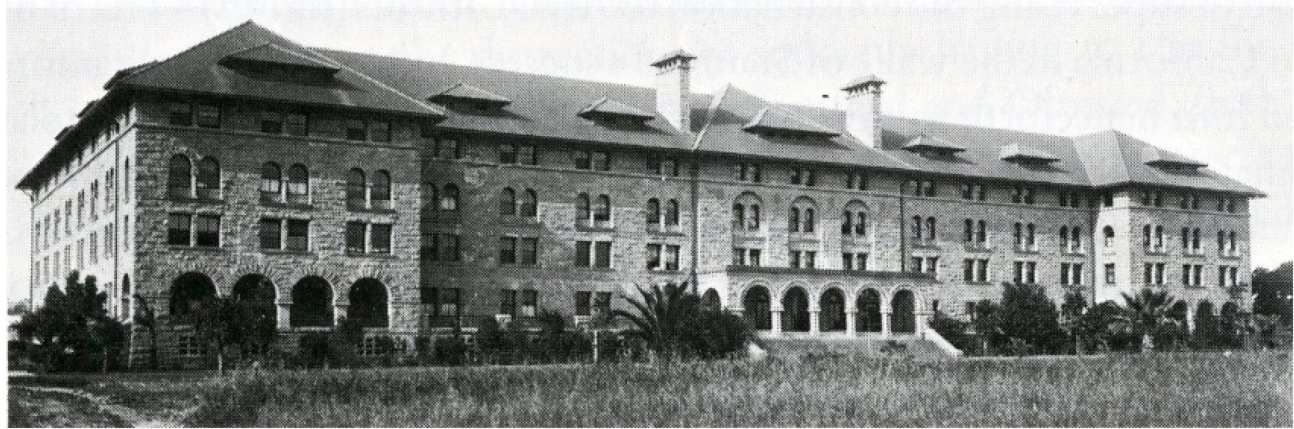
[49] Charles D. Austin to Messrs. Shelpley, Rutan and Coolidge (1 December 1890), 1, SC125, B.2, F.2, SUA.

[50] According to Bertha Berner, who travelled with the Stanfords in Europe in 1888, Leland Stanford saw the Hotel-Kursaal de la Maloja while passing by Lake Maloja in their carriage. His immediate response was: "I may see the boys' hall built after all…I do believe down there by the lake I see a hotel very much on the order of the building I have pictured in my mind as a suitable one for the boys' dormitory. We must examine it carefully." Bertha Berner, *Mrs. Leland Stanford: An Intimate Account* (Stanford: Stanford University Press, 1935), 76.

[51] Stanford sent Jordan a telegram on 16 May 1891, saying he had decided to utilize Spanish names for the two dormitories. Encina Hall (boys) was named for the coast live oak and Robles Blancho, later shortened to Roble Hall (girls), for the white or valley oak. Jordan named most of the campus roadways after Spanish men of various accomplishments, deliberately commemorating California history and further strengthening the identity of the school as that of being Californian. Bartholomew and Brinegar , "Encina Hall," 5; and SC125, B.1, F.3, SUA.

to work from, but he also relied on some of Richardson's former designs to provide inspiration.[52] As the summer of 1891 approached there was increased pressure to complete the Inner Quadrangle—with the exception of the church—the two student dormitories, faculty housing and the museum so that Leland Stanford Junior University could finally open in the fall of 1891.



Encina Hall, constructed in the same manner as the Inner Quadrangle

The Leland Stanford Junior Museum and Roble Hall

The museum was first conceived of as a separate project and was to be sited in Golden Gate Park in San Francisco. The Stanfords asked Shepley, Rutan and Coolidge to draw up plans for it in 1887.[53] Then it was to become part of the university and placed in one or more of the northern buildings of the quadrangle, along with the library. However, in March 1888, Jane Stanford wrote several letters to different persons in Athens, Greece, trying to obtain a photograph of the last museum her son had visited before his death, the National Archaeological Museum of Athens.[54] The creation of the museum was her particular project—Olmsted's assistant, Codman, referred to it as "Mrs. S's museum"—and she had ultimately decided that she wanted the Leland Stanford Junior Museum[Ext.] to be a replica of the National Museum and thus designed in the Neoclassical style.

This caused a great deal of consternation for Codman, who was visiting Palo Alto at the time. He wrote to John Charles Olmsted on 10 October 1889, expressing concern that "the exterior form of the museum" should be of "a general

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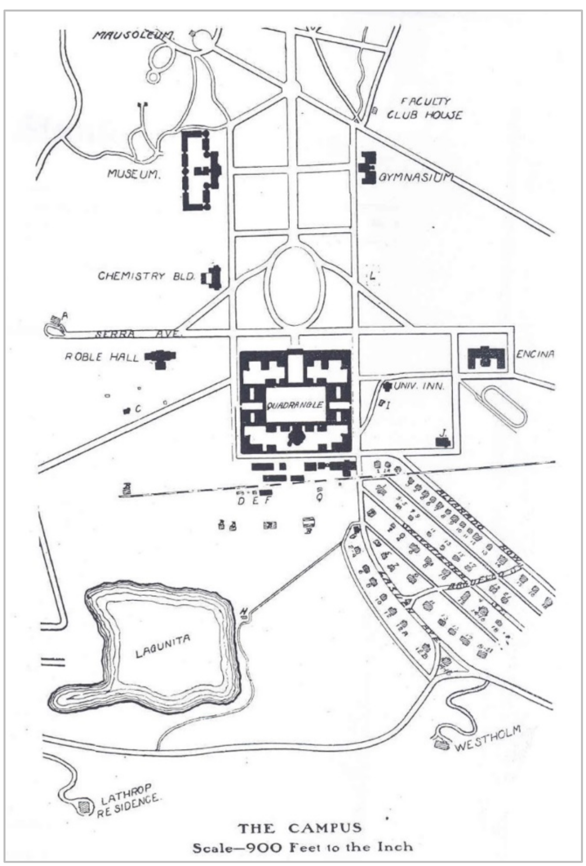
[52] Turner, "The Collaborative Design," 45.

[53] Those plans have been lost but a ledger entry for them exists in the Shepley, Rutan and Coolidge records. The architectural style of that particular design is unknown. Charles H. Rutan later wrote that the firm "had made designs for the Museum and submitted them to Governor Stanford, but at his death Mrs. Stanford employed someone else to design the building." Rutan was clearly misremembering the timeline as the museum was constructed in 1891 before Stanford's death, but it is unknown if he is referencing the 1887 museum plan slated for Golden Gate Park or a later museum plan specifically intended for the campus. Paul Turner, "The Architectural Significance of the Stanford Museum," in *Museum Builders in the West: The Stanfords as Collectors and Patrons of Art, 1870-1906* (Stanford: Stanford University Museum of Art, 1986), 96, 132; and Richard Joncas, *Building on the Past: The Making of the Iris and Gerald Cantor Center for Visual Arts at Stanford University* (Stanford: Board of Trustees of the Leland Stanford Junior University, 1999), 38; and Charles H. Rutan to John K. Branner (30 June 1910), 1, SC125, B.1, F.5, SUA.

[54] Leland Stanford Junior collected many artifacts during his young lifetime and wanted to one day build a museum to display them to the public. He loved going to museums and visited the National Museum at Athens in January 1884, just two months before his death. He was so impressed with this particular museum it was said that he wanted to build one similar to it in San Francisco on the site of his father's old stables across from the Stanfords' Nob Hill mansion. Harry C. Peterson, San Francisco *Call* (14 March 1919), reprinted in Turner, *Museum Builders*, 94, 129.

similarity" to the architectural style of the university.[55] Less problematic for him was the new potential placement of the museum. He thought it should be located on the girl's (west) side of the campus and perhaps a gymnasium (or a large hall for meetings and concerts) could be sited directly across from it on the boy's (east) side. In this way, "those four blocks (where we originally intended professors' houses) might all be used as memorial ground…" with the concurrent shifting of twelve professor houses, "the plans of six of which have already been prepared, but this is no serious difficulty for the blocks across roads 8 & 9 are perfectly suited to contain them."[56]



The ultimate location of the Leland Stanford Junior Museum flanking the entry drive. Map circa 1904.

Mrs. Stanford had determined that the museum and the girl's dormitory must also be ready by the time school began. This meant that a method different from the laborious cut stone construction that was being used on the Inner Quadrangle and Encina Hall was essential for the timely completion of these two additional buildings. The San Francisco architectural firm of Percy and Hamilton was familiar with the use of iron and concrete and had successful experience with constructing buildings of unusual structural characteristics.[57] They had previously worked with Ernest

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[55] Henry Sargent Codman to John Charles Olmsted (10 October 1889), 1-5, SC125, B.2, F. 3, SUA.

[56] Ibid.

[57] George Washington Percy and F.F. Hamilton had both trained back east before relocating to San Francisco ca. 1876 and going into partnership in 1880. Percy had published technical papers on the use of iron and concrete and the firm was also experienced in designing in the Richardsonian Romanesque style. Paul Turner, "The Architectural Significance of the Stanford Museum," in *Museum Builders*, 98-100.

Leslie Ransome, an Englishman whose father had also pioneered architectural uses of concrete, on San Francisco's Academy of Sciences. The younger Ransome had also experimented with strengthening concrete by inserting twisted iron rods into the floors and walls; the method was known as reinforced-concrete. He worked as the engineer and contractor on the Leland Stanford Junior Museum and utilized his innovative reinforced-concrete technology on both that structure and on the girl's dormitory, Roble Hall.[Dem.]

The Leland Stanford Junior Museum in 1891

The University Opens its Doors

When the university opened on 1 October 1891 the academic buildings made up the Inner Quadrangle. Directly behind the Quadrangle stood the Power House[Ext.] and the Boiler House[Ext.] with its towering 125-foot-high smokestack. West of these two buildings stood the more utilitarian, small Electrical Engineering and Mechanical Engineering Department[Ext.] and the much larger Civil Engineering Department.[Ext.] A scattering of other utilitarian buildings were erected south of these buildings and the L-shaped wood structure[Dem.] used as a bunkhouse for construction workers was taken over by impoverished male students who could not afford to pay board elsewhere.[58]

[58] The utilitarian shop buildings consisted of a forge, a wood-working shop, and a carpenter's shop. They were soon joined by a post office, printing shop and architect's office. The Art Department was also located in a small building in this area.

The Stanford carriage on its way to the Inner Quadrangle on Opening Day, 1 October 1891

Although first university president David Starr Jordan had expected at best perhaps 250 students to enroll, his enthusiastic stumping of the state during the previous summer ultimately encouraged an astonishing 440 students to register for classes. Fifteen faculty members taught the first semester; the following spring semester saw 555 undergraduates and thirty-seven graduate students being instructed by twenty-nine faculty.[59]

Encina Hall (left) and Roble Hall (right)

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[59] Most of the faculty, except for a few bachelors who temporarily moved into Encina Hall, lived in the ten houses built by Shepley, Rutan and Coolidge on Alvarado Avenue, more commonly referred to as Alvarado Row. Most of the ten houses were treated as duplexes with two families in residence. Students soon named this group of houses The Decalogue. The bachelors did not stay long in the chaotic conditions that typified the Encina Hall experience. Encina Hall held 300 beds, Roble Hall held 72. The poorer male students moved into the L-shaped Camp, the ramshackle housing used by construction workers. Overflow faculty and students who could not live on campus moved into boarding houses, rooming houses and eventually fraternity and sorority houses, first off campus and later on campus. Palo Alto, a town Stanford intended to be a university town at some point in 1887, was founded in 1891 but was slow to grow, with real development not taking place until 1893. One neighborhood was known as Professorsville for its plethora of university faculty. Bartholomew*, Chronology*, 15; and Elliott, *Stanford University*, 109.

Six “Pretty Long Years”

Construction of the Outer Quadrangle[Ext.] was put on hold when Leland Stanford died on 21 June 1893, just two years after the university opened. Money problems associated with both railroad losses and the national financial panic of 1893, which began shortly after Stanford’s death, were exponentially compounded when the United States government placed a fifteen million dollar claim on Leland Stanford’s estate for not-yet-due railroad loans in May 1894. Mrs. Stanford had been awarded a monthly $10,000 allowance while her husband’s lengthy will was in probate—the bulk of which supported the university. The institution also underwent severe salary cuts, staff layoffs and effectively shut down any notions of construction for the next few years.[60]

The U.S. Supreme Court ruled in Mrs. Stanford’s favor regarding the claim on Leland Stanford, Sr.’s estate on 2 March 1896. Within a month some $2.5 million in bonds was turned over to the Board of Trustees but it was another two years before Stanford’s will was completely probated and Mrs. Stanford had full access to her inheritance.[61]

Jane Stanford Completes the Founders’ Vision

Mrs. Stanford considered it her duty to her husband’s memory to move ahead with campus construction plans once it was economically feasible. It was a point of pride with her that she alone provided the money needed for campus construction as the university “had been projected in all good faith as a complete gift to the people of the state.”[62] She also had every intention of finishing her ambitious building program during her lifetime, but instructed the Board of Trustees to complete it in the case of her death.[63] She intended to build the Outer Quadrangle (a series of two- and three-story buildings that flanked the north and south facades of the Inner Quad), the Memorial Church,[Ext.] the Memorial Arch,[Dem.] the Chemistry Laboratory,[Ext.] a new men’s gymnasium,[Dem.] a new library[Dem.]—separate from another new library already slated to be part of the Outer Quadrangle—and the additional wings that would turn the Leland Stanford Junior Museum into a quadrangle. She later wrote, shortly before her death in 1905: “…To me these stone buildings had a deep and important significance. These noble buildings are not alone for the present, but for ages to come.”[64]

Mrs. Stanford utilized several different local architects and builders, some of whom had worked on earlier campus construction, to realize her goal.[65] The Stanfords had offered Charles D. Austin the job of university architect in 1891,

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[60] Stanford had given Mrs. Stanford one million dollars in stocks and bonds as her personal property in 1883 as a “rainy day” nest egg in case of his unexpected death. Mrs. Stanford also used the interest on these stocks and bonds to help support the university during the lawsuit and probate. Karen Bartholomew and Claude Brinegar, “Old Chemistry: One of Jane Stanford’s Noble Buildings,” *Sandstone and Tile* (Winter 1999), 5.

[61] Bartholomew*, Chronology*, 28.

[62] Mrs. Stanford began to pay for campus construction with her stocks and bonds once the economic climate improved in 1897. Her one exception of accepting funds for building was brother-in-law and Board Trustee Thomas Welton Stanford’s gift of his $150,000 inheritance from Leland Stanford, which Thomas turned over to Mrs. Stanford for campus use. Elliott, *Stanford University*, 571; and Bartholomew, “Old Chemistry,” 5.

[63] Elliott, *Stanford University*, 283; and Bartholomew, “Old Chemistry,” 6.

[64] “Mrs. Stanford’s Farewell Message,” *Stanford Alumnus* (June 1905), 3.

[65] Mrs. Stanford apparently held “competitions” for several—or possibly all—of her buildings, including Memorial Church, which Shepley Rutan and Coolidge declined to enter since Coolidge had already completed drawings for it. Hodges submitted a Romanesque design for the new library that was not accepted, and a Classical Revival design for the new gymnasium which was. Turner, “The Collaborative Design,” 48; and Charles H. Rutan to John K. Branner (30 June 1910), 1, SC125, B.1, F.5, SUA; and Charles Edward Hodges to Mrs. Jane Stanford (27 December 1901), 1, SC125, B.1, F.4, SUA; and Charles Edward Hodges (8 January 1902), SC125, B.1, F.4, SUA.

but he and his family preferred to return back east. The Stanfords then turned to his assistant, the amenable Charles Edward Hodges, to take the job.[66] Despite the moratorium on producing academic buildings that began in 1891, Hodges had kept busy designing functional university-related structures such as the Power House and the Woodworking Shop, in addition to numerous on and off campus residences for faculty, fraternities and sororities.[67] He worked closely with both Mrs. Stanford and Palo Alto estate and campus business manager, Charles Lathrop (Mrs. Stanford's youngest brother).

The Outer Quadrangle

Hodges would later recall that the new program of building underwent "the same rigid economy" that had characterized the past six long years; both Mrs. Stanford and Charles Lathrop were well known for their adherence to the cardinal virtues of thrift and saving.[68] Thomas Welton Stanford, one of Leland Stanford's brothers, had turned his inheritance over to Mrs. Stanford for use at the university and his $150,000 gift made the construction of the first Outer Quadrangle building possible.[69] The cornerstone for the Thomas Welton Stanford Library was laid on 2 November 1898, with the second building, the Assembly Hall, beginning to rise in the same year. These two buildings formed the northeast range of the Outer Quadrangle, which rose in stages between 1898 and 1902.[70] Hodges modified the upper floor of the two-story buildings so that they "carried over the arcade" and therefore provided more floor space.[71] Hodges later wrote that Shepley Rutan and Coolidge sanctioned the changes he made to both the Outer Quadrangle and the Memorial Arch, which he began work on in April 1899.[72]

Coolidge had designed the Memorial Arch in 1887, basing it on an unexecuted Richardson sketch of a Civil War Monument meant for Buffalo, New York. Hodges purchased the plan from Shepley, Rutan and Coolidge for $3,000 and modified it at Mrs. Stanford's request from a height of eighty-five feet six inches to one hundred feet, equivalent to a ten-story building. A twelve-foot-high frieze was topped by two observation rooms, reached by a circular iron staircase located inside the west column. The arch was completed by the end of 1899 but the carving of the four-sided frieze took another three years.

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[66] Hodges was born in England and had attended the University of London. He acquired architectural training and experience in his native country before emigrating to America, where he found work with Shepley, Rutan and Coolidge. Elliott, *Stanford University*, 104; and *Biographical Dictionary of American Architects* (Los Angeles: New Age Publishing Company, 1956), 291.

[67] Numerous photographs of campus structures of various uses are assumed to be of Hodges's design, or that he supervised the construction of, as they are displayed in a scrapbook he created and they do not represent the entire campus. Some of the photographs bear his hand-written captions while others were left unidentified. Many of the structures can be firmly identified as his as there are existing plans in either the Stanford Archives or Maps and Records. A0028, Charles Edward Hodges Photograph Albums, ca. 1898-1905, Box 1, SUA.

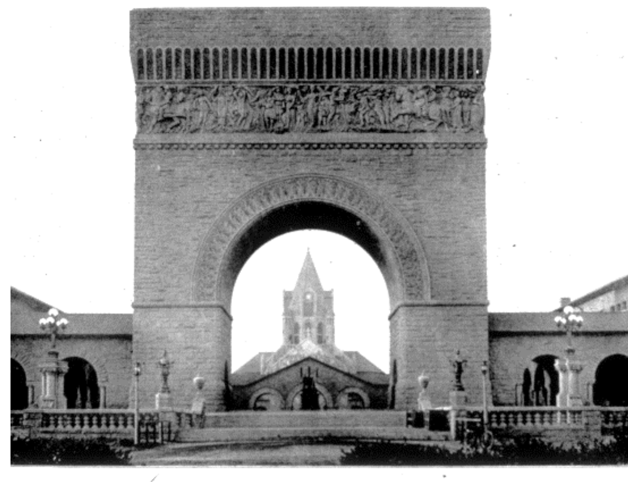
[68] Hodges, ""Reminescences [*sic*], 3; and Elliott, *Stanford University*, 454.

[69] Hodges, "The Growth of the Quadrangle," 15.

[70] Hodges wrote a letter to *Architect and Engineer* in 1919, correcting a recently published article about Stanford University that claimed Richardson was the original architect. He identified Percy and Hamilton as the architects for the Thomas Welton Stanford Library and the Assembly Hall, Benjamin Schultze for Zoology and Botany and Clinton Day for History and Physics, as well as the Memorial Church. Hodges described his own role as associate architect "on all this work." Hodges, "Architects and Architecture of Stanford University," 115.

[71] Four statues were erected to stand along the second story of the north façade: *Wilhelm von Humboldt, Louis Aggasiz, Benjamin Franklin* and *Johann Gutenberg*. A bust of *Leland Stanford* was installed on the second floor exterior of the southeast History corner. Hodges, "Reminescences [*sic*]", 4; and Allen, "Memorial Arch," 5-6.

[72] Hodges, "Architects and Architecture," 115.



Memorial Arch (left) with Memorial Court and Memorial Church in the background

Faculty Housing

In 1900, as pressure for more faculty housing grew, Mrs. Stanford spent $24,000 building four duplex residences on Lasuen Avenue.[73] In 1902 she would build "a colonial house" for the new Memorial Church deacon that "bids fair to be a distinct addition to the architectural beauty of the 'Row.'"[74] Mrs. Stanford had been concerned about the quality of housing on campus and twice set financial limits as to what the construction costs would be for all residences. She had also allowed a few personal friends who had no connection to the university to build private homes on campus; these houses ultimately ended up over time belonging to the university and were used as residences for either faculty or students. This first faculty neighborhood was laid out on the diagonal street grid (Alvarado, Salvatierra and Lasuen streets) proposed in Olmsted's plans, the only neighborhood that followed that pattern.

Three streets of houses made up the first faculty neighborhood, ca. 1900

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[73] "New Buildings," *Stanford Daily* (7 September 1900), 1; and "New Buildings," *Stanford Alumnus* (June 1900), 157.

[74] "Campus Improvements," *Stanford Alumnus* (October 1902), 6.

Expansion of the Museum

Multiple projects were undertaken simultaneously. While Hodges was busy with Memorial Arch, Percy and Hamilton returned to design north and south additions that stood perpendicular to the central portion of the museum. They again used Ransome's reinforced-concrete method for the new floors; the walls of the museum additions were constructed of brick surfaced with cement to match the existing structure, reflecting Mrs. Stanford's desire to cut expenses.[75] While the new additions were being built, Mrs. Stanford also hired the Venetian firm of Antonio Salviati and Company to execute a series of mosaics onto the central façade of the museum.[76]

This completed a second phase of museum construction but the third and final building that would complete the museum quadrangle would not commence until 1902. This final very large addition, designed by Hodges, was constructed between 1902 and 1906. Also of unreinforced masonry, the addition increased the museum to 200,000 square feet of exhibition space and 90,000 square feet of storage space, making it possibly "the largest private museum in the world."[77]

The Leland Stanford Junior Museum, ca. 1905

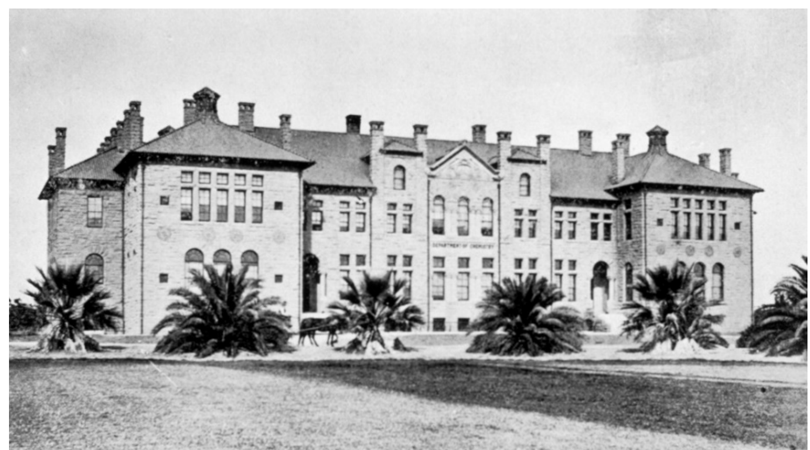
[75] Turner, "Architectural Significance," 104-105.

[76] The Stanfords had admired the firm's work after viewing their restoration of the Church of San Marco in 1883. Mauricio Camerino took over the firm after Salviati's death in 1890. Camarino personally supervised the installation of the Memorial Church mosaics both before and after the 1906 earthquake. Bartholomew, *Chronology*, 37.

[77] Ibid.

The Chemistry Building

Mrs. Stanford hired San Francisco architect Clinton Day to design the Chemical Laboratory and to execute Coolidge's design for the long-awaited Memorial Church.[78] She sited the Chemical Building between the museum and the Main Quadrangle, utilizing the space Codman had identified as potential "memorial ground." Clinton's challenge was to create an eclectic building that merged the two contrasting styles of Richardsonian Romanesque and Neoclassical, bridging the Main Quadrangle and the Museum. Construction began in 1900 and was completed by January 1903.



The Chemistry Building reflected both Romanesque and Classical Revival features

Memorial Church

Memorial Church, along with the Leland Stanford Junior Museum, was a project very close to Mrs. Stanford's heart and one she dedicated to her husband's memory. One day while walking with Professor John C. Branner, she confided: "But, Mr. Branner, while my whole heart is in the University, my soul is in that Church."[79] Beyond this sentimental attachment, both of the Stanfords had considered a spiritual life of the upmost importance, in addition to the worldly education of students and making provisions for their good health by building gymnasiums and sports fields. Memorial Church would replace the small chapel that had been set within the Inner Quadrangle in 1891.

Architect Clinton Day worked from Charles Coolidge's drawings of the nondenominational Memorial Church. Coolidge had based the drawings on Richardson's design for Boston's Trinity Church, among other sources, and the design had evolved over time.[80] Construction of Memorial Church began in 1899 and the building was dedicated on 25 January 1903, although the interior carving of quotations, the mosaic work of Antonio Salviati and Company and the inclusion of the stained glass windows by Frederick Lamb would take another two years.[81] The dedication of Memorial Church

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[78] Day completed his master's degree at the University of California in 1874. He designed numerous Queen Anne-style residences, including the National Register property called Falkirk in 1888. He was also known for creating several distinctive commercial designs in San Francisco, including City of Paris (also National Register, demolished), a remodel of Gump's after the 1906 San Francisco Great Earthquake and Fire and the Wells Fargo Building at 744 Market Street. He had also designed a chemical laboratory for University of California in 1891. "Clinton Day," Pacific Coast Architecture Database, https://digitallab.washington,edu (accessed 8 April 2013).

[79] Elliott, *Stanford University*, 456-457.

[80] Turner, "The Collaborative Design," 43-45.

[81] Bartholomew, *Chronology*, 37.

represented the near completion of the Outer Quadrangle, with the keystone to the last arch being set in place on 15 March 1904.[82]

Memorial Church after the mosaics were installed by Salviati and Company

The Library

When Stanford University first opened in 1891, the library was located in Building 1, immediately east of the main entrance to the Inner Quadrangle along the north façade. A second university library was constructed in the northeast corner of the Outer Quadrangle when Thomas Welton Stanford turned his $150,000 inheritance from his brother over to Mrs. Stanford for her use in 1898. She, in turn, still wanted to build a much larger library that would meet the university's growing need for collection space for decades to come.

Hodges submitted a design "in the Spanish style of architecture" so that the "front would harmonize with our present buildings."[83] Mrs. Stanford, however, was more interested in creating additional Classical Revival rather than Romanesque buildings, as her choices for both the new library and new boy's gymnasium proved. Ultimately, Mrs. Stanford was captivated by a sketch of a building submitted to her by a San Francisco artist/artisan named Joseph Evan Mackay.[84] Mackay looked to an art gallery called the Memorial Hall that was constructed for the 1876 Centennial Exhibition in Philadelphia for inspiration.

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[82] Bartholomew, *Chronology*, 39.

[83] Charles Edward Hodges to Mrs. [Jane] Stanford (8 January 1902), SC125, B.1, f.4, SUA.

[84] Mackay was listed in the San Francisco Directory as a "designer of church windows, domestic windows, glass mosaics, and mural decoration." Paul V. Turner, "The Library That Never Was," (Stanford: Library Associates, undated), 6.

Clinton Day was hired by Mrs. Stanford in 1903 to actually produce the building. He paid Mackay one-fourth of his own fee, which waived any further rights Mackay had to the original design. Day worked hard to modify the design to make it more structurally sound. Construction began in the summer of 1904 with the new library being sited directly across from the Chemical Laboratory. Mrs. Stanford, who had died unexpectedly in February 1905 while in Honolulu, Hawaii, did not live to see the completion of the building. Construction was slowed by eight months to a year when a decision was made to make the library fire-proof by tearing out much of the interior woodwork, including sections of oak floors, and replacing the wood with iron beams and joists.[85]

The new library just before 18 April 1906

The Men's Gymnasium

A wood "temporary" gymnasium, called Encina Gymnasium, had been hastily erected in January 1892 for the men's use but it was woefully inadequate. The last "noble building" that Mrs. Stanford did not live to see completed was the men's gymnasium, which was located north of the new library and directly across University Avenue from the Leland Stanford Junior Museum. Hodges seems to have not had any qualms in designing this building in a Classical Revival style as it stood squarely across from the Neoclassical Museum and was separated from the Main Quadrangle by the new library. Hodges spent three weeks back east visiting various college gymnasiums and Mrs. Stanford herself visited the Harvard Gymnasium in 1904.[86] Construction began in 1904 and was nearing completion in early April 1906.

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[85] "Library To Be Fire-Proof," *Stanford Alumnus* (January 1906), 6.

[86] "Finest Gymnasium in America," *Stanford Daily* (2 December 1904), 4; and Jane L. Stanford to Dr. David S. Jordan (4 December 1904), reprinted in Elliott, *Stanford University*, 585.

The Great San Francisco Earthquake and Fire of 1906

On 18 April 1906 at 5:12 am a 4.0 magnitude foreshock struck Northern California, followed within thirty seconds by an 8.3 magnitude earthquake that lasted about sixty seconds.[87] The city of San Francisco was devastated and university registrar Orrin Leslie Elliott wrote that the "major disaster [was] the most striking event in the history of the University."[88] The campus sustained such extensive damage it was shut down completely while reconstruction took place.

Damage to Campus Buildings

Campus damage included interior damage to Inner Quadrangle classrooms and more extensive damage to Outer Quadrangle classrooms, including the new Geology building, which was completed but not yet occupied.[89] Memorial Church, Memorial Arch, the new annexes to the museum, the new men's gymnasium and the new library were badly wrecked. One Row house had to be demolished while numerous others sustained fallen chimneys and plaster damage. Both Encina Hall and Roble Hall had experienced chimneys crashing through numerous floors to the ground or basement levels, and the south walls of the east and west wings of Encina Hall would need to be entirely rebuilt. The back arcade of the Outer Quadrangle had collapsed, as had the massive two-year-old entry gates on Palm Drive. The Chemistry building, the Engineering buildings and the Power House had sustained heavy damage.

Damage to Memorial Church

[87] Richard Hansen and Gladys Hansen, *1906 San Francisco Earthquake* (Charleston, SC: Arcadia Publishing, 2013), 7.

[88] San Francisco buildings and streets suffered extensive damage from the earthquake. Fifty separate fires within the city caught within a few minutes of the temblor; they gradually merged and burned out a four-square-mile area over the next three days. The Stanford's wood Nob Hill mansion survived the earthquake in excellent form only to burn down completely the following day with all furnishings and an extensive art collection still inside. Elliott, *Stanford University*, 146.

[89] Elliott, Stanford University, 152.

One student described the Memorial Church as “Mrs. Stanford’s most precious gift to us, the gift into which she had most fully put her heart.” Jordan wrote that it was an “exquisite ruin,” the loss of which “touches us deeply,” in contrast to other damaged buildings such as the new gymnasium, library and museum annexes that “we have no feeling for.”[90]

Initial Reconstruction of the Campus, 1906-1908

Jordan had tasked a preliminary committee to assess the damage; it was composed of Professor Charles B. Wing, structural engineer; Professor William S. Durand, mechanical engineer; Professor Arthur B. Clark, architect; Charles Edward Hodges, architect; and Charles D. Marx, civil engineer and chairman.[91] Hodges resigned his position in June 1906, possibly in reaction to the extensive public criticism regarding the damage to the Outer Quadrangle, the Memorial Arch and the new men’s gymnasium. The Board of Trustees then tasked three Engineering professors who formed the so-called Commission of Engineers on 29 June 1906—Charles Marx (the chair again), William Durand and Charles Wing—with rebuilding the university.[92]

The Board ultimately decided to focus first on all classrooms within the Main Quadrangle, the restoration of Encina Hall and Roble Hall, and the extensive repairs needed by the Chemistry Building. This would achieve the goal of the university reopening in time for the upcoming fall semester in late August 1906. The new library and new men’s gymnasium were razed and not replaced. The least damaged rear wing of the museum was repaired and turned over to the university’s Medical School for the study of anatomy and bacteriology. The remaining additions were razed and not rebuilt. The interior and the collections had sustained great damage, as had the lighting and heating systems. The museum, once it reopened, would languish for decades to come.

Memorial Arch, for which alumni had immediately pledged to raise replacement funds, was ultimately abandoned. Memorial Church was taken down completely to the ground and rebuilt with metal framing.[93] Most of the reconstruction, with the exception of the museum and church, was completed by 1908. Although Charles Lathrop intended to pay for a new steeple with his own funds, it was not rebuilt. Memorial Church was completed and reopened in 1913, with minor changes to the façade; the reinstallation of the decoration was not finished until 1916.

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[90] John K. Bonnell, “Stanford Still Stands.” Stanford Alumnus (May 1906), 16; and Fradkin, The Great Earthquake, 148.

[91] “Engineers Report on Damages,” Stanford Alumnus (May 1906), 23.

[92] An original projection of “five to six years at least before Stanford will be as efficient and as well-equipped as she was before the earthquake of Wednesday” was made but, despite the additional tasks undertaken by the Commission of Engineers, most of the construction was completed by the end of 1908,with the exceptions of the Memorial Church and museum repairs. Daily Palo Alto (21 April 1906), 2.

[94] Mitchell, *Stanford University*, 6.

A Second Generation of University Leadership Emerges: Herbert Hoover and Timothy Hopkins

Herbert Hoover, a member of the Pioneer Class of 1895, and Stanford's most successful alumnus, proposed the creation of a Student Union in 1909 that would restore the "solidarity that existed between students and faculty in the old days." It was to be funded by students and alumni, and was a catalyst for the process of soliciting monetary gifts from alumni and friends of the university; the notion that Stanford University was not interested in contributions still prevailed due to Mrs. Stanford's insistence during her lifetime that no outside funds would be accepted.[94] In 1911, the Board of Trustees elected Hoover to join them. He became a driving force for change in an effort to optimize the university's struggling financial condition.

Jordan retired as president in 1913 to become Chancellor with the understanding that John C. Branner would next serve as president.[95] Branner agreed but only to a two-year term, which would coincide with his projected retirement. This would allow the Board two years to secure a suitable replacement.

The Student Union

Branner was still acting as president when the first phase of the Hoover-inspired Student Union[Ext.] was completed. It was sited directly to the south of the Engineering buildings. Charles F. Whittlesey designed the Men's Clubhouse[Ext.]—dubbed "the Union" —and the Women's Clubhouse,[Ext.] which respectively formed the north and south structures. Construction had begun in 1913, with the realization of the connecting arcade postponed due to the overall cost. The two clubhouses were completed in 1915, but with loans that needed to be paid off before additional building could take place.[96]

The Women's Clubhouse in 1920

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[94] Mitchell, *Stanford University*, 6.

[95] The position of Chancellor was a paid three-year position; it was not renewed in 1916 when Jordan officially retired. His highly-public profile as a pacifist was very much closely identified with that of the university. While America has not yet joined WWI as a combatant, war fever was on the rise throughout the country and many at Stanford were anxious to separate the two reputations of the man and the institution. Bartholomew, *Chronology*, 46.

[96] The second phase of the building, as conceived by the Hoovers, was that the two original buildings would be joined by a central building, in addition to the completion of the arcade, with the arcade moving to the foreground of the complex. "Stanford Union and Women's Clubhouse Launched," *Stanford Daily* (17 October 1913), 1.

A New Quadrangle, Library and Art Gallery

One outcome of Hoover's Board membership and fundraising skill was a subsequent campus building boom.[97] The first project was a new library, needed to replace the one destroyed in the 1906 earthquake. This idea soon became entwined with Trustee Thomas Welton Stanford's offer of a new art gallery, in order to exhibit paintings he had earlier donated to the museum that were still sitting damaged in a wrecked building. Combining the two projects provided for a quadrangle to the east of the Main Quadrangle as envisioned in the master plan.

The Board had already made the move to the use of more modern materials and building techniques in 1908 when a Beaux-Arts style concrete addition was constructed on the back of one of the original sandstone Engineering buildings (Building 524) standing along Panama Street. By 1900 the Beaux-Arts style had become a major force in American architectural design due to the enormous success of the World Columbian Expostion in Chicago in 1893. The style was characterized by its formal emphasis on central vistas, perpendicular axes and unity of composition. As architectural historian Paul Turner noted: "The principals of monumental organization facilitated orderly planning on a grand scale and were capable of including many disparate buildings or parts within a unified overall pattern…It was therefore natural that many of the new American universities, large both in size and ambition and thinking of themselves as cities of learning, should turn to the newly fashionable Beaux-Arts system to create their physical form and self-image."[98]

Respect for the Olmsted Plan

Trustee Timothy Hopkins, who was a member of the Grounds Committee of the Board, wrote to Frederick Law Olmsted Junior in 1913, asking for help with siting "a new building" (the proposed library) and "some improvement of the grounds adjacent thereto," while acknowledging "that [Olmsted's] plans have been somewhat departed from."[99] A member of the firm wrote back suggesting that the company's West Coast representative, J. Frederick Dawson, visit the campus in January 1914. Dawson promised a detailed report, which he delayed sending to Hopkins so that it could be reviewed by "our senior partner," meaning Frederick Law Olmsted Junior.[100]

The eleven-page report covered numerous topics that included recommendations for siting the new library and a working corporation yard, and re-paving the Inner Quadrangle.[101] Dawson reiterated that "a compact city-like close grouping together of the working buildings of the University is the true principle and should be resolutely followed instead of the prevailing idea of Eastern Universities of scattering the buildings widely apart in a great park."[102] He singled out as problematic "the tendency to spread the buildings as the Chemistry, old Museum, Gymnasium site and old Library were located or planned to be located, if continued, will result in a tremendous loss of time for all who have occasion to go from building to building, or from residence to working building which will continue and increase as many centuries as the university exists."[103]

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[97] Bartholomew*, Chronology*, 46.

[98] Paul V. Turner, *Campus: An American Planning Tradition* (Cambridge: The MIT Press, 1984), 167.

[99] Olmsted's son, Frederick Law Olmsted Junior, and stepson, John Charles Olmsted, formed Olmsted Brothers to succeed their father's firm in 1898. Timothy Hopkins to Frederick Law Olmsted Junior (15 October 1913), 1, SC125, B.2, F.4, SUA.

[100] Handwritten note by Dawson made on Hopkin's letter requesting status of the report. Timothy Hopkins to Messrs. Olmsted Brothers (29 April 1914), 1, SC125, B.2, F.4, SUA.

[101] Olmsted Brothers to Board of Trustees (8 May 1914), 1-11, SC125, B.1, F.5, SUA.

[102] Ibid., 8.

[103] Ibid.

Furthermore, Dawson hoped “that the University will continue to give a robust dignified ‘Mission style’ tone to all future architectural construction, modifying it, however, to be more luxurious and more intellectual, as befits a modern university, and we hope that the grounds will be planted in harmony with the Mission style rather than in the English landscape gardening style, by using small growing shrubs, vines and perennial ‘ground cover’ rather than turf.”[104] The Board would follow most of Dawson’s recommendations, particularly those concerning the siting of the stadium, the gymnasium and the library.

Architects Bakewell and Brown

In late November 1913, shortly before Dawson was to tour the campus the following January, Trustee Hopkins recommended that the noted San Francisco architects, Bakewell and Brown, be hired “as consulting architects for the university.”[105] It had been eight years since Hodges had resigned, and the Board of Trustees was concerned that the right architect be chosen to execute the library. Coolidge was under consideration but the thinking was “that if an Eastern architect were chosen ‘there would be difficulty cooperating with him unless he or a representative were on the ground or in the vicinity…’”[106] Another worry was that if the architect did the excellent job the Board desired, “it is quite possible he will receive further commissions. It is certainly to be hoped that the policy of zigzagging from one architect to another, which has proved so fatal since Senator Stanford’s death, may be discontinued in the future...”[107]

John Bakewell, Jr. and Arthur Brown, Jr. of Bakewell and Brown, had already designed six double Craftsman-style faculty houses for the Board of Trustees in 1908 and 1909.[108] The firm was a particularly apt choice, not only for their proximity, but for their ability to design in an eclectic Beaux-Arts classical style that they combined with a specifically Californian aesthetic.

Both men had attended the University of California where they were heavily influenced by Bernard Maybeck, Ernest Coxhead and Charles Keeler.[109] Both Bakewell and Brown also studied at the École des Beaux-Arts in Paris, along with another University of California classmate, Julia Morgan. Brown was the designer and draftsman of the partnership, with Bakewell taking on responsibility for the specifications and construction of the various projects.[110] Their classical education, which emphasized eclecticism, combined with their firmly rooted Californian aesthetic, would ultimately provide nearly two dozen campus structures that would harmonize well with Stanford University’s original Richardsonian Romanesque and Mission-style architecture. One these projects was the creation of a second

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[104] Ibid.

[105] Vetrocq, “Stanford Before 1945,” 85.

[106] Ibid.

[107] Ibid.

[108] Timothy Hopkins and Arthur Brown Junior grew up together; the Brown and Hopkins family were connected by close business and social ties that included shared holidays and travel in Europe. While this personal relationship might have prompted Hopkins to offer Bakewell and Brown the contract for designing the faculty homes, by 1913 they had clearly proven their ability to take on the much larger responsibility of campus architects. Their partnership began in 1905 and they worked steadily on relatively small projects until 1912, when they won the prestigious competition for the design of the new San Francisco City Hall. This, along with their design for the Burlingame Country Club, was enough to convince the Board they could handle “a larger construction campaign.” Jeffrey T. Tillman*, Arthur Brown Jr.: Progessive Classicist* (New York: W.W. Norton and Company, 2006), 204-205.

[109] Maybeck and Coxhead were two Bay Area proponents of the British Arts and Crafts Movement which emphasized a direct connection between architecture and nature. In the San Francisco Bay Area, their work was typically known as First Bay Tradition. Therese L. Baker-Degler, “The Architects: John Bakewell Jr. & Arthur Brown Jr.,” in *Historic Houses IV: Early Residential Communities of the Lower San Juan District, Stanford University* (Stanford: Stanford Historical Society, 2007), 7.

[110] Tilman, *Arthur Brown Jr*., 35.

quadrangle east of the MainQuadrangle, which included the new library,[Ext.] the new art gallery[Ext.] and a new education building.[Ext.]

This new quadrangle would nearly equal the original one in size, and would "have the same arcades, the same brown sandstone walls and red-tiled roofs as the old one."[111] However, there would also be differences:

> *Instead of having two groups of buildings separated by a court like the front façade of the original Quad, the front of the new group of buildings will be unbroken by any court but will be composed of a large two-story edifice with a smaller one-story structure on each side. There will be no inner court in the new Quad, the new library buildings which will be the largest and most imposing of the new edifaces, occupying a central position. A number of smaller courts will separate the library from the outer buildings*.[112]

Green Library was completed in 1919

Residences Befitting Presidents

When David Starr Jordan and his family arrived in California, along with university registrar Orrin Leslie Elliott and his family, by train from the East, the two groups were housed by the Stanfords in Peter Coutts' former residence, which Jordan promptly christened Escondite Cottage.[Ext.] The Elliotts soon moved to nearby Menlo Park to await the new faculty housing the Stanfords were in the process of having built, leaving Escondite to the Jordans.

Leland Stanford chose the site for the building of a "commodious stone residence" for Jordan's use as president, intending the new residence to stand northwest of Roble Hall at the end of Serra Street set within a copse of oaks.[113] However, this plan was disrupted by Stanford's death in 1893. Jordan instead paid for a more modest wood house,

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[111] "Library and Museum Will Be Most Imposing Structures," *Stanford Daily* (14 October 1915), 1.

[112] Ibid.

[113] David Starr Jordan, The Days of A Man: Being Memories of A Naturalist, Teacher and Minor Prophet of Democracy (Yonkers-On-Hudson, NY: World Book Company, 1922), 511-522.

Xasmin House,[Dem.] designed by Hodges in 1893. The site had originally been earmarked for faculty housing by Olmsted, but Jordan's home was the only one built in the area.[114]

The university's second president, Professor John Branner, lived with his family in a large house on Alvarado Row, next door to the house lived in by the Elliotts. Branner remained in that residence during his two-year presidency.

Ray Lyman Wilbur, the third university president who was appointed on 13 October 1915, became involved with the building of an official university residence intended for the president. Wilbur chose the site for the house in March 1916, south of the Main Quadrangle on axis with Palm Drive.[115] Since the large structure was to serve as both presidential residence and campus reception center, Wilbur wanted a location that would allow wide approaches and good parking space to accommodate large numbers of cars.[116]

Louis Christian Mullgardt was the architect of choice; he had also worked as a draftsman for Shepley, Rutan and Coolidge before relocating to California in 1905.[117] Wilbur described the architectural style of the elegant three-story house as "Spanish Gothic."[118] Mullgardt began building the house in 1917 but construction was slowed by supply shortages related to WWI and the Wilbur family would not move in until 1918.

The university president's house, later known as The Knoll,[Ext.] shortly after completion

Herbert Hoover and his wife, Lou Henry Hoover, had lived abroad for most of their marriage but in 1909 they began to shift repeatedly between living in Palo Alto, on the Stanford campus (once Hoover became a Trustee), in New York City, in Washington, DC and at their London home. By 1912 Mrs. Hoover was sketching plans for a home the Hoovers wanted to build in a campus faculty subdivision on San Juan Hill; ultimately she would ask Stanford art professor and

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[114] In 1924 a second home for the Jordans was erected close by at university expense and Xasmin House was transformed into a graduate student women's dormitory.

[115] Joncas, Stanford University, 72.

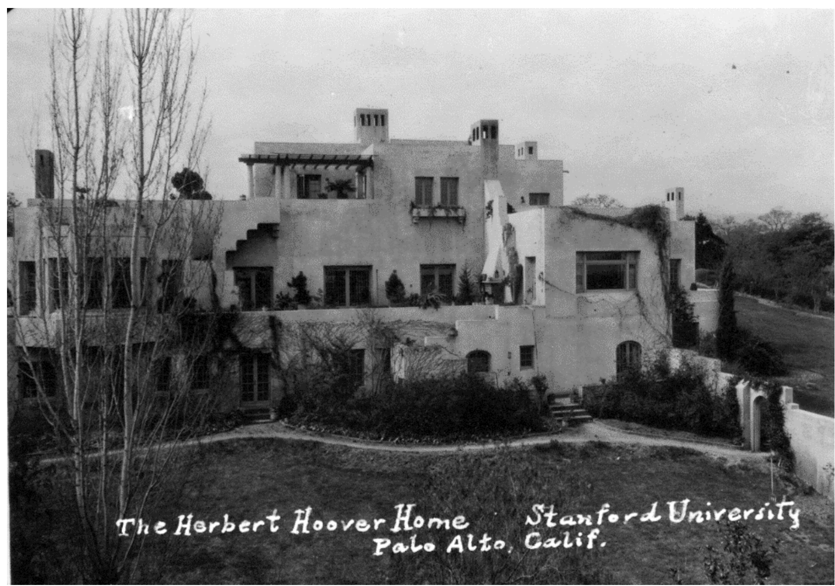
[116] Robinson, Memoirs of Ray Lyman Wilbur, 211.

[117] Joncas, Stanford University, 73.

[118] Ibid.

part-time architect Arthur Bridgeman Clark, a neighbor and close family friend, to help her design a different home for the same site.

Mrs. Hoover took the lead on designing the house -- A.B. Clark taking only a remote role due to university duties -- assisted by draftsman Charles Davis. The exterior design of stark cubic forms and flat roofs was essentially completed when Clark's son, Birge Clark, returned from the war in March 1919. Birge Clark began to work in tandem with Davis on the drafting process, with Mrs. Hoover regularly assessing the drawings and making tactful suggestions when the design was not to her pleasing. Construction began on the house in 1919.[119] The architectural style of the house has defied description since the house was first constructed, with all of the principals involved giving different explanations over time that included thirteen various styles.[120] Hoover later gave the house[Ext.] to the university to serve as the official residence of the university president.



Hoover House. Photo by Berton W. Crandall, courtesy Stanford University Archives.

[119] The final cost of the house ranged from $135,000 to $175,000, depending on the source, and the large size of the house continued to be a matter of concern for both Hoovers for some time to come. Turner, *Mrs. Hoover's Pueblo Walls*, 46-48.

[120] These styles included Pueblo Mexican Spanish, Mediterranean or Italian, Zuni, Mission Pueblo, Modernistic, Oriental, Early American Aztec, Hispano-Moorish, Algerian, Hopi, Mission Revival and International Style. Turner, *Mrs. Hoover's Pueblo Walls*, 57.

World War I at Stanford University

America was largely isolationist in outlook at the start of WWI in June 1914; most Americans considered the distant war not their concern. One of the proponents of American involvement in the war was new university president Wilbur, who had symbolically asserted his independent and modern thinking by refusing to be inaugurated in academic robes.[121] Wilbur's time and attention was much directed towards supporting the war long before America officially joined as a combatant in April 1917 and once that happened, campus life between then and the end of the war in November 1918 was intensely focused on the war effort.

Camp Fremont

The university leased over half of its acreage (6,200 out of some 8,180 acres) soon after America entered the ongoing war in April 1917.[122] The property was leased by the United States government as part of Camp Fremont, a 7,203-acre military training camp that would be constructed at a cost of $1.9 million with a main entrance at Santa Clara Avenue and the County Road (El Camino Real) in nearby Menlo Park.[123] The overall boundaries would lie west of Menlo Park, Palo Alto and Mayfield, stretching up into the foothills, with large tracts owned by Stanford University and the Spring Valley Water Company leased for maneuvers and field training.

Student Housing Crisis

Before and during the early months of the war, Wilbur had been concerned with creating adequate on-campus housing needed for the increasing enrollment of students. Twice as many students lived in the fraternity and sorority houses as the two dormitories and off-campus housing.[124] While the dormitories and gymnasiums had historically been sited to the east and west of the Main Quadrangle by gender—men on the east and women on the west—the fraternity and sorority houses were jumbled together irrespective of gender, with houses being located "to fit the convenience of existing water and sewer lines and sidewalks."[125] Although Wilbur deplored what he regarded as the undemocratic nature of these student groups, he grudgingly accepted the pragmatic need for fraternities and sororities because they financed the construction and operation of their houses.[126]

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[121] Robinson, *Memoirs of Ray Lyman Wilbur*, 201-202.

[122] Barbara Wilcox, "Fremont, the Flirt: Unearthing Stanford's World War I Battleground," *Sandstone and Tile* (Stanford, CA: Stanford Historical Society, Spring/Summer 2013), 6.

[123] A U.S. Army source stated the camp proper was 1,203 acres and the entire reservation was 7,203 acres. A 1917 local newspaper article claimed the leased maneuver grounds were composed of 25,000 acres, but a U.S. Army source sized the maneuver grounds at 63,584 acres. "Camp Fremont," typescript, (Washington, DC: Department of the Army, undated), 1, Camp Fremont clipping file, Menlo Park Historical Association Archives; and William S. Strobridge, *Golden Gate to Golden Horn: Camp Fremont, California and the American Expedition to Siberia of 1918* (San Mateo, CA: San Mateo County Historical Association, 1975), 2; and "Palo Alto Secures Army Camp," Mountain View *Register-Leader* (6 July 1917), 1; and "Maneuver Grounds," Camp Fremont, RG092 Entry 1974 Box 99, National Archive and Records Administration.

[124] Bartholomew, *Chronology*, 48.

[125] Robinson, *Memoirs of Ray Lyman Wilbur*, 129.

[126] Wilbur disliked both the elitist component of the fraternities and sororities and the subsequent—sometimes divisive—rivalries that grew between the Greek organizations and the "Hall" students. He particularly abhorred hazing, the loss of house mothers and the subsequent problems related to liquor, and the exclusion of non-whites and Jewish students from living in Greek houses. This final issue was for Wilbur the ultimate antithesis of Stanford ideas and the Stanford experience. He did try to quash both fraternities

Encina Hall was expanded by 150 beds over the summer of 1916, making 450 beds available for the men. Roble Hall, with its 72 beds, was entirely too small and a new Roble Hall[Ext.] was completed in September 1918. Designed by San Francisco architect George Kelham—he had designed the new Palace Hotel in San Francisco after the 1906 earthquake and the San Francisco Public Library in 1916—in the Spanish Eclectic style, the new dormitory housed 226 women.[127] Located just north of Lagunita Reservoir, the new dormitory was not part of any projected quadrangle, although it was located close to the new presidential residence—as Jordan's home had been built close to the original Roble Hall. Kelham had designed the original structure as "two H-plans side by side," but only one block and an additional wing were built and joined by what was to be a temporary hall.[128]

The new Roble Hall located just north of Lagunita Reservoir

and sororities during the 1920s but to no avail. Sororities were disbanded after his retirement in 1944; they were reinstated in 1977. Robinson, *Memoirs of Ray Lyman Wilbur*, 129, 222; and Bartholomew, *Chronology*, 70, 116.

[127] The old Roble Hall was rechristened Sequoia Hall and converted into a men's dormitory.

[128] Joncas, *Stanford University*, 71.

Memorializing the War

With the end of WWI on 11 November 1918, campus life once more focused on academics while also being transformed by the watershed experience of the international conflict. Wilbur wrote the Board of Trustees on 19 January 1919:

> *In order to make preliminary plans for the development of a suitable memorial to the Stanford men and women who lost their lives or who took a part in the Great War, I am asking Professor Emeritus John M. Stillman to get together a suitable committee. No ordinary memorial tablet will in any way meet this historical situation. Thus the Great War of history and the part that Stanford played in it should be commemorated. I am asking Professor Stillman, in organizing his committee, to consider the possibility of a simple but monumental university building.*[129]

Plans had already been put in motion by May 1918 to collect primary materials relating to the Stanford University war experience; Associate Professor Edgar Robinson of the History Department was charged with compiling this information in conjunction with the Stanford War Information Committee.[130] Hoover, already an enthusiastic bibliophile—as was Timothy Hopkins—was inspired by reading educator and historian Andrew White's autobiography while crossing the English Channel, and "had resolved on the spot to save the original records of the social revolutions that would no doubt be unleashed by the Great War."[131] He sent Wilbur a $50,000 check in 1919 to collect primary materials overseas for what was ultimately to become the Hoover War Library. Fund raising and planning for the two buildings that would ultimately commemorate WWI, first known respectively as the Memorial War Theater[Ext.] and the Hoover War Library,[Ext.] would span the next two decades.

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[129] Ray Lyman Wilbur to Board of Trustees (8 January 1919), 1, SC1010, SUA.

[130] "Compiling of War Material Under Way," Stanford Daily (1 May 1918), 1; and SC019, Stanford War Records, B.5, F. 22, SUA.

[131] "Library and Archives History," Hoover Institution, http://hoover.org (accessed 29 October 2015).

Between the Wars – The Roaring Twenties and the Great Depression (1920 – 1941)

When Wilbur assumed the presidency in 1916, he was concerned with the expansion of the campus as a residential community and vowed to build new dormitories, dining facilities and recreational facilities to accomplish this goal. Tentative plans were put off by WWI. However, by 1922, Wilbur announced a new building program that would benefit from the success of the first phase of fund-raising that had so far raised $800,000 of a projected one million dollars. Known as the First Million, it was intended that continued fundraising would ultimately bring in a Second and then a Third Million.[132] The immediate construction focus was to be on new residences for the men, new Biology and Law buildings and a new women's gymnasium.

Expansion of Student Housing

Dormitories continued to be separated for men and women, with men's residences generally on the east side of the campus and women to the west. Separate physical education facilities were also provided: the men's gymnasium, swimming pool and tennis courts next to the main athletics area on the east side and the smaller women's facilities on the west side. This gender-driven division was adhered to as new student dormitories were built although the fraternity and sorority houses were built side-by-side to take advantage of existing facilities like roads and water connections.

The Union Residence Hall

One exception to this pattern was the Union Residence Hall,[Ext.] located just south of the Main Quadrangle. Wilbur explained that the "proposed residence units are based on the types of dormitories at Oxford and Cambridge, and will be constructed on the same general type of architecture as the new Union."[133] The recently completed new Union building, designed by Bakewell and Brown, was in the Spanish Colonial Revival style. Living space for men was available in the upper floors of the new building but the president hoped that that space would one day only be used for student-related activities. Wilbur concluded by saying, "We have a right to look ahead to the future development of Stanford. We have an ideal location for one of the great institutions of the world, an ideal plan, and a wonderful start."[134] (The Union Residence Hall was reassigned to house women when the enrollment limit on women was lifted in 1933.)

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[132] The First Million was intended to endow faculty salaries, the Second Million to construct new buildings and the Third Million to partially endow the Medical School in San Francisco. "President Wilbur Describes Future Stanford Campus," *Stanford Daily* (5 May 1922), 1; and Bartholomew, *Chronology*, 54.

[133] Ibid.

[134] "President Wilbur Describes Future," 1.

The new Union connected by arcades with the Men's and Women's Clubhouses

Toyon and Branner Halls

The two new men's dormitories—Toyon Hall[Ext.] and Branner Hall[Ext.]—were completed on the east side of the campus in 1923. These were designed by Bakewell and Brown, as was Encina Commons,[Ext.] a series of two large dining rooms and six smaller rooms intended for Eating Club use that were added on to the back of Encina Hall.[135] Both Toyon and Branner were considered additions "of a contemplated dormitory quadrangle," but the buildings were not connected by arcades.[136] Instead, they were "all to be linked up on the quadrangle plan, with courts and plazas between."[137] It is clear that by this time the planning concept of the extended quadrangles was still very strong but that the defining characteristic of the arcades was not always executed. Encina Commons was connected to the back of Encina Hall with an arcade that surrounded all three sides of the new addition. Toyon and Branner, on the other hand, were not connected to each other by arcades.[138]

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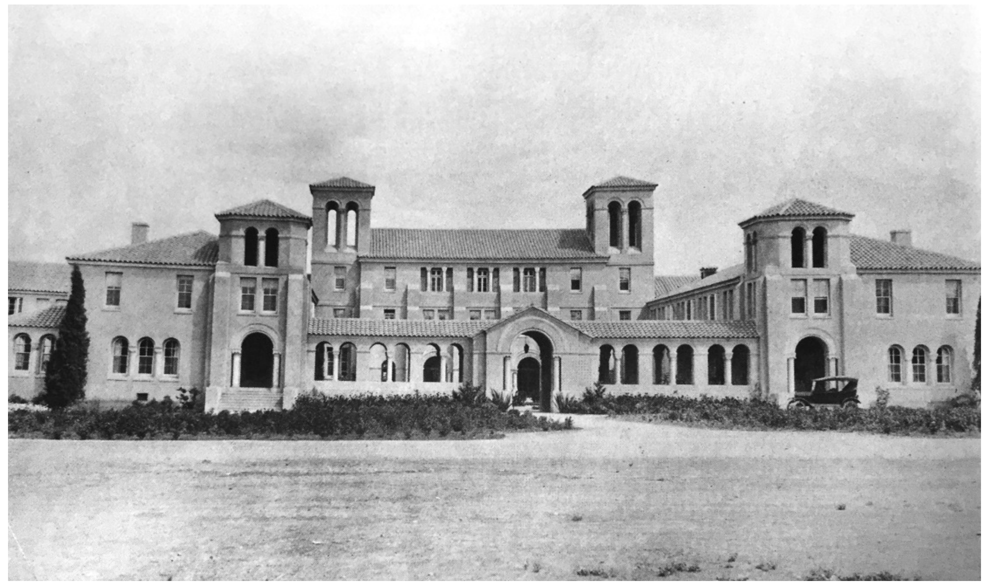
[135] The new Union and the Encina Commons were intended to be the primary eating venues for male students, along with Branner. Bartholomew, *Chronology*, 30; and Mitchell, *Stanford University*, 23.

[136] The relatively small size of Toyon at 120 beds reflected the administration's experience of trying to cope with the persistent chaotic conditions that characterized Encina Hall with first 300, then 450 beds. Wilbur was determined to create more balanced living conditions that he hoped might incidentally provide more focus on scholarship. *Stanford University: From the Foothills to the Bay* (Stanford: Stanford Bookstore, undated), unpaginated.

[137] Ibid.

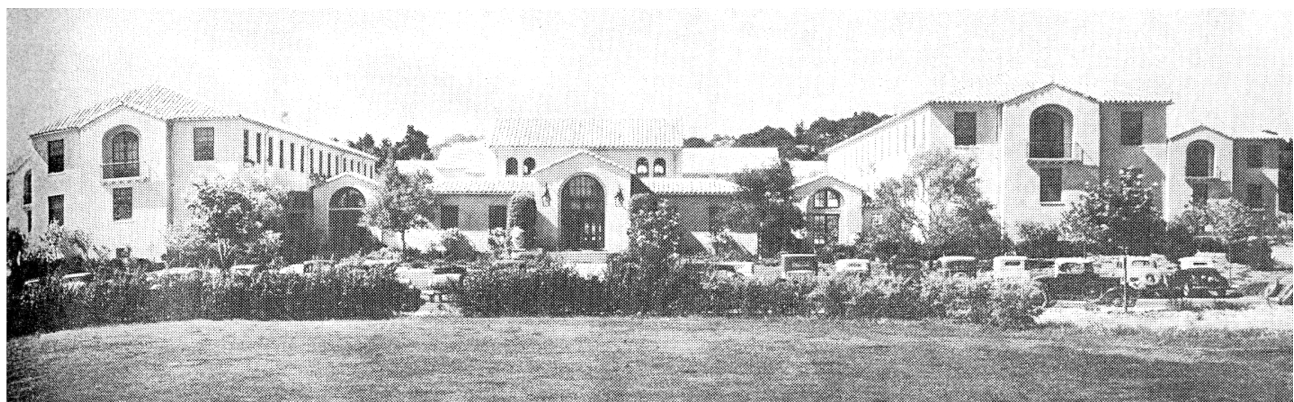
[138] Two additional men's dormitories, twins of Toyon and Branner, were planned to fill out the dormitory quadrangle but were never built when fund-raising was halted by the advent of the Great Depression. Tilman, *Arthur Brown, Jr,* 211.



Toyon Hall faced west and was located within the center of the "new dormitory quadrangle"

Lagunita Court

In May 1933, due to the economic hardship of the Great Depression and to issues relating to the increased imbalance in men and women on campus, the Board of Trustees decided to lift what had been a 500 student cap on women and enroll 200 additional women students in the coming fall. This kept the ratio intended by Mrs. Stanford (40% women to 60% men) but also increased tuition income. Student housing on campus was insufficient so a new dormitory was required to house these additional 200 women.[139]



The main façade of Lagunita Court in 1934, as seen from Roble Field

Small-group living in a large-scale setting, as experienced in Toyon Hall and the Stanford Union, had proven to be more successful than the single large hotel-style dormitory of Encina Hall, where conditions were chaotic and noisy. Therefore Lagunita Court[Ext.] was conceived as four separate halls housing fifty women apiece. These halls surrounded a central cloistered courtyard and were connected by corridors to each other and to a central dining room backed by a

[139] "On and Off the Campus," *Stanford Illustrated Review* (December 1933), 82.

large kitchen. The combination of houses and centralized dining was referred to as the "independent house system" and it was so successful at Lagunita Court that all subsequent dormitories on campus over the next several decades were built on the same principal.

Student Athletic Facilities

Stanford students had pursued a variety of sports since the founding of the university despite the lack of facilities. There were no gymnasiums, athletic grounds, football fields, baseball diamonds, cinder paths for track or tennis courts when the university opened due to the focus on simply getting the buildings constructed before school started. The students improvised while plans were made; two "temporary frame buildings" soon went up, with the men's gym completed in January 1892, and the women's gym some weeks later.[140] By the end of 1892, the women had two tennis courts and the men four. While various sports received enthusiastic participation and support, football was by far the most popular sport with the student body.

The Board of Athletic Control had been created in February 1917, transferring responsibility for athletics away from the faculty committees and the Student Association that had overseen athletics since 1891. During WWI most competitive sports on campus ceased for the war's duration although several matches of all types were held between students and soldiers at Camp Fremont. However, once the war was over, the Board of Athletic Control revived and did such a good job of reorganization and management that fees earned from sports events began to be used to partially pay for new construction. These new venues included the Stanford Stadium,[Ext.] designed by Engineering Professor Charles Wing, the Basketball Pavilion,[Ext.] two new men's and women's gymnasiums, the Golf Course[Ext.] and Golf Clubhouse[Ext.] and Board of Athletic Control's administration building[Ext.] (now known as Montag Hall).[141]

A New Roble Gymnasium

Bakewell and Brown had designed the replacement Encina Gymnasium back in 1914 and expanded it in 1925. In the meantime, Stanford women were still dependent on the original 1892 Roble Gymnasium, more commonly known as "Woodpecker Hall" for the numerous holes in the upper walls and roof made by birds. This structure was moved in 1917 to be closer to the women's bathhouse and pool. By 1922, an average of 362 female students per quarter were scrambling for floor space and equipment in the one-room structure, with two to three women jamming into dressing rooms meant for one and the lines at the showers eight-women deep.

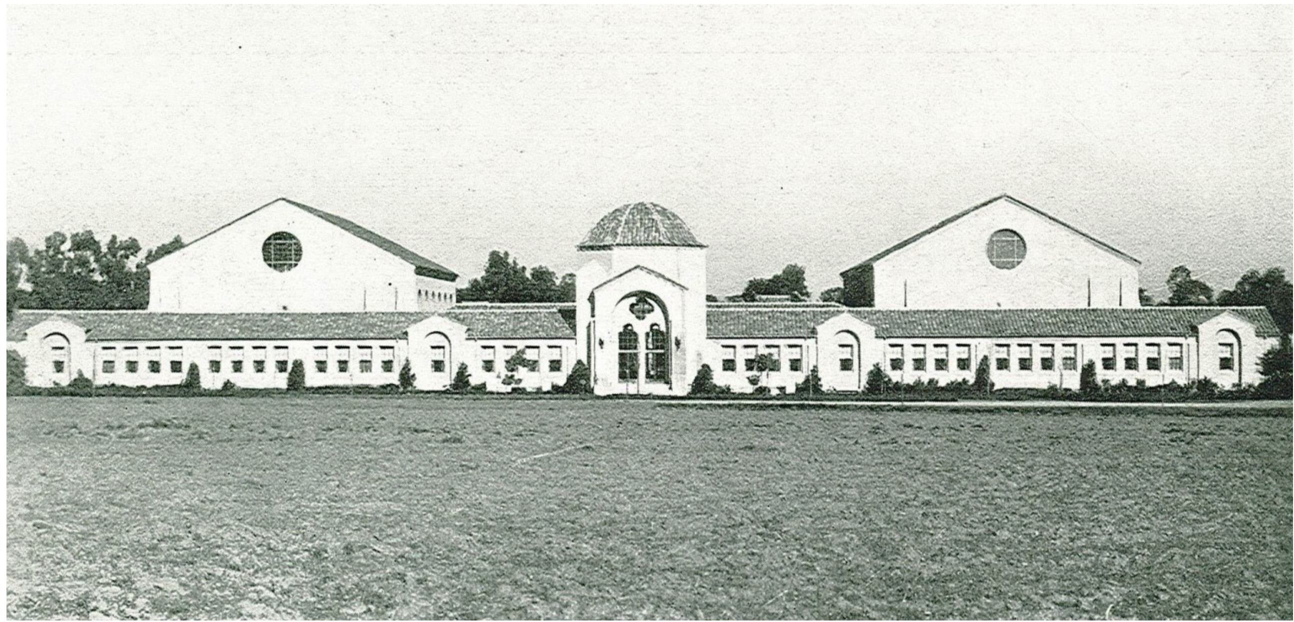
A committee petitioned the Stanford Board of Athletic Control for funding in the amount of $250,000 for a new gym for women—University Comptroller Almon Roth had already requested Bakewell and Brown to draw up plans—and the Board of Trustees agreed to furnish a loan of $225,000. The final project came in at $236,000 with an $11,000 gift making up the difference. This paid for the building; the women students raised an additional $20,000 to furnish and equip an otherwise-empty structure.

Brown designed Roble Gym,[Ext.] formally known as the Women's Gymnasium, to "follow the lines of Spanish architecture, being built around a patio, and having, like other University buildings, a red-tile roof." He placed the main gymnasium and a dance studio into two separate wings (both groups had jostled for space in the one-roomed original building), with administrative offices for the physical education and medical staff on either side of the front lobby and locker rooms with showers at the back of the complex. A playing field, along with a swimming pool, was laid out west

[140] Elliott, Stanford University, 187-189.

[141] Mitchell, *Stanford University*, 123.

of the building, providing expansion of a women's dormitory quadrangle which "may eventually contain six large Girls' Dormitories."[142]



Roble Gymnasium in 1931

New Facilities for Science and Engineering

Science at Stanford, and particularly science related to industrial development, began to take shape during the 1920s. Three buildings reflected this trend. The first was the 1926 Harris J. Ryan High-Voltage Laboratory,[Dem.] which was located southeast of faculty housing towards the foothills. It was designed by Bakewell and Brown and paid for by outside donors.

Another outside gift from the Daniel Guggenheim Fund for the Promotion of Aeronautics was applied to the remodeling of an existing building and the construction of a wind tunnel[Dem.] in 1926.

In 1929, the Carnegie Institution's Laboratory of Experimental Taxonomy and Genetics was built on a leased five-acre site northwest of the Main Quadrangle. While this independent lab was not affiliated with the university, its scientists collaborated on numerous projects with the university's biology departments.[143] The Carnegie Institution's first building[Ext.] was designed by Bakewell and Brown.

Completion of the "Library Quadrangle" and "Art Quadrangle"

Despite the coming Great Depression, which began with two devastating back-to-back stock market crashes on 24 and 29 October 1929—and a country-wide subsequent decline in construction—three major campus buildings would see completion in the coming decade. The immediate effects of the stock market crashes were negligible, and Hoover, who

[142] George Gibbs to Olmsted Brothers (10 March 1931).

[143] Mitchell, Stanford University, 10.

had been elected the United States president in 1928, originally believed that the nation-wide economic crisis would be short-lived. Building plans on campus were able to proceed for another year or two without too much curtailment; the worst years of the Depression were 1933 and 1934, when one out of every four persons was out of work, and those still working had typically undergone a salary cut, a reduction in hours, or both.

Memorial Hall

By 1929, enough funds to build the War Memorial building were not yet available despite the initial and partial success of the One, Two and Three Million fund-raising efforts.[144] In the early 1920s, other buildings had taken precedence over that of a memorial, even one that was intended to take shape as a serviceable building. A growing want on the part of the students for a new assembly hall fueled a desire to see this building take shape as "a place where concerts and dramatic productions might be presented," thus combining the memorial idea with a so-called New Theater movement.[145]

Bakewell and Brown's design was approved by the Theater Committee, which consisted of Wilbur, Controller Almon Roth and the architects in April 1935. Memorial Hall was dedicated on 24 October 1937, with Wilbur and retired campus chaplain, Dr. D. Charles Gardner, taking part in the ceremonies. Dr. Gardner paid tribute to the 3,762 campus community members who served in one capacity or the other during WWI, with a particular focus on the seventy-seven Stanford lives lost. Surviving members of the families of those who were listed on the Stanford Roll of Honor attended the ceremony as special guests.[146]

Memorial Hall shortly after completion. Photo courtesy Stanford News Service.

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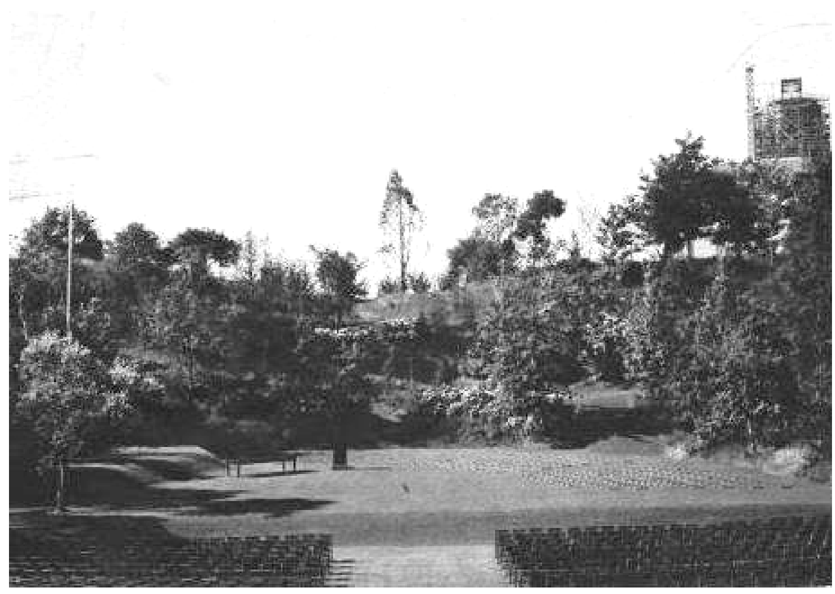
[144] Students had raised $186,000 through the Memorial Fund Committee and those funds languished until 1931 when another $2,000 was raised by an editorial written for the student publication The Chaparral. In 1935 the Board determined students would pay off the balance of the $587,000 project through a combination of 75% of the funds earned by the Union were to be combined with students paying $1/quarter until 1956. "Building Funds Given Largely By Students," Stanford Daily (29 May 1936), 4.

[145] "Hasten the New, Reinvigorate the Old," *Stanford Daily* (21 February 1929), 2.

[146] "Services Held to Dedicate New Theater," *Stanford Daily* (25 October 1937), 1.

Frost Amphitheater

A related project was the nearby construction of a 7,500 seat amphitheater[Ext.] that was the financial gift of the bereaved parents of a student, Laurance Frost, who had recently died.[147] It was intended for graduation exercises, outdoor plays and concerts, with actors and musicians having easy access to dressing rooms at Memorial Theater, as it was known at the time. 93,000 cubic yards of soil from multiple campus sites and the Palo Alto subway project were combined to create the bowl, and the $35,000 gift was used to partially pay for the extensive landscaping which also incorporated three large native oaks.[148]



Frost Amphitheater shortly after completion in 1937

While the new Art Quadrangle (Memorial Hall and Frost Amphitheater) was undergoing construction, progress was also finally being made in the Library Quadrangle with plans being developed for the new Education Building, the new Law Building and the Hoover War Library.[149] The construction of the newly christened School of Education Building, completed in 1938, would "signalize that this second Quad will soon be half completed," and also marked the first new classroom building built in the past thirty years.[150]

The Hoover Institution of War, Revolution and Peace

Once the decision was made to place the War Memorial to the north, at some point between 1933 and 1936, and to build it in the Beaux-Arts style rather than as a tower, the idea of a tower was transferred to the Hoover War Library. The War Library was still slated to stand along the north edge of the Library Quadrangle, however, and to squarely face Memorial Hall. This decision illustrates the growing shift in planning that now focused on planning for the street rather

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[147] "Amphitheater Work Advances," *Stanford Daily* (*29 May 1936*), 4.

[148] "Stanford Builds for the Future," 1.

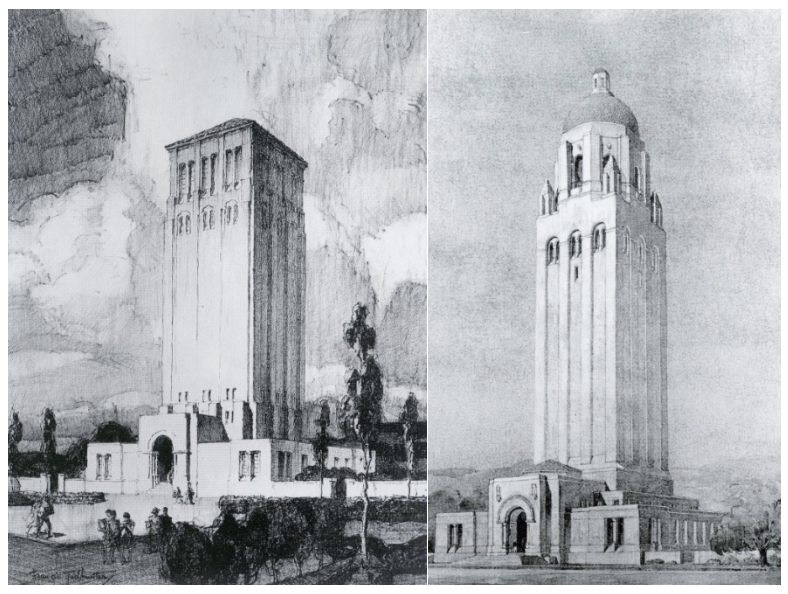
[149] At some point in the early 1920s Wilbur was thinking about placing an English Department building between the Art Gallery and the library. Vetrocq, "Stanford Before 1945," 90.

[150] "Stanford Builds for the Future," frontispiece.

than the quadrangle, with Memorial Hall and the Hoover War Library facing each other in the same way Roble Gymnasium was facing Roble Hall and Lagunita Court.[151]

While the concept of agglomerating buildings within a square was perceived as an execution of the expansive quadrangles, and there was still an intention to connect the buildings by arcades—at least in the Library Quadrangle—the reality was that all four sides of that particular quadrangle had been independently developed "as a band of facades harmonizing with opposing structures."[152] As the university had already learned by the 1920s, it was challenging to finance the building of extensive arcade systems and, often by the time funds were available, truncated arcades were all that could be built.

The four-story tower originally conceived for the War Memorial was too small to hold the Hoover War Library which was then at five million books and artifacts. Brown stretched the building upwards to fourteen stories, thus providing "a building of sufficient height to provide adequate architectural expression to the whole plant," which had been lacking since the losses of Memorial Arch and the steeple of Memorial Church in 1906.[153] The tower was a free-standing building, relating directly to Memorial Hall across the way, rather than being connected to the adjacent Art Gallery by arcades.



The Hoover War Library (left) as originally conceived by Arthur Brown, Junior; the final design (right) after consulting with Herbert and Lou Henry Hoover.

The building was officially named the Hoover Institution of War, Revolution and Peace; when it was dedicated on 20 June 1941, WWII had already been raging in Europe for two years. One of the most iconic buildings on the Stanford campus, Hoover Tower, as the building is called today, would prove to be the last Bakewell and Brown design executed for the Stanford campus.

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[151] Vetrocq, "Stanford Before 1945," 96.

[152] Ibid.

[153] Ray Lyman Wilbur, President's Report of 1939, reprinted in Tilman, Arthur Brown, Junior, 220.

Stanford and World War II (1941 – 1945)

The country remained largely isolationist once World War II broke out in September 1939 after German Chancellor Adolf Hitler invaded Poland with German troops. America had not joined the League of Nations following WWI and therefore had no stake in supporting the Allied nations that responded to Hitler's growing military aggression in 1939. However, when the Japanese made a surprise attack on Pearl Harbor at dawn on 7 December 1941, most Americans underwent a sea change in opinion due to a sense of betrayal and outrage. The campus, like the rest of the country, was plunged at once into an all-consuming war effort that was characterized by legal restrictions and regimentation.[154]

Wilbur had originally been planning to retire in 1940, following twenty-four years of service as university president, but the Board of Trustees asked him to continue on until 1 January 1942, thus allowing him to "represent the University as its academic head during the ceremonies in celebration of the 50th Anniversary."[155] Wilbur agreed, becoming chancellor on 1 January 1942, and then acquiesced to a second extension until 1 September 1943 due to the war.

The Campus Transformed in Support of the War Effort

The campus community was immediately consumed by the war effort, which affected administration, faculty and students of both sexes.[156] Accommodations were made for both men and women, with men falling into two categories of those below the draft age of twenty-one—the draft between the ages of twenty-one and forty-five had been instituted in 1940—and those already enlisted. This latter group was further divided into those assigned for undergraduate training and those undergoing advanced and graduate instruction.

Men were encouraged to study mathematics, physics, chemistry, biology and engineering, in addition to one or more of eight specific foreign languages. The women were encouraged to study nursing, Red Cross, first aid, physical therapy and engineering that related to drafting and technical calculations.[157] Students were also encouraged to study all four quarters, to complete their education as quickly as possible. In February 1942, in cooperation with the War Department's Civilian Defense School, a series of classes were offered repeatedly on handling incendiary bombs, gas bombs and other civilian menaces.

The regular student body was joined by over 1,400 men in May 1943 taking part in the Army Specialized Training Program, which specialized in pre-engineering and engineering classes. Classes were extended to take place from 7:30 am until 11:30 pm, and by Fall 1943, total enrollment of students and military for the coming quarter was recorded at an all-time high of 5,324.[158] Quonset huts[Dem.] sprang up behind the Chemistry Building and Green Library to support this increase in students.

All of these military personnel needed to live somewhere and there was no nearby Camp Fremont where they might be bivouacked. Instead, all of the men's dormitories—Encina, Sequoia, Toyon and Branner—were occupied by students and soldiers-in-training. The fraternity houses were also used by military trainees and were renamed after various

[154] Mitchell, Stanford University, 141.

[155] Robinson, Memoirs of Ray Lyman Wilbur, 584.

[156] Mitchell, Stanford University, 142.

[157] Ibid., 145.

[158] Bartholomew, Chronology, 70.

American presidents for the duration of the war. Wilbur negotiated any structural changes or additions made to these buildings with the federal government paying the costs.

As the war progressed the Army began calling student soldiers to the two fronts; Army Specialized Training Program enrollments began to drop in March 1944 and by September 1944 overall enrollment had dropped down to 3,003 students. This comparative reduction prompted some to fear that Stanford might close for the duration of the war, but new university president Donald B. Tresidder, who assumed office on 1 September 1943, assured the community that the university would remain open.[159] By the end of the war in June 1945, nearly 12,000 Army personnel—including sixty women—had been housed on campus and took part in the Army Specialized Training Program, the Civil Affairs Training School, the Women's Army Corps Physical Training School or the Civil Communications Intelligence School.

Preparing for the Post-War Era

Tresidder's background was unusual for a university president, as he was not an academic but a businessman; he had run Camp Curry at Yosemite National Park since 1927.[160] When constructing the Ahwahnee Hotel Tresidder hired friend and architect Edward "Ted" Spencer to be the one-man planning department.[161] Both men learned the value of long-term planning from this challenging project and when Tresidder faced the need for long-range planning at Stanford in 1943, he didn't hesitate to hire Spencer on as Stanford's first planning director. Spencer, who also continued running his successful San Francisco-based architectural firm, agreed to take the job on a part-time basis.

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[159] Bartholomew, Chronology, 70.

[160] Kiester, Donald B. Tresidder, 30-34, 43.

[161] Keith S. Walklet, The Ahwahnee: Yosemite's Grand Hotel (Yosemite National Park, CA: DNC Parks and Resorts of Yosemite, Inc., 2004), 28.

The Post-war Campus (1945 – 1975)

Tresidder took the unprecedented step of establishing a planning office for a university; having weathered Yosemite's growth over the preceding two decades and acutely aware that Stanford now faced a similar experience, he was convinced that long-range planning was the only solution. Before the war's end, Spencer produced a report that incorporated enrollment projections, dormitory needs, and efficient use of classroom and laboratory space.[162]

Modernizing the Campus

In addition to Spencer, another significant hire made by Tresidder was Stanford alumnus Alf Brandin as the new Business Manager in 1946.[163] Brandin was tasked with financing all of the campus responsibilities, and he believed that income could be had from a different use of Stanford land previously devoted to agricultural leases. While focusing on the most immediate project—dealing with the projected return of the students—Brandin also began thinking very hard about developing lands that could not be sold.[164] His initial two ideas were the creation of a shopping center and an industrial park on Stanford lands; while the two projects took several years into the 1950s to fully develop, they received Tresidder's whole-hearted support from the beginning.[165]

Housing students was one of the most urgent considerations. The number of students had crept up each quarter after the war starting with Fall 1945 and by Fall 1946, Stanford expected to register 7,000 students while only having enough housing for 4,000.[166] The situation was aggravated by a new type of student—the married veteran who would be bringing his wife and children with him. While the tuition that poured into Stanford's coffers courtesy of the GI Bill was a welcome and much-needed infusion of cash, building materials remained in short supply.

Tresidder solved the immediate problem of married student housing by tasking Thomas Spragens, Stanford's first official representative in Washington, DC, to negotiate for surplus land created by the closure of the Dibble Army Hospital, located on the former Timothy Hopkins estate in Menlo Park. Dubbed the Stanford Village,[Dem.] the university spent $500,000 on seven weeks of renovations to convert army barracks into apartments. On 19 September 1946, 1,073 single men, eighty-four single women, and seventy-eight married but childless couples moved in even as carpenters and plumbers were still at work. On 11 October 1946, the first of 300 families also moved in. While the long-term goal was to bring the majority of students to reside on the campus, the Stanford Village complex supplied a successful short-term solution to a pressing problem.

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[162] Kiester, *Donald B. Tresidder*, 74-75.

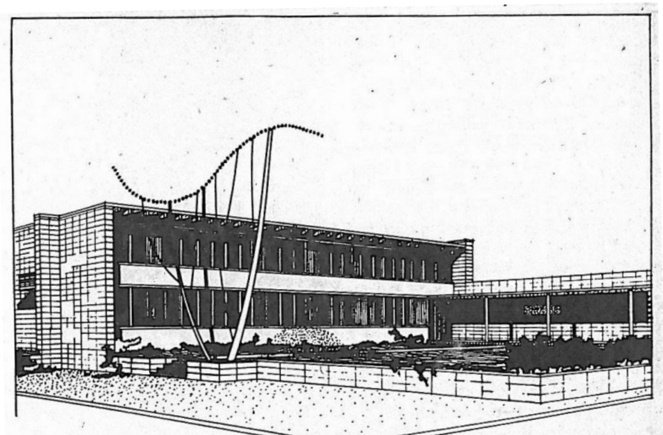
[163] Brandin had attended Stanford beginning in Fall 1932. He and a group of friends coaxed a horse into another student's room in Encina Hall, a well-publicized prank that earned the boys 100 hours of community service. Brandin was an alumnus active in fund raising before serving in WWII. Robert de Roos, "Oral History with Alf Brandin," (12 June 1987), unpaginated, Stanford Oral History Project Interviews: 1971-1995, SC1017, Box 8, SUA.

[164] One source of outside income pursued by both Tresidder and Dean of Engineering Frederick Terman was that derived from academic research combined with West Coast industry. Tresidder and Terman had corresponded throughout the end of the war—Terman was working on the East Coast on war leave—about the potential for expanding and modernizing the university through the creation of the Stanford Research Institute in November 1946, which would potentially attract top flight scientists to the university and would generate West Coast industry shaped by academic research. The proposed industrial park was another expression of this kind of symbiotic thinking. Kiester, *Donald B. Tresidder*, 86-87.

[165] Kiester, *Donald B. Tresidder*, 92.

[166] Kiester, *Donald B. Tresidder*, 70.

In April 1946, just months before the arrangements for Stanford Village were finalized, alumnus and former Board of Trustee Judge George C. Crothers gave Stanford a gift of $125,000 to build Crothers Hall,[Ext.] a men's dormitory slated to house forty male graduate law students.[167] With Tresidder's support, campus architect Spencer proposed a Modern design. Crothers objected strenuously to Spencer's Modern design and by October 1947 Spencer had modified his original drawing to reflect the changes Crothers wanted, specifically buff-colored walls, a reduction in glass surfaces and a sloping red tile roof.[168] Tresidder's intention to harmonize Modern architecture with Stanford's traditional styles had failed the first test. Spencer's first attempt to bring Modernism to the Stanford campus had been stopped in its tracks and the result looked very much like a typical Bakewell and Brown design, with Crothers's preferences prevailing as donor of the building.



Spencer's original design for Crothers Hall (left) and the final design used (right)

Tresidder died unexpectedly at the age of fifty-three of a heart attack on 28 January 1948 while staying in New York City to attend a meeting. The entire campus community was shocked by the sudden loss of a man whose long-term vision for modernizing the university had just started to take shape. An immediate search began for a new president.

Resistance to Modernism

Spencer in May 1948 presented "Stanford Builds," an exhibit about campus planning prepared to coincide with the annual Stanford Alumni Conference.[169] With this exhibit, Spencer intended to show the Stanford community the direction he felt planning at Stanford was going to take. While he approved of the Olmsted Plan's adherence to quadrangular expansion, because it was "…an ideal solution for housing the academic programs and…a perfect expression for this arid climate and earthquake terrain," he had no intention of replicating historical architectural styles.[170] Spencer believed firmly in modern construction that utilized the latest technology with style a secondary

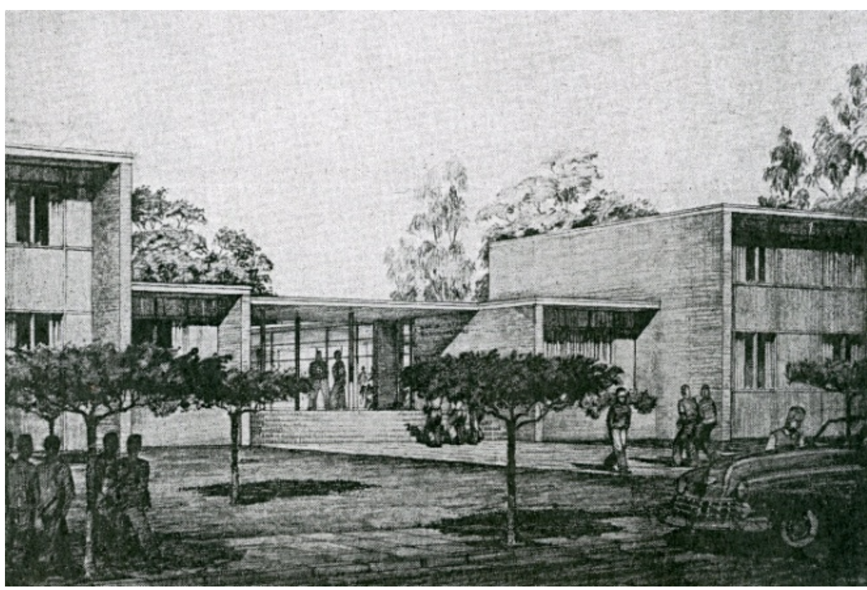
[167] "Judge George Crothers Donates $125,000 for Construction of Dormitory for Forty Law Students," *Stanford Alumni Review* (April 1946), 9.

[168] "Crothers Hall Begun," *Stanford Alumni Review* (October 1947), 5.

[169] Warnecke, "Stanford's Architecture," 1.

[170] Pearson, "Beyond Sandstone and Tile," 3.

consideration. His six principles for campus planning were: 1) Physical environment is recognized as a major influence on the life of man and on his institutions, 2) the Inner Quadrangle will continue to be the heart of the university, 3) the basic relationship of the land to the functions of the University will be preserved, 4) the basis of the University's circulation will be a system of concentric roads, 5) architectural unity will be achieved by form, not by recreating former styles, and 6) the University will provide adequate housing facilities for the major part of its students and staff.[171]



Spencer's conceptual drawing for Stern Hall exhibited in "Stanford Builds" in 1948

It was the fifth principle, one that had already been lost in the design battle over Crothers Hall, that Spencer intended to hold fast to in the subsequent creation of a new men's dormitory known as Stern Hall.[Ext.] It was built in stages with Phase One completed in 1949, Phase Two in 1956 and Phase Three in 1959. The reason for the staggered implementation was financial; donor Lucie Stern had willed $400,000 to Stanford University to build a men's dormitory but the final cost of Stern Hall was $3,233,000, with the Stern Estate ultimately paying half the cost.[172] Stern Hall was designed by Spencer and his partner, William Clement Ambrose; two junior partners, Wesley A. Talley and Alton S. Lee, may have also worked on the project.[173] Alumni showed their derision for the gray-walled and flat-roofed complex by posting a Chevrolet Body Plant sign next to the structure. The exterior walls were eventually painted a buff color.

Most people, particularly university alumni, "did not see the quadrangular form as enough to unite the Modern style of the new buildings with older buildings on campus."[174] A firestorm of controversy broke out, with alumni asking the Board of Trustees to change Stern's design. They demurred, insisting it was too late for revisions. However, the topic refused to die down, and one of the trustees, John E. Cushing, asked son-in-law and architect John Carl Warnecke to

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[171] Pearson, "Beyond Sandstone and Tile," 2.

[172] Yi-Ren Ng, "Balancing Fashion and Function: The Modern Design of Stern Hall" (December 1977), 2, unpublished manuscript, SUA.

[173] Stern Hall drawings (1948, 1955, 1958), Maps and Records, Stanford University.

[174] Pearson, 4.

weigh in on the conflict.[175] Warnecke was an active Stanford alumnus who had earned an undergraduate degree in 1941—after playing varsity tackle on the undefeated 1940 "Wow Boys" Rose Bowl football team—and an additional Bachelor of Architecture in 1942 at Harvard on an Architectural Scholarship. Warnecke was keenly aware of the controversy but loath to comment due to his friendship with Spencer. However, he rationalized that he could leave out personalities and focus on maintaining a professional point of view.

Warnecke noted that until recently, it was generally believed that "the architecture at Stanford would take care of itself," based on Bakewell and Brown's long-term successful integration of what both Warnecke and Spencer referred to as "Transitional" architecture. Warnecke, who had worked an internship with Arthur Brown, Junior, believed that this was because Bakewell and Brown had created contextual buildings that "incorporated in their designs the use of the red tile roofs and the buff-colored walls ….which harmonized the new with the old."[176] The inclusion of the buff-colored walls and—as the single most important common denominator, the sloping red-tiled roofs—provided the emotional connection alumni and other campus community members derived from viewing the buildings on a daily basis. Warnecke believed that as long as this emotional connection was maintained any style of architecture would work. Therefore, he advised the continued utilization of buff-colored walls and sloping red-tiled roofs; in June 1949, the Board concurred and deemed that "any future building should, so far as possible, blend and harmonize with the original buildings to form a pleasing whole."[177]

President Sterling and the Expansion of the Cold War Campus

On 7 October 1949, J.E. Wallace Sterling was inaugurated in Frost Amphitheater as Stanford's fifth president. The Canadian-born history professor—he had earned his Ph.D. in history at Stanford in 1938—would oversee more campus construction than any of the previous presidents in his subsequent nineteen-year-long term. Sterling, in close alliance with Dean of Engineering Frederick Terman—whom he would make provost in 1955—would work tirelessly to promote Stanford as a world-class university; the two men's personalities complemented one another with Sterling providing the charm and Terman the single-minded focus.[178] One of the best examples of their efforts was the realization of the Stanford Industrial Park.[179]

Skidmore, Owings and Merrill were hired in 1953 to prepare a master campus plan. They concurred with the industrial park and the shopping center as well—the sixty-acre plan had already been announced to the public—and also recommended homes for 40,000 people on 2,933 acres.[180] The Committee on Land and Building Development, which had been established by Sterling in 1951 and consisted of faculty and administrators, studied the report and recommended that more land needed to be set aside for future academic use. In 1934 the Board of Trustees set aside 1,022 acres for academic reserve; in 1954 the number was increased to 3,218 acres and enlarged again in 1960 to 4,800 acres.[181]

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[175] Warnecke, "Stanford's Architecture," c.

[176] Warnecke, "Stanford's Architecture," 24.

[177] Bartholomew, *Chronology*, 74.

[178] Gillmor, *Fred Terman at Stanford*, 427-428.

[179] The Stanford Industrial Park was renamed the Stanford Research Park in 1984; it continues to operate under that name today.

[180] Gillmor, *Fred Terman at Stanford*, 324.

[181] The Board of Trustees decided in 1974 to also place the foothills in academic reserve. Gillmor, *Fred Terman at Stanford*, 326; and Bartholomew, *Chronology*, 75.

While housing for faculty and staff was limited by these decisions, student housing remained a priority. Drawings show the new women's dormitory, Florence Moore Hall,[Ext.] placed southeast of Roble Hall and north of the Knoll.[182] By 1953, plans were made to also build Wilbur Hall,[Ext.] Crothers Memorial Hall[Ext.] and to add on to Stern Hall, all located on the men's east side of the campus.[183] Dormitories were still restricted to two stories in height, to hold buildings in scale with the Main Quadrangle and because the prevailing belief that there was plenty of land still available for residential housing.[184]

Escondido Village,[P.Dem.] the first on-campus married student housing intended to replace the temporary converted hospital barracks at Stanford Village, was placed on the far northeastern side of campus. The first phase – a one and two-story apartment complex -- was laid out on the advice of Lewis Mumford, who instigated an asymmetrical layout in juxtaposition to the Stanford Village's military precision. The architecture was Modern but countered the brutal concrete of Stern Hall with the softer, woody Second Bay Tradition espoused by William Wurster of Wurster, Bernardi and Emmons in San Francisco.[185]

Escondido Village continued to expand in the 1970s, Phase 2 and 3 shown in an artist's rendering

Breaking Down the Olmsted Plan

An expansion of space originally conceived as the Student Activities Center, White Memorial Plaza was named in memory of William Nicholas White and John Barber White II, two brothers from the class of 1949.[186] The large area was fronted by several different buildings. Two of these were the new post office and bookstore,[Ext.] designed in the Modern style by John Carl Warnecke in 1960.

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182 Eldridge T. Spencer, "Expansion of Housing for Women," Stanford University Committee on Land and Building Development, SC813, B.1, F.1, SUA.

183 Bartholomew, *Chronology*, 77.

184 The two-story concept was not going to last much longer; the 1956 and 1959 additions made to Stern Hall ultimately ended up being three stories high due to rising student enrollment.

185 Wurster, Bernardi and Emmons had already designed the Center for Advanced Study in Behavioral Sciences, an independent research center located on the old Charles Lathrop estate, Alta Vista, in the foothills in 1954.

186 Bartholomew, *Chronology*, 87-88.

Spencer had already developed a plan for campus center back in 1952; his version placed the projected new student union, to be named after Donald Tresidder, parallel to the south side of the Old Union and in the shape of a traditional rectangular building.[187] By 1962, when the Tresidder Memorial Union[Ext.] was completed, it had been pushed southwest and assumed a sprawling Modern asymmetrical shape.

Tresidder Memorial Union

Rapid Expansion of Science and Engineering to the West

Spencer made numerous contributions to the development of the Science Quadrangle; his firm designed several buildings sited there between 1948 and 1958. These include the Salvatori Geophysics Lab,[Dem.] the Noble Petroleum Engineering Lab,[Dem.] the Applied Electronics Lab,[Dem.] the Electronics Research Lab,[Dem.] the High Energy Physics Lab[Dem.] and the microwave lab.[Dem.][188] Most of these buildings displayed a simple, stripped-down style, evocative of Modern functionalism. They were also remarkably inexpensive to construct. Spencer wanted the Science Quadrangle to be limited to pedestrian traffic but much of the area was devoted to parking lots and service yards and the landscaping was not maintained on a level with the rest of the campus. Another intention was to connect the buildings with covered walkways, which would have referenced the arcades, but this effort also met only limited success.[189]

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[187] Eldridge T. Spencer, “Student Activities Area,” SC813, B.1, F.1, SUA.

[188] Pearson, “Beyond Sandstone and Tile,” 7.

[189] Pearson, “Beyond Sandstone and Tile,” 8.

Electronics Research Lab and High Energy Physics

Campus Unrest and Upheaval

In 1963, some six months after the Tresidder Memorial Union was completed, Stanford added fallout shelters in response to the Cuban Missile Crisis that had occurred in October 1962. Basements stocked with survival supplies intended to supply two weeks of shelter for some 6,800 people are denoted by black and yellow civil defense signs.[190] The fallout shelters were part of a nationwide civil defense program and were financed by the federal government.

The national women's liberation movement also arrived on campus. In 1967 women students demanded the right to live off-campus—male students have been able to live off-campus for years while women students remained subject to house mothers and curfews. New co-ed residences with increasingly lax restrictions soon become the norm on campus, with numerous fraternities opting out of their national organizations in order to facilitate living with women.[191]

Sterling announced his upcoming retirement in March 1967 and in July his office was destroyed by arson, an increasingly common event on the campus as student protests continued to intensify. The day-to-day living conditions on campus were dominated by student and faculty activism, with sit-ins and other protests occurring regularly over issues such as student deferments, Stanford's teaching curriculum, the Vietnam War, the presence of the ROTC, the environment, a lack of diversity in the student population, and Stanford's acceptance of military contracts. Sterling was succeeded by Kenneth Pitzer, a chemist and former president of Rice University, who was appointed on 19 August 1968.[192] Pitzer was overwhelmed with the chaotic campus conditions and was forced to resign within nineteen months.

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[190] Bartholomew, *Chronology*, 85-86.

[191] Between 1961 and 1967 several Stanford fraternities broke with their national affiliations to support African American and Jewish students joining the previously all-white groups. Bartholomew, *Chronology*, 84, 90, 92.

[192] Bartholomew, *Chronology*, 96-97.

Pitzer was succeeded by Stanford provost and professor of contemporary British history, Richard W. Lyman on 24 September 1970.[193] Lyman dealt with two more years of political unrest with the crescendo peaking in 1972; numerous anti-war protests took place that year and a fire attributed to arson caused $1,000,000 in damage to parts of Encina Hall where administrative offices were located.[194] Beginning in 1973 the campus gradually assumed a more peaceful pace.

In March 1974 the Board of Trustees voted to restrict the campus foothills to academic use, overturning the previous interpretation of the outlying lands being available for commercial development to provide financial income. Instead, the lands would remain open and subject to "possible low-intensity educational uses that respect the environment and leave ridge lines and hilltops free of structures."[195] Olmsted's vision of a "residential community of scholars, with students in small living groups located in close proximity to faculty and academic facilities" was noted as a principle concept, despite the acknowledgement of its current imperfections.[196] Growth over the past fifteen years was reviewed with the Medical Center, SLAC, astrophysics and the Jasper Ridge Biological Preserve being specifically mentioned. The point being made was that the overall purpose of the Stanford land endowment was "to provide adequate land, on a continually renewing basis, for facilities and space for the instructional and research activities of the University."[197]

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[193] Bartholomew, *Chronology*, 104.

[194] Bartholomew, *Chronology*, 108-109.

[195] Bartholomew, *Chronology*, 112.

[196] "Stanford Land Use-An Overview of Policy Determinants," University Committee on Land and Building Development (9 January 1974), 2, SC813, B.3, F.1, SUA.

[197] Ibid., 13.

3: REGIONAL CONTEXT – COLLEGIATE ARCHITECTURE IN THE SAN FRANCISCO BAY AREA

This chapter establishes the context for evaluating Stanford's academic buildings: the development of collegiate architecture in the San Francisco Bay Area. Stanford University is one of more than 70 institutions of higher education in the region and shares a common mission, and common property types, with its sister institutions. The nine-county San Francisco Bay Area was selected as a geographic context because 1) it is a geographic unit recognized by local, state and federal agencies, 2) it has a social cohesion created by patterns of residence, recreation and employment that tie the region's communities to each other, and 3) it is a manageable sample for comparative purposes. The 275 colleges and universities located throughout the State of California were considered to provide too large a comparison set, and the dozen in Santa Clara County to provide too small a comparison set. This regional perspective captures the range of institutional types: state colleges and universities, community colleges, private sectarian institutions, for-profit professional schools, and private colleges and universities of varying scales. Fine architecture, influenced by common trends and in many instances common architects, can be found in all types of colleges and universities.

A broad look at the region's campuses is provided below, after a brief general discussion of collegiate architecture.

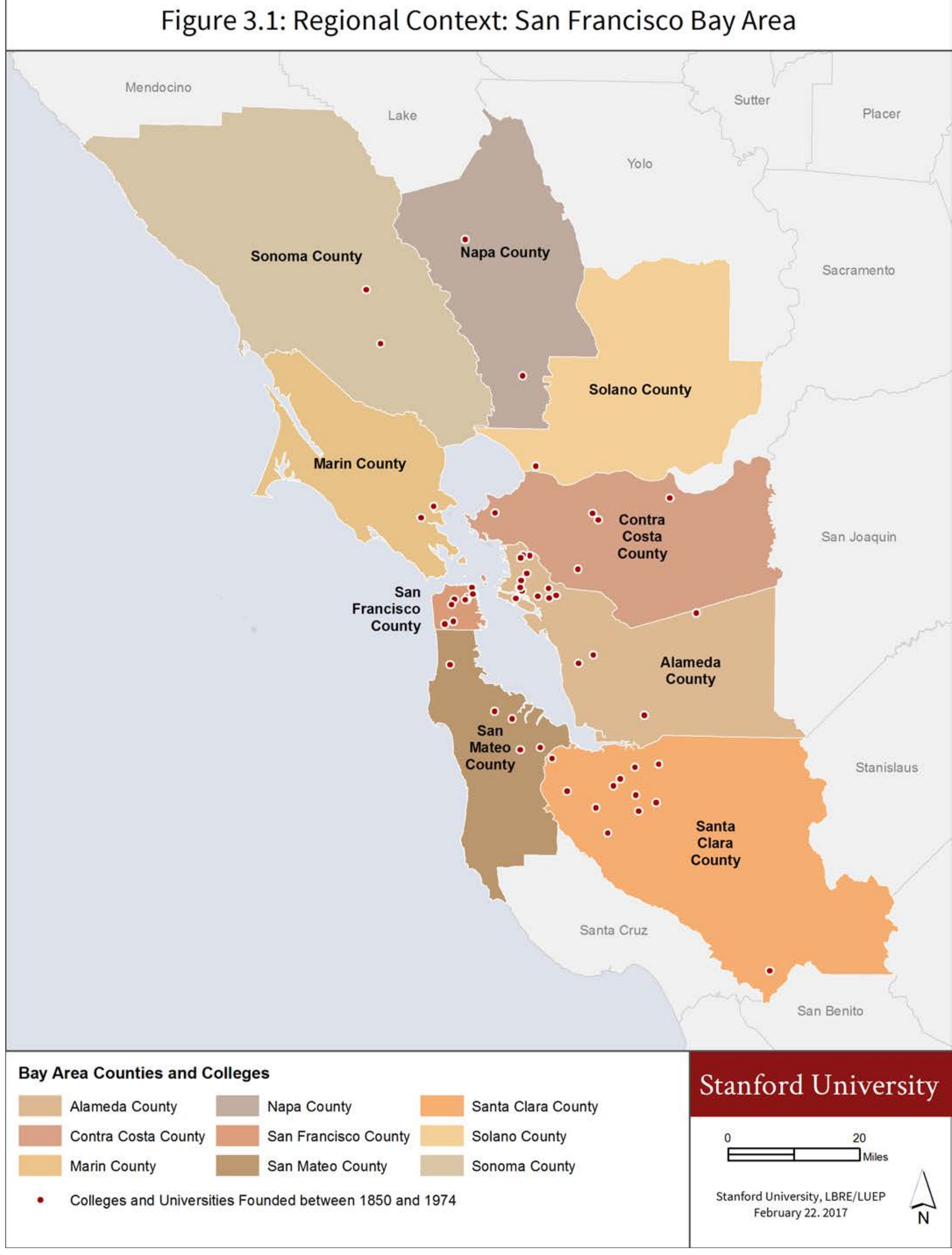
Figure 3.1: Regional Context: San Francisco Bay Area
Mendocino
Lake
Sutter
Placer
Yolo
Sacramento
Sonoma County
Napa County
Solano County
Marin County
Contra
Costa
County
San Joaquin
San
Francisco
County
Alameda
County
San
Mateo
County
Stanislaus
Santa
Clara
County
Santa Cruz
San Benito
Bay Area Counties and Colleges
Alameda County
Contra Costa County
Marin County
Napa County
San Francisco County
San Mateo County
Santa Clara County
Solano County
Sonoma County
Colleges and Universities Founded between 1850 and 1974
Stanford University
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Miles
Stanford University, LBRE/LUEP
February 22. 2017
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Collegiate Architecture

Strictly speaking, colleges and universities are not exactly the same kinds of institutions. A college can be a stand-alone institution providing a liberal arts education or specialized technical degree (for example, a college of nursing or dentistry), generally only granting undergraduate degrees. A university can be organized as a collection of colleges (or it may be organized onto "schools") and has graduate as well as undergraduate programs and degrees. Architecturally there may be subtle differences in plan but generally colleges and universities share a common list of property types and popular styles. The scholarly literature on architecture in higher education commonly uses "collegiate" to refer to various styles and we adopt that convention here.

European Examples

While American colleges and universities differ in some important ways from older European institutions, there is no doubt that these ancient colleges and universities were important models for the development of higher education, first in the British colonies and then the United States.[1] During the colonial period, immigrant alumni of the universities of Great Britain – Oxford and Cambridge in particular – established the earliest colleges in North America.[2] These early institutions were by-and-large intended to provide classical and theological education to the sons of the elite. In the 19th century, some American institutions adopted elements of German higher education, in particular the focus on natural sciences and engineering. Here we are concerned mainly with the architectural expressions associated with the pursuit of knowledge; European archetypes were widely copied throughout the United States and were the "root" of many collegiate architectural styles.

University of Bologna (founded 1088)

Cambridge University (founded 1209)

Humboldt University, Berlin (founded 1810)

University of Salamanca (founded 1218)

Some major European universities

Medieval Gothic and Tudor architecture inspired the “Collegiate Gothic” style, particularly popular among private colleges founded by Protestant congregations.[3] The Georgian architectural styles of Great Britain, transferred to the American colonies in the 18th century, spawned the Georgian style of the first colleges in the New World built during that period, but also a “Collegiate Georgian” or “Colonial Revival” style that is ubiquitous in the United States.

The curricular focus on ancient languages and literature influenced collegiate architecture as well in the Greek Revival, Romanesque Revival and Classical Revival styles.[4]

Collegiate Georgian/Colonial Revival Architecture

Harvard College, founded in 1636, is the oldest institution of higher education in the U.S. Harvard’s oldest surviving building, completed in 1720, is Massachusetts Hall. The oldest academic building in the United States is Wren Hall at the College of William and Mary in Virginia, completed in 1700 (and rebuilt three times after being damaged by fire). The building was constructed of locally produced red brick in Georgian style.[5]

Massachusetts Hall,
Harvard University (1720)

Wren Hall,
College of William and Mary (1700)

Early American universities of the British Colonial period

These early prototypes are the foundations of “Collegiate Georgian” or “Colonial Revival” campus buildings throughout the United States emerging after the 1876 Centennial Exhibition in Philadelphia, and continuing in popularity through the first half of the 20th Century. [6] Strongly symmetrical, often constructed in red brick, and commonly sporting the dormered roofline and/or a small central tower, this style is widespread in areas of the country where brick is a common construction material.

Southern Methodist University (Dallas)

Oklahoma State University (Stillwater)

Colonial Revival examples

Classical Revival

Thomas Jefferson, who attended the College of William and Mary, designed the campus of the University of Virginia in Neoclassical style in 1820. Together with Jefferson's home at Monticello the campus became a World Heritage Site in 1987. Greek Revival campus buildings inspired by classical buildings in Europe were particularly popular following Jefferson's example, in the first half of the 19th century. A second wave of Classical Revival academic buildings emerged at the turn of the century, following the great success of the style at the Columbian Exposition in Chicago in 1892.

University of Virginia (1820)

University of North Carolina, Chapel Hill (1851)

Early Classical Revival examples

Classical Revival elements, particularly the triangular pediment supported by columns, were often combined with Colonial Revival elements. These hybrid forms are particularly common in “Greek” society fraternity and sorority houses on American campuses.

University of Minnesota

University of Indiana

Eclectic Classical Revival Greek houses

Gothic Revival

Many of the great universities of Europe have medieval buildings constructed in the Gothic style, whose most universal feature is the pointed arch. Towers, crenellated parapets, exaggerated quoins and other castle and cathedral inspired features were particularly popular in the 19th century revival of Gothic in Europe as well as North America.

All Souls College, Oxford (est. 1438)

University of Glasgow, Scotland (est. 1451)

Gothic universities

University of Chicago (est. 1890)

Princeton University (est. 1746)

Yale University (est. 1701)

Duke University (est. 1892)

Gothic Revival examples

Thematically related Tudor Revival fraternity and sorority houses belong in this family of buildings inspired by medieval Europe.

University of Oregon

University of Michigan

Tudor Revival Greek houses

Second Empire/Baroque Revival Architecture

Romantic picturesque styles of central Europe became popular in the 19th century as members of the American elite did the "Grand Tour" of Europe to acquire taste and culture. In Europe during this period this style was "modern" architecture especially popular for large civic buildings. These elaborate and expensive buildings enjoyed a brief vogue on American campuses. The signature elements of Second Empire style are the steeply sloping mansard roof (often covered with slate tiles) and elaborate window crowns.

University of Paris (La Sorbonne) (est. 1253).
Chapel in center circa 1642, side wings 1889.

Vassar College (1861)

French Second Empire examples

A contemporary variation of Baroque Revival particularly popular in the United States during this period was known as "Italianate" style. Inspired by Italian Renaissance forms, Italianate style emerged in Great Britain in the early 19th century and spread to the United States where it remained popular for decades.

Samford Hall, Auburn University (1887)

Science Hall, University of Wisconsin (1887)

Italianate examples

Romanesque Revival was another Baroque Revival form, similarly invested in towers and ornament with the signature addition of arched openings and rustic stonework. Popularized by Boston architect Henry Hobson Richardson, Romanesque Revival combined an eclectic series of European-inspired elements into new combinations and forms considered quite “modern” at the time.

Maxwell Hall, University of Indiana (1890)

Powell Library, UCLA (1929)

Romanesque Revival examples

Beaux-Arts/Arts and Crafts

The Beaux-Arts movement refers to principles taught at the most influential art and architecture school of the late 19th Century – École des Beaux-Arts in Paris, France. Beaux-Arts is both an urban planning movement and a series of related architectural styles. The school favored formal, classically inspired styles encompassing a diverse range of design elements; hundreds of American architects studied at the school and brought back French ideas about urbanism and architecture to the United States.[7] Beaux-Arts was the dominant style for the grand expositions in Philadelphia (1876), Chicago (1893) and St. Louis (1904) and had a strong influence on many college campuses during this period.

In the same period the Arts and Crafts movement emerged in Great Britain, celebrating master craftsmanship in response to the emerging industrial age. Arts and Crafts is best known for elaborately crafted and rustic interior design and decorative arts celebrating the beauty of nature and a romantic vision of a rural pre-industrial past. The movement influenced architecture by promoting the value of master craftsmanship in construction details, introducing a fashion for elaborate plant and flower motifs taken up by Beaux-Arts architects, and spawning the “Craftsman” style of romantic rustic architecture in the United States.

Doe Memorial Library, UC Berkeley (1911)

College of Fine Arts, Carnegie Mellon University (1900)

Beaux-Arts examples

Art Deco

New architectural trends accompanied the turn of the century. While Beaux-Arts continued to dominate higher education well into the 20th century, the "Streamline Moderne" variant of Art Deco appeared on many campuses.

University of Montreal (1924-43)

E52 Massachusetts Institute of Technology (1938)

Art Deco examples

Modern

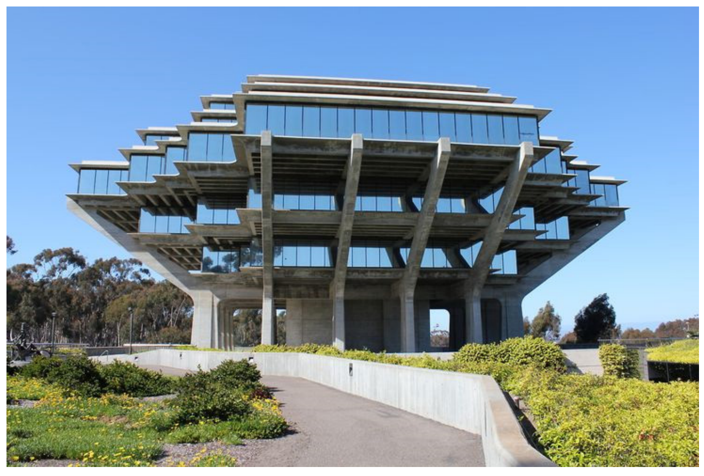
Modern architecture arrived on college and university campuses beginning in a small way in the late 1930s but expanding rapidly after World War II and during the Cold War. Great architects fled Europe and arrived in America looking for work, creating the dramatic walls of glass associated with the "International Style." American architects adapted the new construction technologies and style in the post-War boom. Visually the a-historic, austere Modernist style summed up the new American self-image: rational, efficient and confident.[8]

School of Social Service Administration,
University of Chicago (1965)

Art Gallery, Yale University (1953)

International Style examples

Another Modernist style was widely adopted on college campuses in this period, known as Brutalism (and often adopted for Schools of Architecture). Brutalist architecture derived its name not from its harsh appearance but from a French term *béton brut*, which means raw concrete.[9] Brutalism's honesty of form and materials imparts a raw and sometimes sculptural appearance. The inflexibility and cold, fortress-like appearance of Brutalism has attracted controversy on many campuses.

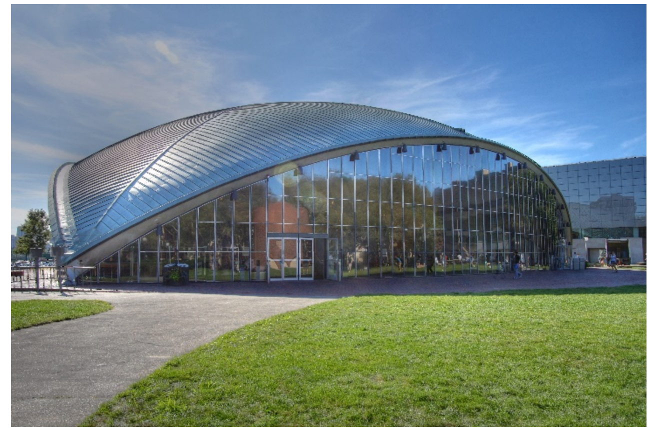


Geisel Library, UC San Diego (1970)

University Centre, Cambridge (1967)

Brutalist examples

Expressionism exploited the potential of new building technologies to create original forms that convey emotion or inner experiences. Often adopted for chapels and performance halls, Expressionist buildings generally stand alone as "objects" on a college campus.



Kresge Auditorium, MIT (1955)

Chapel, US Air Force Academy (1962)

Expressionist examples

Summary

Collegiate architecture in the United States often looked to Europe for inspiration, and at times imitated European styles faithfully. American architects also deliberately combined historicist elements in a more eclectic fashion to achieve original effects. Regional variations in style, based on differences in regional history (former colonies of Great Britain differing from former colonies of France or Spain, for example) and climate were also important in shaping collegiate architecture. College leaders, patrons and alumni also had strong influence on architectural styles.

Collegiate Architecture in the San Francisco Bay Area

The San Francisco Bay Area had easy access to lumber and stone, a mild climate, and a dynamic, diverse and egalitarian population. The colleges and universities of the Bay Area often adopted national and international architectural styles – there are buildings at Bay Area campuses that would not be out of place in Paris or Pittsburgh. However, regionalism also flourished and produced great campus buildings and distinctive California styles. Stanford's iconic Main Quadrangle with its synthesis of California Mission and Richardsonian Romanesque, Bernard Maybeck and Julia Morgan's California Arts and Crafts buildings at UC Berkeley and Mills College, and the woody modernism of Second Bay Tradition exemplify this regionalism in collegiate architecture.

The following section presents an overview of the development of higher education in the San Francisco Bay Area, and its expression in collegiate architecture. The treatment is not exhaustive by any means, but seeks to identify trends and place the Stanford University campus within its regional setting. While there are isolated examples of nearly every collegiate style mentioned above in the region, our review concentrates on the most prevalent forms. For example, there are a handful of collegiate Gothic Revival buildings in the study area but the style didn't "catch on" in California the way that Spanish Colonial Revival did. Similarly, while there are Tudor Revival fraternity and sorority houses sprinkled around Bay Area campuses there are very few Tudor Revival buildings in comparison to other regions of the United States. Thus these do not represent important styles in the regional context.

The information on specific campuses was largely gleaned from their official websites. In each era, the institutions are presented in the order they were founded, with a focus on surviving major academic buildings. Buildings that have been demolished are not presented. Newly founded institutions are presented in a separate table in each period. Examples of buildings that exemplify each theme and its associated styles are provided for illustrative purposes.

Higher Education in the San Francisco Bay Area

There are currently more than 275 colleges and universities operating in California.[10] Today, in the nine-county San Francisco Bay Area, there are 71 colleges and universities offering a wide variety of degree programs.[11] The state's first colleges opened in 1851: Santa Clara College (now Santa Clara University), the College of Notre Dame (relocated to Belmont in 1922) and the University of the Pacific (relocated to Stockton in 1924). Minn's Evening Normal School, which became San Jose State University, was founded in 1857. Mill's College (1852) and the University of San Francisco (as St. Ignatius Academy – 1855) were also founded in this first decade of statehood. California's first state university, UC Berkeley, was founded in 1868. [12]

By the time of Stanford University's opening in 1891 there were at least ten colleges and universities in the San Francisco Bay Area, concentrated in the vicinities of Berkeley, Oakland and San Jose. The San Francisco Peninsula was notably lacking in higher education opportunities. Stanford University, located on the far northern border of Santa Clara County, filled the gap between San Francisco and Santa Clara and San Jose.

Pioneering Campuses (1850 – 1874)

Ten colleges were founded in the San Francisco Bay Area between 1850 and 1874. Many of the early colleges relocated and only a handful of campus buildings from this era have survived. Figure 3.2 shows the location of these institutions in 1874 (some of them had relocated at least once during the period). Table 3.1 presents the chronological sequence of college founding and the survival of campus buildings from this early era.

Figure 3.2: San Francisco Bay Area Colleges Founded between 1850 and 1874

Bay Area Colleges Founded between 1850 and 1874

Berkeley
- UC Berkeley (UCB)

San Francisco
- Pacific School of Religion (PSR)
- Saint Mary's College of California (SMCC)
- UC San Francisco (UCSF)
- University of San Francisco (USF)

Oakland
- Mills College (MC)
- Holy Names University (HNU)

San Jose
- Notre Dame de Namur University (NDNU)
- San Jose State University (SJSU)

Santa Clara
- Santa Clara University (SCU)

Stanford University

0 20 Miles

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Stanford University, LBRE/LUEP
February 22. 2017

Table 3.1: San Francisco Bay Area Colleges and Universities, Surviving Facilities Constructed 1850 - 1874

Present name	Present location	Historical name	Founding date	Original location	Surviving buildings from this period
Santa Clara University	Santa Clara, Santa Clara County	Santa Clara College	1851	Yes	No
Notre Dame de Namur University	Belmont, San Mateo County	College of Notre Dame	1851	No, moved from San Jose in 1922	No
Mills College	Oakland, Alameda County	Young Ladies Seminary	1852	No, moved from Benicia in 1871	Mills Hall (1871)
University of San Francisco	San Francisco, San Francisco County	St. Ignatius Academy	1855	No, moved within San Francisco in 1927	No
San Jose State University	San Jose, Santa Clara County	Minn's Evening Normal School	1857	Moved from San Francisco in 1871	No
St. Mary's College	Moraga, Contra Costa County	St Mary's College	1863	Moved twice (San Francisco, Oakland), to current location in 1928	No
Pacific School of Religion	Berkeley, Alameda County	Pacific Theological Seminary	1866	Moved four times (San Francisco-Oakland-Berkeley), to its current location in 1926	No
Holy Names University	Oakland, Alameda County	Convent of Our Lady of the Sacred Heart	1868	Relocated within Oakland in 1957	No
University of California at Berkeley	Berkeley, Alameda County	College of California	1868	Relocated from Oakland, 1873	South Hall (1873)
UC San Francisco	San Francisco, San Francisco County	Medical Dept. of the University of California	1873	San Francisco, San Francisco County	No

The two surviving college buildings from this early era are located in Alameda County: South Hall at UC Berkeley and Mills Hall at Mills College. Both buildings are eclectic blends of Second Empire and Italianate styles, consistent with national trends in this period. Both are listed on the National Register of Historic Places.

South Hall, UC Berkeley (1873) Mills Hall, Mill College (1871)

Regional examples of Second Empire/Italianate collegiate architecture

Two other surviving early buildings, not originally constructed for educational uses, are located on campuses in the San Francisco Bay Area. Adobe Lodge at Santa Clara University was constructed in 1822 and is the only remaining adobe brick building at the site of the Mission Santa Clara de Asis. The building is Mission Style. Ralston Hall (1868) was a private home until it was acquired by the Sisters of Notre Dame de Namur in 1922. Ralston Hall is Italianate. Ralston Hall is listed on the National Register of Historic Places.

Adobe Lodge, Santa Clara University (1822)

Ralston Hall, Notre Dame de Namur University (1868)

Other early campus buildings in the region

Late Victorian Era (1875 – 1899)

While colleges and universities continued to be founded and to expand in the last quarter of the 19th century, many of the buildings constructed during this era were later demolished. Many colleges relocated after suffering damages in the 1906 earthquake and fire. San Francisco State Normal School had its first building on Nob Hill destroyed in 1906, as did the St. Ignatius Academy (later known as San Francisco University). UC Berkeley added a number of academic buildings during this period but later demolished them due to fire and/or earthquake hazards and to make room for newer buildings.[13] Figure 3.3 shows the locations of newly founded colleges and universities in 1899.

Table 3.2 shows that few if any major buildings survive from this period on previously founded campuses. Some Late Victorian houses subsequently converted to academic use or to house students survive on or near these campuses. Table 3.3 shows the newly founded campuses of the period which also suffered major losses and displacement after 1906. Stanford University, while suffering significant damage in 1906, retains the largest collection of Late Victorian collegiate buildings in the region.

Late Victorian architecture contains a wide variety of eclectic styles. Three styles are strongly represented on campuses in the San Francisco Bay Area: Shingle Style, Neoclassical, and the Romanesque Revival with Mission Influence that emerged at Stanford. Queen Anne style Victorian houses were also popular in this period but few examples have survived on campuses in the region. At Stanford, many Queen Anne boarding houses and sororities were later refashioned in simpler styles that were less expensive and easier to maintain than the elaborate wood trim that characterizes the style.

Stanford University, founded in 1891, completed more than 1 million square feet of academic buildings before the end of 1900. While the Stanford campus suffered major damage in the 1906 earthquake, and some major buildings and features were demolished, the majority of its early buildings have been preserved. A discussion of the architecture of Stanford follows below; generally, these early Stanford buildings are Richardsonian Romanesque with Mission Influence; however, the Stanford Museum was an exception displaying Classical Revival style. The eclectic Richardsonian Romanesque with Mission Influence style, constructed of sandstone quarried in south San Jose, was a strongly Californian expression in contrast to the more international forms favored at UC Berkeley for example.

Encina Hall, Stanford University (1891)

Stanford Museum, Stanford University (1891 wing)

Regional examples of Late Victorian collegiate architecture

Table 3.2: San Francisco Bay Area Colleges and Universities, Surviving Facilities Constructed 1876 – 1900 on Existing Campuses

Present name	Present location	Historical name	Founding date	Original location	Surviving buildings from this period
Santa Clara University	Santa Clara, Santa Clara County	Santa Clara College	1851	Yes	No
Notre Dame de Namur University	Belmont, San Mateo County	College of Notre Dame	1851	No, moved from San Jose in 1922	No
Mills College	Oakland, Alameda County	Young Ladies Seminary	1852	No, moved from Benicia in 1871	No
University of San Francisco	San Francisco	St. Ignatius Academy	1855	No, moved within San Francisco to current location in 1927	No
San Jose State University	San Jose, Santa Clara County	Minn's Evening Normal School	1857	Moved from San Francisco in 1871	No
St. Mary's College	Moraga, Contra Costa County	St Mary's College	1863	Moved twice (San Francisco, Oakland), to current location in 1928	No
Pacific School of Religion	Berkeley, Alameda County	Pacific Theological Seminary	1866	Moved four times (San Francisco-Oakland-Berkeley), to its current location in 1926	No
Holy Names University	Oakland, Alameda County	Convent of Our Lady of the Sacred Heart	1868	Relocated within Oakland in 1957	No
University of California at Berkeley	Berkeley, Alameda County	College of California	1868	Relocated from Oakland, 1873	No

Figure 3.3: San Francisco Bay Area Colleges Founded between 1875 and 1899

Bay Area Colleges Founded between 1875 and 1899

Healdsburg
- Pacific Union College (PUC)

Stanford
- Stanford University (SU)

San Rafael
- Dominican University of California (DUC)

San Francisco
- San Francisco State University (SFSU)
- UC Hastings College of the Law (UCHCL)

Stanford University

0 20 Miles

N

Stanford University, LBRE/LUEP
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Table 3.3: San Francisco Bay Area Colleges and Universities, Facilities Constructed 1876 – 1900 on Newly Founded Campuses

Present name	Present location	Historical name	Founding date	Original location	Surviving buildings from this period
UC Hastings College of the Law	San Francisco, San Francisco County		1878	Relocated several times within San Francisco	No
Pacific Union College	Angwin, Napa County	Healdsburg Academy	1882	Moved from Healdsburg in 1922	No
Dominican University	San Rafael, Marin County	Dominican College	1890 as a school; 1915 added junior college 1917 added 4-year college	Yes	Meadowlands Hall and Martin de Porres Hall (both built 1888, purchased 1918), Edgehill Mansion (built 1888, purchased 1920)
Stanford University	Santa Clara County	Leland Stanford, Jr. University	1891	Yes	Inner Quadrangle (1891), Museum (1891), Encina Hall (1891)
San Francisco State University	San Francisco, San Francisco County	San Francisco State Normal School	1899	Relocated within San Francisco twice, to current location 1953	No

Dominican University in Marin County acquired a summer estate home constructed by the De Young family in 1888, Meadowlands, in 1918. This fine example of Shingle style architecture houses 85 Dominican students and an assembly hall. The campus also acquired the Queen Anne Victorian Edgehill Mansion in 1920 which is used for religious programs and student organizations. These great houses, too, had a strongly regional character with extensive use of wood and expansive outdoor living spaces.

The Stanford University campus was constructed on the Palo Alto Stock Farm and a handful of farm buildings predating the founding of the university survive on the campus today. Some have been converted to academic uses. These buildings do not reflect the theme of collegiate architecture and are reviewed independently in Appendix C.

Meadowlands Hall, Dominican University (1888)

Edgehill, Dominican University (1888)

Regional examples of Shingle and Queen Anne collegiate architecture

Arts and Crafts (1900 – 1924)

The Arts and Crafts Movement arrived in the eastern United States with influential exhibitions of decorative arts in the late 1890s. Architecturally, the Arts and Crafts Movement favored medieval and rustic styles but the focus on finely crafted ornament had a strong presence on the more formal Beaux-Arts buildings of the era. The two movements were in philosophical tension. Arts and Crafts emerged out of opposition to industrialization in Great Britain and romanticized the preindustrial practices of guilds and master craftsmen, the dignity of hand work and a romantic reinterpretation of rural life (juxtaposed with the crowded, dirty, dangerous factories of the emerging industrial cities). The movement is strongly associated with the emergence of socialism in Great Britain and the work of William Morris, master designer and socialist revolutionary. In the United States Ralph Waldo Emerson was a champion of the movement, exalting the dignity of labor and the "useful arts," and the inspiration found in nature.

In contrast, Beaux-Arts borrowed the great architecture of European palaces, cathedrals, and cloister houses – created by guild artisans – to reinforce social and political hierarchy in the United States. Beaux-Arts buildings convey a sense of order, permanence and importance that appealed to many college leaders and their patrons. Some Americans found the style too opulent and formal but it certainly found a home in the San Francisco Bay Area. Two substyles of Beaux-Arts are found here – one borrows more from French, Belgian, German and Northern Italian forms, while the other reflects the influence of Southern France and Spain. The two movements intersect in the emphasis on skilled craftsmanship and finely executed ornament that characterizes the best buildings of this period.

Interrupted by the great earthquake and fire of 1906 and World War I, only the University of California at Berkeley enjoyed a major expansion during this period funded largely by the Hearst family, and marked by a series of landmark buildings by John Galen Howard. Generally, Beaux-Arts formalism continued as a popular style for major academic buildings. The less formal style now described as "First Bay Tradition," emerged as a regional expression of the international Arts and Crafts movement, led by Julia Morgan and Bernard Maybeck. Several fine examples of the First Bay Tradition survive at UC Berkeley and Mills College, with many more located in the adjacent neighborhoods of Berkeley and Oakland. A number of houses in Craftsman style were adapted during this period to house students and small academic programs. Taken together, Beaux-Arts, First Bay Tradition, and Craftsman share elements that we've grouped as "arts and crafts" for this theme.

Certainly buildings of the earlier periods also displayed fine craftsmanship. The emphasis shifted however from a fairly standard set of classically inspired details in the Late Victorian era (Greek order capitals, dentils, classical pediments, etc.) to include an astonishing display of novel new forms in the Arts and Crafts period, often inspired by plants. For example, the rustic sandstone carving of Stanford's original inner quadrangle, completed in 1891 was embellished after

1900 with the addition of major mosaic panels and stained glass on Memorial Church. While they are evaluated as one property (attached by the arcade system), the Memorial Church displays a Beaux-Arts lavishness that the California Missions never dreamed of.

Sather Gate, UC Berkeley (1910)

Art Gallery, Stanford University (1917)

Hearst Memorial Mining Building, UC Berkeley 1907)

Memorial Church, Stanford University (1903)

Thoreson House, UC Berkeley (1908)

Roble Hall, Stanford University (1917)

Arts and Crafts details with plant forms

Table 3.4: San Francisco Bay Area Colleges and Universities, Surviving Facilities 1900 – 1924 on Existing Campuses

Present name	Present location	Surviving major buildings from this period
Santa Clara University	Santa Clara, Santa Clara County	Alumni Science Hall, Kenna Hall, O'Connor Hall
Notre Dame de Namur University	Belmont, San Mateo County	No
Mills College	Oakland, Alameda County	El Campinil, Alderwood Hall, Kapiolani Cottage, Margaret Carnegie Library, Student Union (all Julia Morgan), Warren Olney Hall (Bakewell and Brown), Orchard House, Meadow House, Lisser Hall
UC Hastings College of the Law	San Francisco	No
University of San Francisco	San Francisco	St. Ignatius Church (1914; SF Landmark)
UC San Francisco	San Francisco	No
San Jose State University	San Jose, Santa Clara County	Central Classroom Bldg, Dwight Bentel Hall, Morris Dailey Auditorium, Tower Hall
St. Mary's College	Moraga, Contra Costa County	No
Pacific School of Religion	Berkeley, Alameda County	No
Holy Names University	Oakland, Alameda County	No
University of California at Berkeley	Berkeley, Alameda County	20 National Register listed properties: California Hall (1905), California Memorial Stadium (1923), Doe Memorial Library (1911), Durant Hall (1911), Girton Hall(1911), Haviland Hall (1924), Hearst Greek Theater (1903), Hearst Memorial Mining Building (1907), Hilgard Hall (1917), LeConte Hall (1924), Men's Faculty Club (1902), North Gate Hall (1906), Phi Delta Theta Chapter House (1915), Sather Gate and Bridge (1910), Sather Tower (1914), Senior Men's Hall (1906), Thorsen House/Sigma Phi Chapter House (1909), Wellman Hall (1912), Wheeler Hall (1917), University House (1911); North Gate Hall, Women's Faculty Club
Pacific Union College	Angwin, Napa County	Irwin Hall (partial)
Cogswell Polytechnical College	San Jose, Santa Clara County	No
Dominican University	San Rafael, Marin County	Angelico Hall (1922), Magnolia House (1918 with 1928 library added on), Guzman Hall (1930), Ralph Minor Hall (1924)
Stanford University	Santa Clara County	Memorial Church (1902), Chemistry Building (1903), Outer Quad (1905), Art Gallery (1917), The Knoll (1918), new Roble Hall (1918), Green Library (1919), Basketball Pavilion (1921), Student Union (1922), Encina Commons (1923), Toyon Hall (1924), Branner Hall (1924)
San Francisco State University	San Francisco, San Francisco County	No

Sather Tower, UC Berkeley (1914)

Wheeler Hall, UC Berkeley (1917)

Tower Hall, San Jose State University (1910)

Hilgard Hall, UC Berkeley (1917)

Regional examples of Beaux-Arts, Northern Influence collegiate architecture

California Hall, UC Berkeley (1905)

Angelico Hall, Dominican University (1922)

Margaret Carnegie Library, Mills College (1906)

O'Connor Hall, Santa Clara University (1912)

The Knoll, Stanford University (1918)

Green Library, Stanford University (1919)

Regional examples of Beaux-Arts, Southern Influence collegiate architecture

Thorsen House, UC Berkeley (1908)

La Maison Francaise, Stanford University (1908)

Men's Faculty Club, UC Berkeley (1902)

Regional examples of Craftsman collegiate architecture

The newly founded campuses of this period shown in Figure 3.4 and Table 3.5 struggled to secure permanent homes, suffered from earthquakes and fires and few major properties from the era survive.

Figure 3.4: San Francisco Bay Area Colleges Founded between 1900 and 1924

Bay Area Colleges Founded between 1900 and 1924

Berkeley
- Starr King School for the Ministry (SKSM)

Gilroy
- Gavilan College (GC)

Oakland
- California College of the Arts (CCA)
- Samuel Merritt University (SMU)

San Jose
- San Jose City College (SJCC)

San Francisco
- Golden Gate University (GGU)
- San Francisco Conservatory of Music (SFCM)

San Mateo
- College of San Mateo (CSM)

Santa Rosa
- Santa Rosa Junior College (SRJC)

Stanford University

0 20 Miles

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Stanford University, LBRE/LUEP
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Table 3.5: San Francisco Bay Area Colleges and Universities, Facilities Constructed 1900 -1924 on Newly Founded Campuses

Present name	Present location	Historical name	Founding date	Original location	Surviving buildings from this period
Golden Gate University	San Francisco, San Francisco County	Evening College	1901	Moved twice within San Francisco; at current location since 1910	No
Starr King School for the Ministry	Berkeley, Alameda County	Pacific Unitarian School for the Ministry	1904	Oakland; moved to Berkeley 1906; moved to present location 1942	No
California College for the Arts	Oakland, Alameda County	School for the California Guild of Arts and Crafts	1907	Berkeley; moved to Oakland campus 1922; added San Francisco site in the 1980s	Macky Hall* (NRHP)
Samuel Merritt University	Oakland, Alameda County		1908		No
San Francisco Conservatory of Music	San Francisco	Ada Clement Piano School	1917	Moved twice within San Francisco	No
Santa Rosa	Santa Rosa, Sonoma County	Santa Rosa Junior College	1918	Moved several times within Santa Rose, to current location in 1930	No
San Jose City College	San Jose, Santa Clara County	San Jose Junior College	1921	Moved within San Jose	No
College of San Mateo	San Mateo, San Mateo County	San Mateo Junior College	1922	Moved twice within San Mateo, to current location in 1963	No

*Older property acquired for academic use

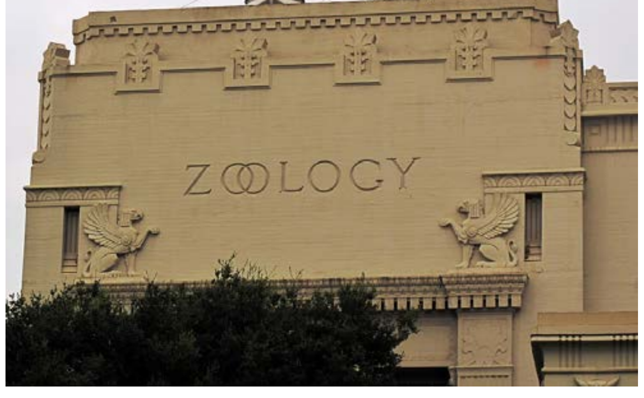
Romance of the West (1925 – 1949)

By the second quarter of the 20th century, romantic images of the American West emerged again (as they had in the 1880s and 90s) in popular cinema, music and literature and influenced architectural tastes as well. In the Southwest, "Pueblo Moderne" architecture blossomed and stately Spanish Colonial Revival styles were adopted by the wealthy for their homes, and by schools, colleges and universities in California.

Two influential Pan-Pacific expositions at San Diego and San Francisco (1915 – 1917) had strong influence over civic and collegiate architecture in California. The San Francisco Pan-Pacific Exposition showcased Beaux-Arts eclecticism, blending various Mediterranean Revival styles (e.g., Italian, French, Spanish, Turkish, North African) into formal and elaborately decorated compositions. The San Diego Pan-Pacific Exposition focused on Spanish Baroque architecture and brought "Spanish Colonial Revival" into vogue across the state.

In the 1920s Spanish Colonial Revival came to dominate collegiate architecture in southern California, in a wide range of substyles from more austere Mission and Pueblo Revival forms to elaborate examples with Baroque ornamentation. In the San Francisco Bay Area some colleges, UC Berkeley among them, remained tied to Beaux-Arts styles and campus construction in this period was inhibited by the Great Depression and World War 2. Nonetheless, a number of fine buildings were constructed in this era on campuses in the San Francisco Bay Area. Some collegiate buildings of the period showed new patterns of ornament influenced by Art Deco though these details generally embellished buildings that remained Spanish Colonial or Beaux-Arts in style.

Uchida Hall, San Jose State University (1932)



Valley Life Sciences Building, UC Berkeley (1930)

Regional examples of Art Deco influenced collegiate architecture

Table 3.6: San Francisco Bay Area Colleges and Universities, Surviving Facilities 1925 -1949 on Existing Campuses

Present name	Present location	Surviving major buildings from this period
Santa Clara University	Santa Clara, Santa Clara County	Mission Santa Clara de Asis (1928), O'Connor Hall (1912), Alumni Science Hall (1923), Kenna Hall (1924), Bergin Hall (1938), Walsh Administration Building (1949)
Notre Dame de Namur University	Belmont, San Mateo County	Chapel (Taube Center)
UC Hastings College of Law	San Francisco	McAllister Tower
Mills College	Oakland, Alameda County	Ethel Moore Hall, Mary Morse Hall, Music Building, Faculty Village, Children's School, Geranium Cottage, Littlefield Concert Hall, Art Gallery, Reinhardt Alumnae House
University of San Francisco	San Francisco	Kalmanovitz Hall (1927), School of Education (1930), Lone Mountain Campus (1932)
San Jose State University	San Jose, Santa Clara County	Spartan Complex East, Walquist Library, Washington Square Hall, Yoshiro Uchida Hall
St. Mary's College	Moraga, Contra Costa County	Main campus constructed 1928; St. Mary's Chapel, 10 Halls (Aquinas, Assumption, Augustine, Dante, De La Salle, Dryden, Fenlon, Galileo, Oliver, Power Plant/Cilsa), Madigan Gym, Post Office
Pacific School of Religion	Berkeley, Alameda County	Holbrook Hall
Holy Names University	Oakland, Alameda County	No
University of California at Berkeley	Berkeley, Alameda County	Cyclotron Laboratory (1944), Minor Hall (1943), Donnor Laboratory (1947), Edwards Stadium (1932), Giannini Hall (1930), Hearst Gymnasium for Women (1927), Valley Life Sciences (1930), International House (1930), Bowles Hall (1928; Nat Reg), Sproul Hall (1942; Nat Reg), Moses Hall (1931), McLaughlin Hall (1931), Lewis Hall (1948), Mulford Hall (1948), Doe Annex/Bancroft Library (1949)
Pacific Union College	Angwin, Napa County	Clark Hall
Cogswell Polytechnical College	San Jose, Santa Clara County	No
Dominican University	San Rafael, Marin County	San Marco, Fanjeaux Hall, Guzman Building
Stanford University	Santa Clara County	Lagunita Court (1934), Memorial Hall (1937), School of Education (1938), Hoover Tower (1940)
San Francisco State University	San Francisco, San Francisco County	No
Golden Gate University	San Francisco, San Francisco County	No

Present name	Present location	Surviving major buildings from this period
Starr King School for the Ministry	Berkeley, Alameda County	No
California College for the Arts	Oakland, Alameda County	No
Samuel Merritt University	Oakland, Alameda County	No
College of San Mateo	San Mateo, San Mateo County	No
Santa Rosa Junior College	Santa Rosa, Sonoma County	Pioneer Hall (1931), Analy Hall (1939), Burbank Auditorium (1939), Museum (1940)

Music Building, Mills College (1928)

Spanish Baroque detail at Music Building, Mills College

Taube Center, Notre Dame de Namur (1930)

St Mary's College (1928)

Lone Mountain Campus (1932), University of San Francisco

Regional examples of Mission Revival and Spanish Colonial collegiate architecture

A number of new institutions emerged in this period, with the Works Progress Administration (WPA) buildings at Santa Rosa Junior College a particular highlight. Constructed in red brick with Gothic and Art Deco elements these buildings convey nationally popular Collegiate styles rather than the regionally dominant Beaux-Arts and Spanish Eclectic.

Analy Hall, Santa Rosa Junior College (1939)

Burbank Auditorium, Santa Rosa Junior College (1939)

Pacific School of Religion (1926)

Regional examples of Gothic Revival (with hints of Art Deco) collegiate architecture

Figure 3.5: San Francisco Bay Area Colleges Founded between 1925 and 1949

Bay Area Colleges Founded between 1925 and 1949

Atherton
- Menlo College (MC)

Kentfield
- College of Marin (CM)

Napa
- Napa Valley College (NVC)

Oakland
- Patten University (PU)

Pleasant Hill
- Diablo Valley College (DVC)

San Francisco
- Academy of Art University (AAU)
- City College of San Francisco (CCSF)
- Cogswell Polytechnical College (CPC)
- Lincoln University (LU)

San Pablo
- Contra Costa College (CCC)

Tiburon
- California Maritime Academy (CMA)

Stanford University

0 20 Miles

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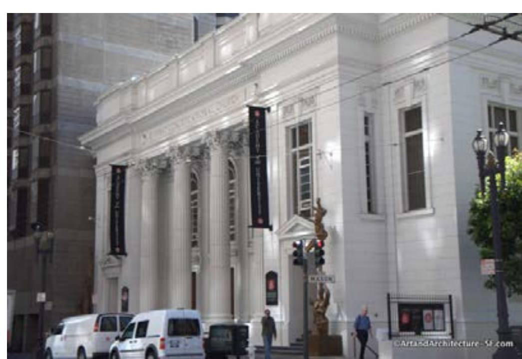
Table 3.7: San Francisco Bay Area Colleges and Universities, Facilities Constructed 1926 -1949 on Newly Founded Campuses

Present name	Present location	Historical name	Founding date	Original location	Surviving major buildings from this period
California State University Maritime Academy	Vallejo, Solano County	California Maritime Academy	1929	Tiburon, relocated to Vallejo in 1943	No
Lincoln University	Oakland, Alameda County		1926	San Francisco. Moved to Oakland in 1999	No
College of Marin	Kentfield, Marin County	Marin Junior College	1926	Yes	Fusselman Hall (1936)
Menlo College	Atherton, San Mateo County		1927	Yes	Administration Building, El Camino Hall, School for Business Administration
Academy of Art University	San Francisco, San Francisco County	Academy of Art College	1929	Occupies many historic buildings in San Francisco	740 Taylor Street (occupied since 1946)
City College of San Francisco	San Francisco, San Francisco County		1935		Science Hall
Cogswell Polytechnical College	San Jose, Santa Clara County	Cogswell College	1930	Moved several times (founded in San Francisco)	No
Napa Valley College	Napa, Napa County	Napa Junior College	1942	Moved 1964	No
Patten University	Oakland, Alameda County	Oakland Bible Institute	1944	Yes	Unknown
Solano Community College	Fairfield, Solano County	Vallejo Junior College	1945		Unknown
Contra Costa College	San Pablo, Contra Costa County	Contra Costa Junior College	1949		Unknown
Diablo Valley College	Pleasant Hill, Contra Costa County		1949		No

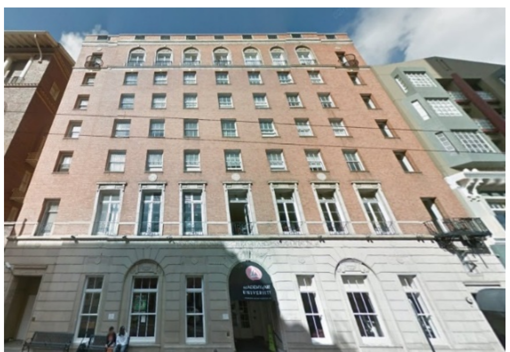
The Academy of Art University in San Francisco was founded in this period and has occupied the building at 740 Taylor Street since 1946. The university has purchased a number of important historic buildings in the city in recent years, of a range of styles and periods.

625 Sutter St, Academy of Art University



491 Post St, Academy of Art University (1915)
(Formerly First Congregational Church)

625 Polk St, Academy of Art University (1912)
(Formerly California Hall)



620 Sutter St, Academy of Art University (1918)
(Formerly YWCA)

Beaux-Arts (Northern Influence) buildings converted to campus use

740 Taylor St, Academy of Art University 1918)

Craftsman building

Regional Modernism (1950 – 1974)

California suffered a brief period of economic instability at the end of World War II, as war material factories closed and veterans returned to one of the highest unemployment rates in the nation.[14] The State government invested heavily in expanding access to public colleges and universities to reduce unemployment numbers and take advantage of the G.I. Bill. Enrollment tripled between 1945 and 1950.[15] By 1950 the state's economy was growing again and the "Cold War" created a flow of federal spending directed at higher education, particularly in science and engineering.

Most California colleges and universities expanded rapidly during this period to meet the rising demand of California's growing population. Some of the smaller private colleges were insulated from this trend, religious institutions for example had no access to state or federal funding for expansion. Other institutions lacked sufficient land area for major expansion on their existing sites. But nearly all the public colleges and universities grew rapidly during this period, as did Stanford University.

Collegiate architecture during the Post War period took a turn towards Modernism as a new generation of architects entered the profession. On many campuses this style was simply added to a collection of campus buildings of various periods and styles without much attention. On other campuses, including Stanford and UC Berkeley, students and alumni protested the addition of starkly modern buildings to their picturesque historic campuses. Newly founded colleges and universities were often designed as master planned campuses and many display higher quality Modern architecture than older institutions.

Like the Beaux-Arts and Spanish Eclectic styles, Modern architecture includes a number of different substyles. These are variously labelled by different critics, but for our purposes three distinctions are useful. First, the raw concrete, deeply recessed openings, and massive cubist forms of Brutalism had a following in the San Francisco Bay Area. Wurster Hall at UC Berkeley is a well-known example of this type. Second, there are examples of Expressionism, where eccentric forms communicate emotional effects. This can be seen in the Newman Center at San Jose State University with its folding pyramidal roof reaching for the cross mounted on its peak, or the round library at Chabot College. And third, a variant of Modernism known as California Regionalism that adapted the functionality of Modernism to the California climate and culture. Sloping roofs – rather than flat roofs -- and wide overhanging eaves are two characteristics of this style. Foothill College and the College of San Mateo both have award-winning examples of California Regionalism on their campuses. Blurring the boundary between indoors and outdoors is also a signature feature of California Regionalism.

Table 3.8: San Francisco Bay Area Colleges and Universities, Surviving Major Facilities 1950 - 1974 on Existing Campuses

Present name	Present location	Surviving major buildings from this period
Santa Clara University	Santa Clara, Santa Clara County	de Saisset Museum (1955)
Notre Dame de Namur University	Belmont, San Mateo County	St. Mary's Hall, Quad
Mills College	Oakland, Alameda County	Mills College Chapel (1967), Walter Haas Pavilion (1970)
UC Hastings College of the Law	San Francisco, San Francisco County	Snodgrass Hall (1953)
University of San Francisco	San Francisco	Gleeson Library (1950), Phelan Hall (1955), War Memorial Gymnasium (1958), Xavier Hall (1959), Koret Law Center (1962), Lone Mountain North (1963), Gilson Hall (1965), Harney Science Center (1965), Hayes-Healy Hall (1966), University Center (1966), Cowell Hall (1969)
San Jose State University	San Jose, Santa Clara County	28 buildings including Administration, Art, Newman Center
St. Mary's College	Moraga, Contra Costa County	Mitty Hall, Justin Hall, Siena Hall, St. Albert Hall
Pacific School of Religion	Berkeley, Alameda County	
Holy Names University	Oakland, Alameda County	Chapel (1957), Cushing Library (1957), Hester Admin. Bldg. (1957)
University of California at Berkeley	Berkeley, Alameda County	Cory Hall (1950), Law Building (1951), Stanley Hall (1952), Dwinelle Hall (1952), Morrison and Hertz Halls (1958), University Hall (1959), Wurster Hall (1964), Evans Hall (1971), Residence Halls (1960), Student Center and McCone Hall (1961), Moffitt Undergraduate Library (1970), Barrows Hall (1964), Etcheverry Hall (1964), University Art Museum (1970), Unit 3 Residence Halls (1964), Lawrence Hall of Science (1968), Space Sciences Laboratory (1966), Senior Hall (1973)
Pacific Union College	Angwin, Napa County	Andre Hall, College Church, Nelson Memorial Library, Newton Hall, Post Office, Winning Hall
Cogswell Polytechnical College	San Jose, Santa Clara County	
Dominican University	San Rafael, Marin County	Albertus Magnus (1950s), Archbishop Alemany Library (1963), Bertrand Hall (1951), Pennafort Hall (1958), Caleruega Hall (1959)
Stanford University	Santa Clara County	Center for Advanced Study in the Behavioral Sciences (1954)
San Francisco State University	San Francisco, San Francisco County	Administration, Business, J. Paul Leonard Library, Ethnic Studies and Psychology, Thornton and Hensill Halls, Science

Present name	Present location	Surviving major buildings from this period
Golden Gate University	San Francisco, San Francisco County	Moved into renovated 1924 Sherman Clay showroom at 536 Mission Street in 1964
Starr King School for the Ministry	Berkeley, Alameda County	Moved to site in 1942; added new wing, classroom, chapel, library by 1964
California College for the Arts	Oakland, Alameda County	Founder's Hall and Martinez Hall (both 1968)
Samuel Merritt University	Oakland, Alameda County	
College of San Mateo	San Mateo, San Mateo County	Fine Arts Center, Library, Administration Building[16]
California State University Maritime Academy	Vallejo, Solano County	
Lincoln University	Oakland, Alameda County	
College of Marin	Kentfield, Marin County	Fine Arts Building (1952, ren. 2012)
Menlo College	Atherton, San Mateo County	Michael's Hall (1954), Brawner Hall (1969) Also Florence Moore Hall (1956), Howard Hall (1954), Student Union (1958), Bowman Library (1962)
Santa Rosa Community College	Santa Rosa, Sonoma County	Jesse Parker Museum (1940)
Academy of Art University	San Francisco, San Francisco County	
City College of San Francisco	San Francisco, San Francisco County	Ocean Campus and 10 other locations within SF
Napa Valley College	Napa, Napa County	
Patten University	Oakland, Alameda County	
Solano Community College	Fairfield, Solano County	
Contra Costa College	San Pablo, Contra Costa County	Library
Diablo Valley College	Pleasant Hill, Contra Costa County	Moved to site in 1952 with 10 steel government buildings; built 1st permanent building in 1953

Wurster Hall, UC Berkeley (1962)

Art Museum, UC Berkeley

Regional examples of Brutalist collegiate architecture

Nelson Memorial Library,
Pacific Union College (1958)

Fine Arts Center, College of San Mateo (1963)

Newman Center,
San Jose State University (1966)

Library, Chabot College (circa 1965)

Regional examples of Mid-Century Modern collegiate architecture (with Expressionist influences)

Some of the best new Mid-Century Modern campus architecture was constructed on newly founded campuses, including Foothill College, featured in “Look” magazine in 1962 as America’s “Jet Age Junior College.”[17] Designed by San Francisco architect Ernest Kump, the campus won three national architecture awards upon its completion (Progressive Architecture Design Award, American Institute of Architects Honor Award, American Institute of Architects Award of Merit).[18]

Foothill College (1962)

Center for Advanced Study, Stanford (1959)

Regional examples of Second Bay Tradition collegiate architecture

Figure 3.6: San Francisco Bay Area Colleges Founded between 1950 and 1974

Bay Area Colleges Founded between 1950 and 1974

Alameda
- College of Alameda (CA)

Cupertino
- DeAnza College (DAC)

Fremont
- Ohlone College (OC)

Hayward
- CSU East Bay (CSUEB)
- Chabot College (CHC)

Los Altos Hills
- Foothill College (FHC)

Pittsburg
- Los Medanos College (LMC)

Oakland
- Laney College (LC)
- Merritt College (MRC)

Sonoma
- Saybrook University (SU)

Berkeley
- Berkeley City College (BCC)
- Graduate Theological Union (GTU)

Pleasant Hill
- John F. Kennedy University (JFKU)

Redwood City
- Cañada College (CAC)

Rohnert Park
- Sonoma State Univeristy (SSU)

San Bruno
- Skyline College (SC)

San Francisco
- California Institute of Integral Studies (CIIS)

Santa Clara
- Mission College (MIC)

Saratoga
- West Valley College (WVC)

Stanford University

0 20 Miles

N

Stanford University, LBRE/LUEP
February 22. 2017

Table 3.9: San Francisco Bay Area Colleges and Universities, Facilities Constructed 1950 -1974 on Newly Founded Campuses

Present name	Present location	Historical name	Founding date	Original location	Surviving major buildings from this period
Laney College	Oakland, Alameda County	Oakland Junior College	1953	Relocated within Oakland in 1970	No
Merritt College	Oakland, Alameda County		1954	Relocated twice within Oakland , to present campus in 1971	
California State University East Bay	Hayward, Alameda County	Hayward State University	1959	No, classes held offsite at Sunset High and Hayward Union High until campus construction completed in 1963	Arts and Education, Science North and South, Music, Meiklejohn Hall and Theater
Sonoma State University	Rohnert Park, Sonoma County		1960	No, moved within Rohnert Park to current location in 1966	Stevenson Hall, Darwin Hall
Graduate Theological Union	Berkeley, Alameda County		1962		
Foothill College	Los Altos Hills, Santa Clara County		1962	No. 1st classes held Highway School in Mountain View	Main Campus, AIA Honor Award 1962
Chabot College	Alameda County		1964	No, first held classes in San Leandro; current campus constructed in 1965	Library (1965), and Performing Arts Center (1967)
West Valley College	Santa Clara County	West Valley Junior College	1964	No. 1st classes held at Campbell Union Grammar School; campus construction completed in 1968	Administration, Library and Applied Arts and Sciences
John F. Kennedy University	Pleasant Hill, Contra Costa County		1964	Yes	Unknown
Ohlone College	Fremont, Alameda County	California Community College	1965	No, relocated within Fremont in 1972	Buildings 3, 4, 5, 6, 7, 9, 10
DeAnza College	Cupertino, Santa Clara County		1967	Yes	Main Campus, AIA Honor Award 1969

Present name	Present location	Historical name	Founding date	Original location	Surviving major buildings from this period
Mission College	Santa Clara, Santa Clara County		1967	Yes	Yes
Canada College	Unincorporated San Mateo County		1968	Yes	Yes
College of Alameda	Alameda, Alameda County		1968	No, relocated within Alameda to current campus in 1970	Yes
California Institute of Integral Studies	San Francisco, San Francisco County		1968		Main building at 1453 Mission St. purchased 2007; built 1924
Skyline College	San Bruno, San Mateo County		1969	Yes	Yes
Saybrook University	Oakland, Alameda County		1971	No; moved from Sonoma to San Francisco to Oakland in 2014	
Los Medanos College	Pittsburg, Contra Costa County		1974		Yes
Berkeley City College	Berkeley, Alameda County	Berkeley Learning Pavilion	1974	Moved to current location in 2006	No

Summary and Themes

The colleges and universities of the San Francisco Bay Area reflect many of the foundational historical styles of collegiate architecture in the United States. Examples of Collegiate Gothic, Georgian and Baroque architecture are present in the region, many of them quite fine examples of these styles. John Galen Howard's Beaux-Arts buildings at UC Berkeley for example would be dignified and important anywhere in the United States.

With the powerful marriage of California Mission Style and Romanesque Revival at Stanford University in the 1890s, a uniquely Californian collegiate style was launched. This developed through the Pan-Pacific Expositions into an array of Spanish and Mediterranean eclectic forms more suited to California's climate and culture.

The Arts and Crafts Movement also created a regional form of Shingle style, often called First Bay Tradition, that celebrated the great forests and mountains and waters of California in woodsy, soaring buildings.[19] From its picturesque beginnings with shingled and faintly Medieval forms at the turn of the century, the focus shifted to vernacular and modern forms in the "Second Bay Tradition" in the mid-20th century.

During each of periods described above, some institutions built better buildings than others, and some styles were more popular than others. The sample is skewed by the loss of many important campus buildings but what is left is the physical record that conveys the period, its feeling and associations.

Themes and Periods of Significance

Table 3.10: Themes and Periods of Significance

Period	Themes	Styles
1850 - 1874	Pioneering Campuses	Second Empire
1875 - 1899	Late Victorian	Richardsonian Romanesque with Mission Influence Shingle Neoclassical
1900 - 1924	Arts and Crafts	Beaux-Arts - Northern European Influence Beaux-Arts - Southern European Influence Craftsman
1925 - 1949	Romance of the West	Mission Revival Colonial Revival
1950 - 1974	Regional Modernism	Brutalist Mid-Century Modern Second Bay Tradition

These themes will drive the evaluation of Stanford University's buildings that follows. In each period (beginning with the second period) Stanford's buildings will be compared with listed buildings of the period from other San Francisco Bay Area campuses.

Notes

[1] Paul V. Turner, *Campus: An American Planning Tradition*. MIT Press. 1984. Pages 3-4.

[2] The American College and University: A History. Frederick Rudolph. University of Georgia Press. 1990. Page 4.

[3] Paul V. Turner, *Campus: An American Planning Tradition*. MIT Press. 1984. Page 116.

[4] Ibid., Page 125.

[5] National Register Nomination Form, Old College Yard/Wren Building. Viewed at https://npgallery.nps.gov/nrhp/GetAsset?assetID=95dc8a33-03b0-46ea-94aa-7f527ee954d8.

[6] Maureen Meister, *Arts and Crafts Architecture: History and Heritage in New England*. University Press of New England. 2014.

[7] Jean P. Carlhian, and Margot M. Ellis, *Americans in Paris: Foundations of America's Architectural Gilded Age: Architecture Students at the École Des Beaux-Arts, 1846-1946*. 2014. Print. Page 14.

[8] Mark Gelernter, *A History of American Architecture: Buildings in Their Cultural and Technological Context*. Manchester: Manchester University Press, 1999. Print. Page 263.

[9] Will Jones, *How to Read Modern Buildings: A Crash Course in the Architecture of the Modern Era.* 2016. Print. Page 9.

[10] College and Universities in California. Viewed at https://en.wikipedia.org/wiki/List_of_colleges_and_universities_in_California.

[11] See also California Community Colleges. Viewed at http://californiacommunitycolleges.cccco.edu/AlphaList.aspx.

[12] William Ferrer, *Ninety Years of Education in California 1846 – 1936.* Oakland. 1937.

[13] Viewed at http://berkeleyheritage.com/1967_UC_Berkeley_Buildings.html.

[14] John Douglass, *The California Idea and American Higher Education: 1850 to the 1960 Master Plan*. Stanford University Press. 2000. Page 195.

[15] Ibid.

[16] All three buildings found eligible for listing on the California Register. *Draft Environmental Impact Report for the 2015 Facilities Master Plan Amendment.* San Mateo County Community College District. 2015. Page 3.4-14. Viewed at http://smccd.edu/eir/files/SMCCCD_DEIR_CD_Web.pdf.

[17] Carl Winter, *History of the Junior College Movement in California.* California State Department of Education. 1964. Page 25. Viewed at http://files.eric.ed.gov/fulltext/ED346902.pdf.

[18] Viewed at https://www.foothill.edu/news/fh-history.php.

[19] David Weingarten, *Bay Area Style: Houses of the San Francisco Bay Region*. Rizzoli. 2004. Pages 10-11.

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4: STANFORD CAMPUS ARCHITECTURE IN THE REGIONAL CONTEXT

Approach

Stanford University buildings are evaluated within each of the periods and themes described previously in Chapter 3 of this Survey, using two tools: 1) the building is assessed as to whether it serves as an example of the important collegiate architectural style of the period, and 2) the building is compared to examples on other San Francisco Bay Area campuses. Collegiate buildings listed on the National Register, California Register and/or as local landmarks are used to develop a "benchmark" for each style: the number of distinctive characteristics a significant building displays. Stanford buildings that meet this benchmark "embody" the style and potentially are eligible under the theme. As described below, once it is found that a building meets the requisite benchmark, professional judgment is then applied to determine whether the building meets the standards for listing on the California Register. Finally, if the building appears to meet those standards, it is assessed for integrity.

California Register Criterion 3 provides the starting point for the assessment of architectural significance:

Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values. Under the survey context, this is elaborated to, for example: *Embodies the distinctive characteristics of Second Empire Collegiate Architecture in the San Francisco Bay Area 1850 -1874*.

The evaluation process proceeds in the following steps:

1. Presentation of the distinctive characteristics that convey the styles under each theme, illustrated with the best examples from the region. The distinctive characteristics that convey each style were collected from a variety of sources, including widely used architectural style reference manuals and regional historic contexts and surveys.
2. Establishment of a benchmark for determining potential eligibility within each style. The benchmark takes into account the number of distinctive characteristics possessed by collegiate buildings that are currently listed on the California and/or National Registers or as local landmarks. In some cases historic resource survey findings are also considered.
3. Examination of major Stanford University buildings to assess how many of the distinctive characteristics each property displays. A significant property should meet the benchmark for listed properties.
4. Exercise of professional judgment. Some properties require additional analysis, particularly where the sample of listed benchmark properties is small or the property displays characteristics of more than one style.
5. Assessment of integrity. (This step is captured in the Inventory.)

Each of these steps is described in greater detail throughout this section of the Survey, with the exception of the analysis of integrity. The most critical aspects of integrity in this context are exterior design, workmanship, materials, feeling and association. Two features that can detract from integrity at other sites were determined not to apply for purposes of this Survey.

First, relocation of a structure does not indicate a lack of integrity of setting at Stanford. Most college campuses in the region have experienced changes in setting over time as buildings have been added or removed, and landscape

features have evolved. And buildings may have been moved from one location to another on a campus without losing their association with the institution. Review of prior historic resources assessments at Stanford indicates that relocation of a structure did not compromise its integrity such that the structure no longer was eligible for listing on the California Register.[1]

Second, interior modifications do not indicate a lack of integrity where the interior is not one that plays an important role in programs open to the general public on an ongoing basis. Buildings at college campuses frequently undergo interior modifications as they are converted to and from academic, housing and administrative uses. Further, even if a building remains in academic use, classrooms are modified and research space is reconfigured on a regular basis. The Santa Clara County Planning Office has recognized that modifications to interior spaces do not warrant historic resources review at Stanford except as follows:

> *However, a limited subset of interior spaces at Stanford may merit historic resources review. Where a historic building's interior plays an important role in programs open to the general public on an ongoing basis, the County may elect to require review of alterations to such public interior spaces. This would include primary public interior spaces in campus museums, performing arts and athletic competition venues. It would not include private offices, classrooms, lecture halls, laboratories or student residences where public access is not generally allowed.*[2]

The implementation of Stanford's historic preservation program is discussed in Chapter 5. These policies and programs will be applied to the buildings found eligible for listing in this Chapter.

Second Empire Collegiate Architecture (1850 – 1874)

As explained in the Regional Context in Chapter 2, the Second Empire and Italianate Collegiate Architecture theme that developed during the 1850-1874 period at Bay Area college campuses is exemplified by South Hall at UC Berkeley, Ralston Hall at Notre Dame de Namur University, and Mills Hall at Mill College. All three are listed on the National Register of Historic Places thus a benchmark comparison isn't required.

Stanford University opened its doors to students in 1891; the surviving buildings at Stanford from the 1850 – 1874 era are agricultural buildings that are unconnected to the theme. Because these properties do not embody the theme, they are evaluated under a separate context. See Appendix C for DPR records for agricultural buildings.

South Hall, UC Berkeley

Mills Hall, Mills College

Ralston Hall, Notre Dame de Namur

Late Victorian Collegiate Architecture (1875 – 1899)

Three styles emerged on college campuses in the region during the 1875-1899 period: the blend of Mission and Richardsonian Romanesque chosen for Stanford's campus buildings, Neoclassical style and Shingle style. While a number of campuses constructed buildings during this period, the only surviving examples of major academic buildings are located at Stanford. In recognition that some flexibility is needed to match the applicable time periods to each style, two Neoclassical buildings from just outside the period of significance are included here: The Greek Theater at UC Berkeley (1903) and 491 Post Street (former First Congregational Church) now in use by the Academy of Art University in San Francisco (1915). Both buildings are strong examples of Neoclassical style; the Greek Theater is listed on the National Register of Historic Places and 491 Post Street is a San Francisco City Landmark.

Richardsonian Romanesque with Mission Influence: Stanford's Main Quadrangle

The Main Quadrangle at Stanford is a series of 27 academic buildings connected by covered arcades surrounding a large paved court. The "Inner Quad," 12 buildings facing the courtyard, was completed in 1891. The second ring of 14 buildings known as the "Outer Quad" and Memorial Church were completed between 1900 and 1903 The design of the complex was set before 1900 but a court case filed after the death of Leland Stanford, Sr. in 1893 delayed the construction effort. The complex suffered some losses in the 1906 earthquake but has retained integrity overall. The entire complex, physically connected by the arcades, is evaluated as one property in the Late Victorian theme and period of significance.

The Main Quadrangle was designed to reflect two major stylistic influences: Richardsonian Romanesque, popularized by Boston architect Henry Hobson Richardson, and California's adobe missions built by Native Americans under the direction of Franciscan missionaries in rustic forms of Spanish Colonial architecture. Leland and Jane Stanford hired Richardson's successor firm, Shepley, Rutan and Coolidge to design the complex and settled on the blended style after touring California missions with Coolidge.

Main Quadrangle, Stanford University

Table 4.1: Distinctive Characteristics of Richardsonian Romanesque and Mission Style

Distinctive characteristics: Richardsonian Romanesque	Main Quadrangle
1. Round-topped arches	Yes
2. Rough-faced, ashlar stonework	Yes
3. Deeply recessed window openings	Yes
4. Ornamental capitals	Yes
5. Hipped roof	Yes
6. Floral ornament	Yes
7. Towers	Yes
Distinctive characteristics: Mission	
8. Terracotta tile roof	Yes
9. Widely overhanging eaves	Yes
10. Shaped parapet or dormer	No
11. Covered arcades	Yes
12. Thick walls	Yes
Number of Distinctive Characteristics	**11/12**

The Main Quadrangle displays 11 of 12 distinctive characteristics of Richardsonian Romanesque and Mission styles. The complex clearly embodies the distinctive characteristics of this new regional style and the master craftsmanship of the era. It retains integrity and it is the Survey team's professional judgment that The Main Quadrangle meets the standards for listing on the California Register within this context.

Stanford Campus Examples

Old Chemistry (1903)

Encina Hall (1891)

A number of other buildings were constructed in this period on the Stanford campus, including the Sapp Center (Old Chemistry), Encina Hall and a series of sandstone buildings behind the Main Quadrangle that share many of the same stylistic features in simplified form. These buildings were assessed against the distinctive characteristics as follows:

Table 4.2: Rating of Romanesque Revival/Mission Style Collegiate Buildings

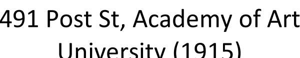
Building	Location	Number of Distinctive Characteristics
Main Quadrangle	Stanford University	11/12
Sapp Center (Old Chemistry)	Stanford University	10/12
Encina Hall and Commons	Stanford University	9/12
Terman Engineering	Stanford University	6/12
Peterson Laboratory	Stanford University	6/12
Mechanical Engineering	Stanford University	6/12
Havas Engineering	Stanford University	6/12

None of Stanford's early sandstone buildings are listed on the National Register, California Register or as local landmarks. A benchmark of 9/12 characteristics captures the major academic buildings that most clearly embody this style. As described in the Inventory sheets in Appendix B, it is the professional judgment of the Survey team that the Main Quadrangle, Sapp Center (Old Chemistry) and Encina Hall and Commons retain integrity and meet the standards for listing on the California Register within this context. Four less elaborate engineering shop buildings fall below the benchmark, and therefore do not sufficiently embody the style.

Neoclassical Buildings

The Neoclassical style is more commonly seen in civic and commercial buildings in the region than in collegiate architecture. It was nonetheless an influential style at both Stanford and UC Berkeley. At Berkeley, Neoclassical elements were incorporated into many Beaux-Arts buildings of the 1900 – 1924 period. We've taken the Hearst Greek Theater into this theme however, as it strongly displays the Neoclassical style. The Hearst Greek Theater is listed on the National Register of Historic Places. Similarly, the former First Congregational Church building now owned by Academy of Art University at 491 Post Street in San Francisco was built during the recovery after the 1906 earthquake in a

strongly Neoclassical style and is brought into this theme to provide regional context for comparison. The 491 Post Street building is a San Francisco City Landmark.



491 Post St, Academy of Art University (1915)

Greek Theater, UC Berkeley (1903), NRHP

Leland Stanford Junior Museum, Cantor Center for the Visual Arts (1891)

Table 4.3: Distinctive Characteristics of Neoclassical Style

Distinctive Characteristics: Neoclassical	**491 Post St**	**Greek Theater**	**Stanford Museum**
1.Low pitched gable or hipped roof	Yes	Yes	Yes
2. Cornice line emphasized	Yes	Yes	Yes
3. Pilasters at corners	No	Yes	Yes
4. Front façade dominated by porch with classical columns	Yes	Yes	Yes
5. Symmetrical front façade	Yes	Yes	Yes
6. Elaborate front door surround with narrow transom and side lights	Yes	Yes	Yes
7. Pediments above doors/windows, may be broken	Yes	Yes	No
8. Boxed eaves	Yes	Yes	Yes
9. Grouped rectangular, double hung windows	No	No	Yes*
9. Smooth finish	Yes	Yes	Yes
10. Roof line balustrade	No	No	No*
Number of Distinctive Characteristics	**8/10**	**8/10**	**8/10**

Notes: * The Stanford Museum has grouped rectangular clathri windows, Roman in origin, which provide metal “X” frames to provide ventilation while preventing entry. Commonly used on banks and museums, this is a Neoclassical feature. Double-hung windows are a more prevalent type. The Stanford Museum did have a roof balustrade that was damaged in the 1989 earthquake and replaced with a plain parapet.

Stanford Campus Examples

In addition to the Stanford Museum, three additional Stanford buildings were evaluated under this theme: the Dunn-Bacon House (Hillel-Ziff Center), Hammarskjold House and Lasuen House.

Hillel-Ziff Center (Dunn-Bacon House), Stanford University (1899)

Hammarskjold House, Stanford University (1900)

Lasuen House, Stanford University (1900)

Table 4.4: Rating of Neoclassical Collegiate Buildings

Building	Location	Number of Distinctive Characteristics	Listed
Lasuen House	Stanford University	8/10	
Hillel-Ziff Center	Stanford University	8/10	
Hammarskjold	Stanford University	8/10	
Cantor Center (Stanford Museum)	Stanford University	8/10	
Greek Theater	UC Berkeley	8/10	Berkeley Landmark
491 Post St	Academy of Art University	8/10	San Francisco Landmark

A benchmark of 8/10 distinctive characteristics would be appropriate for determining whether a campus building that embodies this style should be considered eligible for listing. As described in the Inventory sheets in Appendix B, it is the professional judgment of the Survey team that the Cantor Center (Stanford Museum), Lasuen House, Hillel-Ziff Center (Dunn-Bacon House), and Hammarskjold retain integrity and meet the standards for listing on the California Register within this context.

Shingle Houses

Shingle style architecture displays relatively simple, plain exterior forms and focuses its decorative effect on interior details. Popular with university faculty, major concentrations occur in Berkeley and in the National Register listed "Professorville" historic district in Palo Alto.[3] Houses of this style are present on a number of regional campuses, constructed by sororities and fraternities, or purchased and converted to student housing use. Sometimes called "First Bay Tradition" style, it was a deliberate counterpoint to the more formal, classically inspired styles of this period. Also included in this style are some examples displaying more ornament and often described as "Queen Anne" Victorians.

Regional Examples

There are relatively few early examples for comparison. However, two quite fine examples have survived: Kappa Alpha Theta at Santa Clara University (formerly the Morse Mansion) and Channing Hall at UC Berkeley.

Kappa Alpha Theta (1892), Santa Clara University

Channing Hall (1887), UC Berkeley

Table 4.5: Distinctive Characteristics of Shingle Style

Distinctive characteristics: Shingle	Kappa Alpha Theta	Channing Hall
1.Uniform covering of shingles from roof to foundation	No	Yes
2. Complex roof with multiple gables	Yes	Yes
3. Roof steeply pitched; sweep of roof covering porches	Yes	Yes
4. Eaves not pronounced	Yes	Yes
5. Small casement and sash windows	Yes	Yes
6. Windows grouped in twos and threes	Yes	Yes
7. Prominent front porch	Yes	Yes
8. Large dominant front gable	Yes	Yes
9. Sparing use of color	Yes	Yes
10. Sparing use of decorative details	No	Yes
Number of Distinctive Characteristics	**8/10**	**10/10**

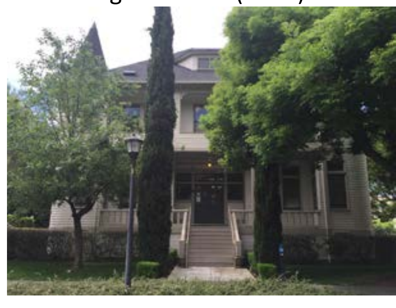
Stanford Campus Examples

The Stanford campus contains a number of examples of Shingle style buildings, somewhat modest by comparison to the high style examples presented above.

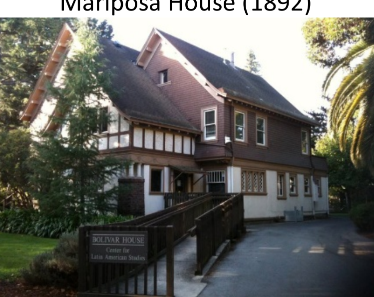
Rogers House (1892)

Mariposa House (1892)

Drell House (1892)



Owen House (1898)



Bolivar House (1898)

Cooksey House (1900)

Table 4.6: Rating of Shingle Style Collegiate Buildings

Building	Location	Number of Distinctive Characteristics	Listed
Channing Hall (Anna Head School)	UC Berkeley	10/10	National Register, Berkeley Landmark
University Dance Studio (1st Unitarian Church)	UC Berkeley	10/10	National Register, Berkeley Landmark
Cooksey House (Synergy)	Stanford University	9/10	
Kappa Alpha Theta (Morse Mansion)	Santa Clara University	8/10	National Register, Santa Clara Landmark
Drell House	Stanford University	8/10	
Owen House	Stanford University	8/10	
Phi Kappa Psi (1770 La Loma Ave.)	UC Berkeley	8/10	Berkeley Landmark
Mariposa House	Stanford University	7/10	
Phi Sig	Stanford University	7/10	
Bolivar House	Stanford University	7/10	
Rogers House	Stanford University	4/10	

For Shingle style, the appropriate benchmark appears to be 8/10. This captures the National Register properties at Santa Clara University (Morse Mansion) and UC Berkeley (Channing Hall). Cooksey, Owen and Drell Houses strongly embody the Late Victorian theme. As described in the Inventory sheets in Appendix B, it is the professional judgment of the Survey team that Cooksey, Owen and Drell Houses retain integrity and meet the standards for listing on the California Register within this context.

There are numerous fine examples of the Shingle style in residential neighborhoods in the region and so the style is not rare enough to justify elevating modest examples. While Mariposa House was previously found eligible for listing when evaluated in isolation, within the regional context the house is a modest example of the style and does not meet the benchmark. Phi Sig and Rogers House similarly do not meet the benchmark for distinctive features needed to embody the style. Bolivar House also does not meet the benchmark and has lost integrity due to alterations including the infill of its porch and removal of shingles on large sections of the house and is therefore not eligible.

Late Victorian Collegiate Architecture at Stanford: Evaluation Summary

Most of the buildings at Stanford constructed in this period are historic resources, with a small number failing to meet the benchmark, or lacking integrity. The summary table below presents the evaluation summary for Stanford University buildings under this theme.

Table 4.7: Late Victorian Evaluation Summary

ELIGIBLE	NOT ELIGIBLE
Richardsonian Romanesque with Mission Influence	
Main Quadrangle	Terman Engineering Laboratory
Encina Hall and Commons	Peterson Laboratory
Sapp Center (Old Chemistry)	Mechanical Engineering
	Havas Engineering
Neoclassical	
Lasuen House	
Hammarskjold	
Hillel-Ziff Center (Dunn-Bacon House)	
Cantor Center (Stanford Museum)	
Shingle	
Cooksey House (Synergy)	Bolivar House
Owen House	Mariposa House
Drell House	Rogers House
	Phi Sig

Arts and Crafts (1900 – 1924)

This period saw the emergence of two stylistic trends: a more formal style that combined European design elements in new combinations (Beaux-Arts) and a rustic, informal style that delighted in natural materials and design elements (Craftsman). Fine examples across the region prominently feature master craftsmanship in their construction details. These styles co-evolved with the Arts and Crafts movement in furniture, decorative objects and painting.

Beaux-Arts Buildings on San Francisco Bay Area Campuses

The fashion for formal, romantic Beaux-Arts buildings grew out of the popular Columbian Exposition in Chicago in 1893 and was celebrated in the Panama Pacific Exposition in San Francisco in 1915-16. Architect John Galen Howard designed an important series of Beaux-Arts buildings on the UC Berkeley campus that have been recognized as a National Register Multiple Property Area.[4] While Beaux-Arts is an eclectic, creative recombining of elements from a variety of European sources into pleasing new compositions, we found that the distinguishing characteristics in our study area could be grouped into two substyles: Beaux-Arts, Northern European Influence, and Beaux-Arts, Southern European Influence.

A comparison of two fine contemporaneous examples, Wheeler Hall by John Galen Howard and the Knoll at Stanford designed by Louis Christin Mullgardt is presented below.

Wheeler Hall (1917), UC Berkeley (NRHP)

Knoll, Stanford University (1918)

Table 4.8: Distinctive Characteristics of Beaux-Arts

Distinctive Characteristics: Beaux-Arts	Wheeler Hall	Knoll
1. Flat or low pitched roof	Yes	Yes
2. Symmetrical façade	Yes	Yes
3. Uniform wall surfaces above the base	Yes	Yes
4. Articulated wall plane with projecting elements	Yes	Yes
Northern European Influence		
5. Pronounced cornice	Yes	Yes
6. Paired columns or pilasters	Yes	No
7. Windows framed by columns or with balustrade at sill	Yes	No
8. Arched doors or windows	Yes	Yes
9. Differentiated base course	Yes	No
10. Classical elements	Yes	No
Southern European Influence		
5. Tile roof	No	Yes
6. Walls meet ground without a base course	No	Yes
7. Exposed rafters or brackets at roofline	No	Yes
8. Rounded openings	Yes	Yes
9. Ornamental metalwork	Yes	Yes
10. Molded ornament	Yes	Yes
Number of Distinctive Characteristics	**10/10**	**10/10**

Wheeler Hall exemplifies the Northern European Influence; the building displays a few of the characteristics of the Southern European Influence but its overall style recalls northern France, Belgium, and Germany rather than southern France, Italy or Spain.

Stanford Campus Examples

Three other Stanford buildings were evaluated under the Beaux-Arts- Northern Influence Style:

School of Education

Roble Hall

Green Library

Table 4.9: Rating of Beaux-Arts - Northern Influence Collegiate Buildings

Building	Location	Number of Distinctive Characteristics	Listed
Doe Memorial Library	UC Berkeley	10/10	National Register, Berkeley Landmark
Wheeler Hall	UC Berkeley	10/10	National Register, Berkeley Landmark
560 Powell Street	Academy of Art	10/10	National Register
Green Library	Stanford University	10/10	
Hilgard Hall	UC Berkeley	9/10	National Register, Berkeley Landmark
Haviland Hall	UC Berkeley	9/10	National Register
California Hall (625 Polk St.)	Academy of Art	9/10	San Francisco Landmark
LeConte Hall	UC Berkeley	8/10	National Register
University House	UC Berkeley	8/10	National Register, Berkeley Landmark
Gymnasium, Clark Kerr Campus	UC Berkeley	8/10	National Register, Berkeley Landmark
Oakland Title Insurance Bldg.	Lincoln University	8/10	Oakland Landmark
Sather Tower	UC Berkeley	8/10	National Register, Berkeley Landmark
Durant Hall	UC Berkeley	8/10	National Register, Berkeley Landmark
Roble Hall	Stanford University	8/10	
School of Education	Stanford University	8/10	

The eligibility threshold of 8/10 distinctive characteristics of Beaux-Arts – Northern Influence style captures all the listed properties. All three buildings at Stanford evaluated under this theme and style meet this benchmark. As described in the Inventory sheets in Appendix B, it is the professional judgment of the Survey team that Green Library, Roble Hall and the School of Education retain integrity and meet the standards for listing on the California Register within this context.

In addition to the Knoll, several buildings at Stanford were evaluated under the Beaux-Arts -- Southern Influence style including the following examples:

Art Gallery

Branner Hall

Toyon Hall

Table 4.10: Rating of Beaux-Arts - Southern Influence Collegiate Buildings

Building	Location	Number of Distinctive Characteristics	Listed
Knoll	Stanford University	10/10	
Old Union Complex	Stanford University	10/10	
Alderwood Hall	Mills College	9/10	
Hearst Memorial Mining Building	UC Berkeley	9/10	National Register, Berkeley Landmark
Wellman Hall	UC Berkeley	9/10	National Register, Berkeley Landmark
Margaret Carnegie Library	Mills College	8/10	
Burnham Pavilion	Stanford University	8/10	
Bechtel International Center	Stanford University	8/10	
Toyon Hall	Stanford University	8/10	
Branner Hall	Stanford University	8/10	
Tower Hall	San Jose State	8/10	California Landmark
Art Gallery	Stanford University	8/10	
California Hall	UC Berkeley	8/10	National Register, Berkeley Landmark
Center for Design Research	Stanford University	6/10	
Barnum Center	Stanford University	5/10	
Mechanical Engineering (02-570)	Stanford University	4/10	
Mechanical Engineering (02-610)	Stanford University	4/10	

Buildings at Mills College are included here, which while not listed were the subject of an intensive historic resource study, completed in 2008.[5] That survey found both Alderwood Hall and the Margaret Carnegie Library eligible for listing on the National Register.

The 8/10 benchmark found to apply to the Beaux-Arts - Northern Influence style also appears to carry over to the Beaux-Arts – Southern Influence style. Eleven buildings evaluated under this theme and style at Stanford meet this benchmark (The Knoll, Old Union, Clubhouse, Nitery, Green Library, Burnham Pavilion, Encina Commons, Bechtel International Center, Toyon Hall, Branner Hall, and Art Gallery). As described in the Inventory sheets in Appendix B, it is the professional judgment of the Survey team that all eleven of these buildings retain integrity and meet the standards for listing on the California Register within this context.

Four minor buildings at Stanford fall below this threshold: three engineering lab buildings and the former university bookstore, now known as the Barnum Center. Therefore, these buildings do not sufficiently embody the style.

Craftsman in the New Century

Beaux-Arts is fundamentally a picturesque, romantic style and while its formal, elegant features contrast with the Craftsman style, the two themes were pursued by the same campuses across the Bay Area during this period. The most important surviving buildings of this type are located on the UC Berkeley campus. These include Julia Morgan's Girton Hall, Greene and Greene's Thorsen House, and Bernard Maybeck's Men's Faculty Club. They represent the evolution of the Shingle style in the new century but are no longer "Victorian" with its more vertical emphasis and elaborate ornament. Craftsman can display a wider range of materials (stucco and stone as well as wood), and adapts well to eclectic influences such as Tudor Revival, Japanese-inspired roof forms, and Art Deco details.

Two strong regional examples are presented below to demonstrate the distinctive characteristics of Craftsman style in collegiate architecture.

North Gate Hall, UC Berkeley (1906)

Kingscote, Stanford University (1917)

Table 4.11: Distinctive Characteristics of Craftsman Style

Distinctive Characteristics: Craftsman	North Gate Hall	Kingscote
1. Horizontal massing	Yes	Yes
2. Multiple roof planes	Yes	Yes
3. Low-pitched roof	Yes	Yes
4. Deep eave overhang with exposed rafters	Yes	Yes
5. Multi-pane over single-pane windows	Yes	Yes
6. Line of three or more windows	Yes	Yes
7. Porch supported by square or tapered columns	Yes	Yes
8. Brackets or extra stickwork	Yes	Yes
9. Rustic, natural or "primitive" craftmanship	Yes	No
10. Connection to outdoors through porches, decks, terraces and/or pergolas	Yes	Yes
Number of Distinctive Characteristics	**10/10**	**9/10**

Stanford Campus Examples

Several other buildings at Stanford also were evaluated under this style, including the following examples:

Black House

La Maison Francaise

Table 4.12: Rating of Craftsman Collegiate Buildings

Building	Location	Number of Distinctive Characteristics	Listed
Thorsen House	UC Berkeley	10/10	National Register, Berkeley Landmark
North Gate Hall	UC Berkeley	10/10	National Register, Berkeley Landmark
Cloyne Court	UC Berkeley	9/10	National Register, Berkeley Landmark
Griffin House	Foothill College	8/10	National Register
Kingscote	Stanford University	8/10	
Black House	Stanford University	8/10	
La Maison Francaise	Stanford University	8/10	
Girton Hall	UC Berkeley	8/10	National Register, Berkeley Landmark
Drawing Building	UC Berkeley	8/10	National Register, Berkeley Landmark
Men’s Faculty Club	UC Berkeley	8/10	National Register, Berkeley Landmark
Phi Kappa Psi	Stanford University	7/10	
Roth House	Stanford University	7/10	
Van Patten	Stanford University	6/10	
Durand	Stanford University	6/10	
Pepper Tree	Stanford University	6/10	
Gould Center	Stanford University	6/10	
Visitor’s Center	Stanford University	6/10	
Harmony House	Stanford University	3/10	

Here again a benchmark of 8/10 distinctive characteristics includes all the listed properties, and is appropriate for selecting the properties that most clearly embody the style within the regional context. Three buildings at Stanford

meet this benchmark. As described in the Inventory sheets in Appendix B, it is the professional judgment of the Survey team that Kingscote, Black House and La Maison Francaise retain integrity and meet the standards for listing on the California Register within this context.

Eight other Stanford buildings fall below the benchmark, and therefore do not sufficiently embody the style. Two of the buildings at the 7/10 rating, Roth House and Phi Kappa Psi, were also previously found not eligible in prior evaluations.

The Stanford Stadium: The Intersection of Neoclassical and Arts and Crafts

Athletic stadiums are a common specialized property type in collegiate architecture. The basic components of a stadium are the field of play, the stands where spectators are seated, and a score board. The addition of fences and gates, ticket booths, restrooms, locker rooms, food service and press boxes characterizes larger examples. The largest, most complex collegiate stadia in the San Francisco Bay area are located at UC Berkeley, Stanford University and San Jose State hosting primarily football and soccer games. Many other colleges have multipurpose stadia that include track and field facilities.

Stanford Stadium (1921, 2008)

Hearst Memorial Stadium, UC Berkeley (1923, 2012), NRHP

CEFCU (Spartan) Stadium, San Jose State (1933, 2001)

Major collegiate stadia in the San Francisco Bay Area

Cox Stadium, San Francisco State

Stadium, CSU East Bay

Stadium, Foothill College

Multipurpose stadia in the San Francisco Bay Area

The stadium as a venue for performance has its roots in classical Greek and Roman amphitheaters and coliseums. Two types are common from the early 20th century: earth embankment amphitheaters like the Yale Bowl (1914) and masonry coliseums such as the Harvard Bowl (1903).

Yale Bowl (1914), NRHP

Harvard Bowl (1903), NRHP

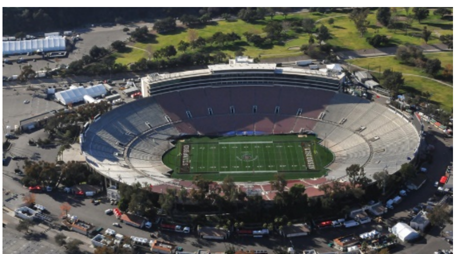
Hearst Memorial Stadium at UC Berkeley is listed on the National Register of Historic Places as an important example of Neoclassical stadium architecture. It is the only listed collegiate stadium in the San Francisco Bay Area. Hearst Memorial Stadium is a hybrid embankment-coliseum stadium, with one end built into the mouth of Strawberry Canyon.[6] The western side of Hearst Memorial Stadium was demolished and replaced in 2012; most of the other original exterior walls were reinforced and preserved.

The Stanford University Stadium was original constructed in 1921 as an earthen embankment stadium, modelled on an earthen stadium uncovered in the ruins of Pompeii. A few years later a wooden structure was added inside the embankment to support expansion of the stands above the embankment. This wooden superstructure was found not be a historic resource and was demolished in 2008 and replaced inside the embankment with a modern concrete structure that provides the stands and associated services. The 1921 embankment with its original stairways and tunnels and wooded vegetation was preserved. The planting of the Neoclassical embankment with trees and shrubs, designed and installed by Daniel MacRorie and Donald McLaren reflects the popularity of naturalized settings in the Arts and Crafts Period.

It is difficult to make a benchmark comparison between only two properties. The National Register nomination for Hearst Memorial Stadium finds it “majestic” in comparison to the Stanford Stadium which is described as “related pleasantly to the tree-studded open surroundings.”[7] Certainly the construction of Hearst Memorial Stadium in the Strawberry Canyon required great feats of engineering in 1923 and again in the seismic retrofit of 2012. The National Register nomination (approved in 2006) compares Hearst Memorial Stadium to only three stadia in California: the Rose Bowl (1922), Los Angeles Memorial Coliseum (1932) and the Stanford Stadium. The Berkeley nominators found their stadium to be the best example in California. The National Register had previously listed the Rose Bowl (listed in 1987) and Los Angeles Memorial Coliseum (listed in 1984).

The Rose Bowl, which is also used for collegiate sports by UCLA, was constructed in 1921 as an earthen embankment stadium. Modifications to the stadium have obscured the embankment on three sides; there is a ramp up the embankment that is the sole remnant of the original stadium.

Rose Bowl embankment, 1921



Rose Bowl, fragment of embankment at lower edge

The Stanford Stadium's embankment is intact and distinguishable from the modern seating and service structures located within it. As a spectator approaches the Stanford Stadium from most sides the historic tree-covered embankment is the dominant visual presence and most spectators enter through the historic tunnels and stairways.

Pedestrian gate to Stanford Stadium with tree-covered embankment and stairway beyond

The Stanford Stadium's original 1921 embankment is the best surviving example of an earthen embankment stadium in California and among the most important at a national level. It compares well to listed stadia. The Stanford Stadium embankment appears to be eligible for the California Register.

Arts and Crafts 1900 – 1924 at Stanford: Evaluation Summary

Stanford's major academic buildings of this period – classrooms, dormitories, library, student union, and art gallery -- compared well to landmark buildings at other colleges and universities in the region. A series of utilitarian engineering "shop" buildings did not meet the benchmark and a small number of Craftsman houses fell below the benchmark as well.

Table 4.13: Arts and Crafts Evaluation Summary

ELIGIBLE	NOT ELIGIBLE
Beaux-Arts – Northern Influence	
Green Library	
Roble Hall	
School of Education	
Beaux-Arts – Southern Influence	
Old Union Complex	Center for Design Research
Knoll	Barnum Center
Burnham Pavilion	Mechanical Engineering (02-570)
Bechtel International Center	Mechanical Engineering (02-610)
Toyon Hall	
Branner Hall	
Art Gallery	
Craftsman	
Kingscote	Van Patten
Black House	Durand
La Maison Francaise	Pepper Tree
	Gould Center
	Visitor's Center
	Phi Kappa Psi
	Roth House
	Harmony House
Neoclassical with Arts and Crafts Influence	
Stanford Stadium Embankment, Stairways and Tunnels	

Romance of the West (1925 -1949)

During the 1925-1949 period, regional collegiate architecture reflected historical themes of the American West: Spanish Colonial Revival, Mission Style, and American Colonial Revival were more prevalent than European historical styles. Spanish Colonial Revival and its variant, Mission Revival, were the most important in major academic buildings in the region.

Spanish Colonial Revival and Mission Revival

Spanish Colonial Revival incorporates a variety of building types and styles used in the Spanish colonies of the New World and can range from Spanish Baroque inspired church architecture with heavy use of elaborate ornament to the severely plain forms of rustic Mission buildings. They have in common the use of stucco wall finishes, terracotta roof tile, and arched openings. The two important variants that are found in our region are presented with examples below.

Lagunita Court, Stanford University (1934)

Vera M. Long Building, Mills College (1930)

Table 4.14: Distinctive Characteristics of Spanish Colonial and Mission Revival Styles

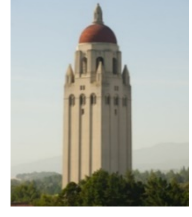
Distinctive Characteristics: Spanish Colonial Revival	Lagunita Court	Vera M. Long Bldg.
1. Buff, pink or tan stucco walls	Yes	Yes
2. Moderately pitched gable or hipped terracotta tile roof	Yes	Yes
3. Round headed openings	Yes	Yes
Spanish Colonial		
4. Focal trefoil, quatrefoil or round window	No	No
5. Tower or elaborated chimney	No	No
6. Entry door emphasized with column or pilasters, carved or tile ornament	Yes	No
7. Little or no eave overhang	No	No
8. Symmetrical main façade	Yes	No
9. Decorative wrought iron	Yes	No
10. Decorative vents	No	No
Mission Revival		
4. Square piers supporting square or arcaded roof	Yes	Yes
5. Large, centered simple entry	Yes	Yes
6. Punched windows in expanses of plain walls	Yes	Yes
7. Wide, open eave overhang with exposed rafters	Yes	Yes
8. Shaped parapet or dormer	No	No
9. Minimal surface ornament	Yes	Yes
10. Thick walls	Yes	Yes
Number of Distinguishing Characteristics	**9/10**	**9/10**

Variations on these styles are prevalent in the region, as seen in the rating table below. Where a building displays both Spanish Colonial and Mission Revival characteristics, we present the style that displayed more characteristics. In some cases, such as the Mills College Art Museum for example, the building displayed the same number of characteristics of both variants; in these cases we present the building as the more general Spanish Colonial Revival.

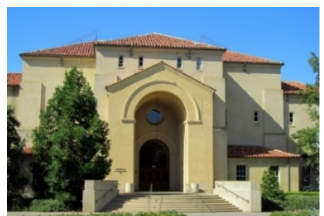
Stanford Campus Examples

In addition to Lagunita Court, Stanford examples of Spanish Colonial and Mission Revival styles include:

Roble Gym



Hoover Tower



Memorial Hall

Table 4.15: Rating of Spanish Colonial Revival Collegiate Buildings

Building	Location	Number of Dist. Characteristics	Style
Roble Gym	Stanford University	9/10	Spanish Colonial Revival
Hoover Tower	Stanford University	9/10	Mission Revival
Lagunita Court	Stanford University	9/10	Mission Revival
Uchida Hall	San Jose State University	9/10	Mission Revival
Mary Morse Hall	Mills College	8/10	Spanish Colonial Revival
Music Building	Mills College	8/10	Spanish Colonial Revival
Lisser Hall	Mills College	8/10	Spanish Colonial Revival
Art Museum	Mills College	8/10	Spanish Colonial Revival
Ethel Moore Hall	Mills College	8/10	Spanish Colonial Revival
Memorial Hall	Stanford University	8/10	Mission Revival
Vera Long Hall	Mills College	8/10	Mission Revival
Lone Mountain Campus	University of San Francisco	8/10	Spanish Colonial Revival
Washington Square Hall	San Jose State University	8/10	Spanish Colonial Revival
Chi Theta Chi	Stanford University	7/10	Spanish Colonial Revival
Greek Theater	Mills College	7/10	Spanish Colonial Revival
Carnegie Institution	Stanford University	7/10	Mission Revival
Serra House	Stanford University	6/10	Spanish Colonial Revival
Grove	Stanford University	6/10	Spanish Colonial Revival
Ventura Hall	Stanford University	6/10	Spanish Colonial Revival

Building	Location	Number of Dist. Characteristics	Style
Montag Hall	Stanford University	6/10	Mission Revival
Gardiner Apts	Stanford University	5/10	Spanish Colonial Revival
Golf Clubhouse and Pro Shop	Stanford University	4/10	Spanish Colonial Revival

Spanish Colonial Revival is the dominant historical style for many campuses in the region and not surprisingly, many of these romantic buildings have been identified as historic resources in professional surveys. None that we could identify, however, have been listed on the National Register, California Register, or as local landmarks. The benchmark of 8/10 captures the major buildings that most clearly embody the style and is consistent with the benchmark used in other themes. Four buildings at Stanford evaluated under this theme and style meet the benchmark. As described in the Inventory sheets in Appendix B, it is the professional judgment of the Survey team that Roble Gym, Hoover Tower, Lagunita Court, and Memorial Hall retain integrity and meet the standards for listing on the California Register within this context.

Six buildings at Stanford (Chi Theta Chi, Carnegie Institution, Serra House, Grove, Ventura Hall, Montag Hall, and Gardiner Apartments) do not meet the benchmark. Therefore, these six buildings do not sufficiently embody the style

American Colonial Revival

In this nostalgic period, American Colonial Revival styles also enjoyed great popularity for larger homes, and in collegiate architecture for fraternity and sorority houses. Only a handful of schools in the San Francisco Bay Area have sorority and fraternity houses. UC Berkeley has the largest number of "Greek" houses with approximately 50 fraternity and sorority houses. San Jose State has 40 Greek chapters, some of which are not housed. Stanford currently has nine Greek houses. Some Greek houses were large single-family houses converted to this use while many others were built for this purpose. At Stanford University, the only examples of American Colonial Revival in the survey area are houses associated with fraternities and sororities, or repurposed for other student living groups.

Most Greek houses are owned by their chapters, not by universities, and are located in neighborhoods adjacent to the campus. We did not survey all the Greek houses in the region as information about these quasi-independent organizations was uneven in quality. A representative sample of each style is presented to provide a basis for comparison. (Greek houses were included above in the Craftsman, Beaux-Arts and Shingle styles.)

Kappa Kappa Gamma, UC Berkeley

717 Dolores, Stanford University

Table 4.16: Distinctive Characteristics of American Colonial Revival Style

Distinctive Characteristics: American Colonial Revival	Kappa Kappa Gamma	717 Dolores
1.Moderately pitched gable or hipped roof	Yes	Yes
2. Symmetrical main façade	Yes	Yes
3. One-story entry porch supported by slender columns	Yes	Yes
4. Rectangular, double-hung windows, multi-paned in one or both sash	Yes	Yes
5. Windows in pairs	Yes	Yes
6. Dormers (hipped or gabled)	Yes	Yes
7. Accented front door surround (pediment, fanlight, or transom)	Yes	Yes
8. Shallow eaves	Yes	Yes
9. Shutters	Yes	Yes
10. Dentils or modillions at cornice	Yes	No
11. Oval or arched accent windows	Yes	Yes
Number of Distinctive Characteristics	**11/11**	**10/11**

Stanford Campus Examples

Stanford examples of the Colonial Revival style include:

Slavianskii Dom

Sigma Nu

Table 4.17: Rating of American Colonial Revival Collegiate Buildings

Building	Location	Number of Distinctive Characteristics	Listed
717 Dolores	Stanford University	10/11	
Kappa Kappa Gamma	UC Berkeley	10/11	
Delta Delta Delta (1735 Le Roy Ave)	UC Berkeley/Jesuit School of Theology	9/11	Berkeley Landmark
Phi Omega Pi (2601 Le Conte Ave)	UC Berkeley/Jesuit School of Theology	9/11	Berkeley Landmark
Alpha Tau Omega (2465 Le Conte Ave)	UC Berkeley/Graduate Theological Union	9/11	Berkeley Landmark
Slavianskii Dom	Stanford University	8/11	
Delta Zeta (2311 Le Conte Ave)	UC Berkeley	8/11	Berkeley Landmark
Mars	Stanford University	7/11	
Muwekma-Ta-Ruk	Stanford University	7/11	
Sigma Chi	Stanford University	7/11	
Columbae	Stanford University	6/11	
Kairos	Stanford University	6/11	
Storey	Stanford University	5/11	
Sigma Nu	Stanford University	5/11	
Haus Mitteleuropa	Stanford University	5/11	

None of the American Colonial Revival houses were listed on the National Register or California Register. Three good examples have been recognized as local landmarks by the City of Berkeley. Kappa Kappa Gamma at UC Berkeley, 717 Dolores, and Slavianskii Dom have been previously evaluated and found eligible for listing on the California Register. The Kairos, Mars, Storey and Sigma Nu houses at Stanford were previously evaluated and found not to be historic resources. This analysis suggests a benchmark of 8/11 distinctive characteristics. At Stanford, 717 Dolores and Slavianskii Dom meet this benchmark. As described in the Inventory sheets in Appendix B, it is the professional judgment of the Survey team that 717 Delores and Slavianskii Dom retain integrity and meet the standards for listing on the California Register within this context.

Eight houses at Stanford (Mars, Muwekma-Ta-Ruk, Sigma Chi, Columbae, Kairos, Storey, Sigma Nu, Haus-Mitteleuropa) do not meet the benchmark, and therefore do not sufficiently embody the style. This reverses the previous determination for the Muwekma-Ta-Ruk house which was previously found eligible as an example of French Colonial architecture. French Colonial style is more common in other regions of the United States (those that were formerly colonies of France such as Louisiana) and does not reflect the theme of Romance of the West. Muwekma-Ta-Ruk does not appear eligible in the regional context developed here.

Frost Amphitheater: A Romantic Nature Theater

Outdoor theaters have their roots in antiquity and are a remarkably widespread property type on college campuses in the region. The earliest collegiate example in the San Francisco Bay Area, UC Berkeley's Greek Theater completed in 1903, is strongly Neoclassical in style. The term "Greek Theater" is also applied to outdoor theaters generally inspired by ancient examples that lack explicitly Neoclassical design elements. [8] The Mills College Greek Theater, for example, has a stage building in Mission Revival style.

There are at least a dozen outdoor theaters on campuses in the San Francisco Bay Area. While outdoor theaters were a popular public works project during the Depression years (several fine Works Progress Administration amphitheaters have survived in the region), only three collegiate examples were identified for the 1925 – 1949 period: the Mills College Greek Theater, the Mather Grove Theater at UC Berkeley, and Frost Amphitheater at Stanford. Many additional examples were constructed in the post-World War II period. Construction dates for these outdoor structures were difficult to obtain but period of construction was evident for most examples.

Table 4.18: Outdoor Theaters

Outdoor theater	Associated college or university	Period of construction	Major features	Photograph
Hearst Greek Theater (NRHP)	UC Berkeley	1900 – 1924 (1903)	Neoclassical stage building and orchestra circle, terraced amphitheater seating finished in concrete, stone seats of honor, wooded hillside	
Greek Theater	Mills College	1925 – 1949 (1928)	Mission Revival stage building, concrete terraced amphitheater seating with grassy terraces at higher level, wooded view	
Frost Amphitheater	Stanford University	1925 – 1949 (1937)	Wooded embankment, grass terraced amphitheater seating (edged in concrete)	
Mather Redwood Grove Theater	UC Berkeley	1925 – 1949 (1934)	Wooded hillside, wooden terraced amphitheater seating, redwood grove focal point	

None of the 1925 – 1949 period theaters are listed on the California or National Registers or as a local landmark. In part, this may reflect the relatively modest scale and design of these structures in comparison to the earlier Hearst Greek Theater with its extensive hardscape and Classical features.

Frost Amphitheater was recently evaluated (2016) as an individual property and found eligible for the California Register under Criterion C as a fine example of an outdoor theater displaying high artistic values. Lacking listed properties to use as benchmarks, we suggest that Frost Amphitheater compares favorably to the other collegiate examples of its period, embodies a romantic Western setting in keeping with the theme, and should be considered a historic resource.

Romance of the West 1925 – 1949 at Stanford: Evaluation Summary

The benchmark comparison method clearly identified the major buildings of this period on the Stanford campus, including the iconic Hoover Tower and several high-style student housing properties. Most of the ineligible housing properties have suffered loss of integrity or lacked the decorative elements that listed examples generally display.

Table 4.19: Romance of the West Evaluation Summary

ELIGIBLE	NOT ELIGIBLE
Spanish Colonial Revival	
Roble Gym	Chi Theta Chi
	Serra House
	Ventura Hall
	Gardiner Apts
	Grove
Mission Revival	
Hoover Tower	Carnegie Institution
Lagunita Court	Montag Hall
Memorial Hall	Golf Clubhouse and Pro Shop
American Colonial Revival	
Slavianskii Dom	Mars
717 Dolores	Muwekma-Ta-Ruk
	Sigma Chi
	Columbae
	Kairos
	Storey
	Sigma Nu
	Haus Mitteleuropa
Other	
Frost Amphitheater	

Regional Modernism and Collegiate Architecture (1950 – 1974)

College campuses expanded quickly in the post-War era. The State of California formed a Postwar Planning Commission to guide the transition into a modern peacetime economy including major expansion plans for public education.[9]

San Jose State's enrollment doubled after the war ended and a number of new buildings were constructed to serve this expansion.[10] "Hayward State," now the CSU East Bay, was added to the state college system in 1959, followed by Sonoma State University in the next year. San Jose City College relocated to a new, larger site and implemented a modernist master plan in the late 1950s and early 1960s. New modern community colleges sprang up across the region.

San Francisco Bay Area collegiate buildings in this era reflected national trends favoring new, forward-looking architecture over reliance on historical forms. California continued to adapt national and international styles to reflect the milder climate and informal culture of the state. For example, the warm, sunny climate favored the thick, cool, shadowed spaces of Brutalism over the "glass box" International Style. Three styles predominated in the San Francisco Bay Area: 1) Brutalism, celebrating the mass and sculptural qualities of concrete construction; 2) Mid-Century Modern, a popular variant of International Style that balanced large expanses of glass with light but solid surfaces; and 3) regional "Second Bay Tradition" that incorporated natural redwood surfaces and a less visually intrusive approach that maximized harmony between buildings and landscape.

Very few collegiate buildings of this era have been subject to detailed historic resource survey and evaluation, even fewer have been listed on national, state or local registers. We will apply the benchmark of 8/10 distinctive characteristics, following the general trend identified for earlier periods, as sufficient to "embody" a style.

Brutalism

The strength and power of concrete construction, coupled with its suitability for our warm climate and its relative lack of expense, led to a boom in Brutalist college buildings in the 1960s. At its best, Brutalism can be sculptural and some fine examples are found on campuses in the region. Attempts to soften the style by connecting it to historical antecedents are generally less successful.

Art Museum, UC Berkeley

Wurster Hall, UC Berkeley (1964)

Table 4.20: Distinctive Characteristics of Brutalism

Distinctive Characteristics: Brutalism	Art Museum	Wurster Hall
1. Monumental massing	Yes	Yes
2. Exposed structural system	Yes	Yes
3. Deeply shadowed openings	Yes	Yes
4. Angular	Yes	Yes
5. Repetitive	Yes	Yes
6. Block-like shapes	Yes	Yes
7. Lack of applied ornament	Yes	Yes
8. Avoidance of traditional elements	Yes	Yes
9. Exposed grey concrete finish	Yes	Yes
10. Object building	Yes	Yes
TOTAL	**10/10**	**10/10**

Stanford Campus Examples

Brutalist examples at Stanford include the following:

Mitchell Building | Durand Building | Lathrop Library

Table 4.21: Rating of Brutalist Collegiate Buildings

Building	Location	Number of Distinctive Characteristics	Listed
Wurster Hall	UC Berkeley	10/10	
Art Museum (NRHP)	UC Berkeley	10/10	National Register, Berkeley Landmark
Hayes-Healey Hall	University of San Francisco	8/10	
Gillson Hall	University of San Francisco	8/10	
Student Union	San Jose State University	8/10	
Mitchell Earth Sciences	Stanford University	5/10	
HEPL South	Stanford University	5/10	
Durand Bldg.	Stanford University	5/10	
Skilling Bldg.	Stanford University	5/10	
Lou Henry Hoover Bldg.	Stanford University	5/10	
Lathrop Library	Stanford University	4/10	
Maples Pavilion	Stanford University	4/10	
Center for Educational Research at Stanford (CERAS)	Stanford University	4/10	
Tresidder Union	Stanford University	3/10	
Avery Aquatic Center	Stanford University	3/10	
EV Mid, Hi Rises	Stanford University	3/10	
McCullough Bldg	Stanford University	2/10	
Varian Physics Lab	Stanford University	2/10	

Very few of these buildings, many of which are barely 50 years old, have been evaluated as historic resources. Only one, the former Art Museum and Pacific Film Archives at UC Berkeley, has been listed on the National Register. Wurster Hall at UC Berkeley has also been found eligible for listing on the California Register. The San Francisco Modern Architecture and Landscape Design 1935 – 1970 Historic Context Statement identified the Administration Building, the Cesar Chavez Student Center, Thornton Hall and Hensill Hall at SF State University as potentially important local examples of Brutalism.[11] The San Francisco context statement advises that:

> In order to meet local and state registration requirements…a Brutalist building would need to be designed in a high style interpretation of the style. In addition, it would need to retain most of its character-defining features.[12]

San Jose's Modernism Historic Context identified the Student Union at San Jose State University as an important example. These factors also support a benchmark for eligibility of 8/10 distinctive characteristics. None of Stanford's Brutalist buildings approach the benchmark; the style was never popular on the campus and the addition of hipped, tile roofs to modern concrete buildings is incompatible with the style.

Mid-Century Modern

A family of Modern styles did gain widespread popularity in the post-War era. Generally, these approaches were "softer" versions of Brutalism and International Style: incorporating large expanses of glass, exposed structural systems and geometric forms. This family of styles includes those variously described as "California Modern" (or "Bay Region Modern" or "Norcalmod"), "New Formalism," and stretching to include "Post-and-beam" construction popularized by Eichler homes. In this example we've blended these forms into a set of distinctive characteristics that is common to most of these overlapping styles.

Phelan Hall, University of San Francisco

Unit 1, UC Berkeley

Table 4.22: Distinctive Characteristics of Mid-Century Modern

Distinctive Characteristics	Phelan Hall	Unit 1
1. Flat roof	Yes	Yes
2. Thin roof edge	Yes	Yes
3. Horizontal bands of windows	Yes	Yes
4. Metal windows	Yes	Yes
5. Corner windows	No	No
6. Masonry exterior (brick, concrete, stucco)	Yes	Yes
7. Lack of applied ornament	Yes	Yes
8. Painted white or light color	Yes	Yes
9. Asymmetrical façade	Yes	Yes
10. Stress on volume rather than mass	Yes	Yes
TOTAL	**9/10**	**9/10**

Stanford Campus Examples

Stanford's Mid-Century Modern buildings include the following examples:

Stern Hall (1949) Florence Moore Hall Bookstore

Table 4.23: Rating of Mid-Century Modern Collegiate Buildings

Building	Location	Number of Distinctive Characteristics	Listed
Phelan Hall	University of San Francisco	9/10	
Unit 1, Unit 2 Residence Halls	UC Berkeley	9/10	Berkeley Landmark
Engineering Building	San Jose State	8/10	
Koret Hall (Law School)	University of San Francisco	8/10	
Gleeson Library	University of San Francisco	8/10	
Business School Complex	San Jose State	8/10	
Stern Hall	Stanford University	7/10	
Credit Union	Stanford University	6/10	
Press Annex Bldg.	Stanford University	6/10	
Florence Moore Hall	Stanford University	5/10	
Dinkelspiel Auditorium	Stanford University	5/10	
Post Office and Bookstore	Stanford University	5/10	
Stauffer I, II and Gazebo	Stanford University	4/10	
Ctr for Turbulence Res	Stanford University	4/10	
Crothers Hall and Crothers Memorial Hall	Stanford University	3/10	
Wilbur Hall	Stanford University	3/10	

A handful of Mid-Century Modern collegiate buildings have been identified as potential historic resources; none that we know of have been listed on the National Register. In the North Bay, Kendrick Hall at the University of San Francisco was identified as a good example of collegiate Mid-Century Modern style, as well as the Business School at San Francisco State.[13] The City of Berkeley has listed the Unit 1 and Unit 2 dormitory buildings as local landmarks. San Jose State's Engineering Building and Business School have been identified as important examples. These determinations lend support to the 8/10 benchmark.[14]

None of Stanford's mid-century modern buildings meet the benchmark; therefore, these buildings do not sufficiently embody the style. Five of these building complexes (Stern Hall, Florence Moore Hall, Crothers and Crothers Memorial Halls, Wilbur Hall and the Credit Union) have been previously evaluated and found not to be eligible for listing.

Second Bay Tradition

The regional descendant of Shingle and Craftsman style, Second Bay Tradition blurs the boundary between structure and setting through the use of natural materials, building elements that reach into the site and buildings that wrap trees and other natural features. Some buildings in this style have a profile that echoes the mountain ranges that frame their setting – Foothill College for example. Second Bay Tradition is best suited to one- or two-story buildings and is often expressed in a complex of related buildings.

Pelican Building (1956), UC Berkeley (NRHP)

Foothill College Campus (1961)

Table 4.24: Distinctive Characteristics of Second Bay Tradition

Distinctive Characteristics	Pelican Building	Foothill College
1. Low pitched roof	Yes	Yes
2. Post and beam construction	Yes	Yes
3. Wood cladding	No	Yes
4. Overhanging eaves	Yes	Yes
5. Exposed rafters	Yes	Yes
6. Horizontal massing	Yes	Yes
7. Large expanses of glass	Yes	Yes
8. Ribbon windows	No	Yes
9. Japanese influence	No	No
10. Plain, simple or vernacular	Yes	No
11. Woodsy texture	Yes	Yes
12. Linked to landscape through pergola, atrium or trellis	Yes	Yes
Number of Distinctive Characteristics	**9/12**	**10/12**

Stanford Campus Example

Stanford's best example of Second Bay Tradition style is CASBS:

Center for Advanced Study in the Behavioral Sciences

Table 4.25: Rating of Second Bay Tradition Collegiate Buildings

Building	Location	Number of Distinctive Characteristics	Listed
Master Plan (37 bldgs)[15]	Foothill College	10/12	
Anthony Hall ("Pelican Bldg")	UC Berkeley	9/12	Berkeley Landmark
CASBS	Stanford University	9/12	
Cluster I	Stanford University	8/12	
Escondido Village I	Stanford University	8/12	
Cedar Hall	Stanford University	7/12	
Cypress Hall	Stanford University	7/12	
Spruce Hall	Stanford University	7/12	
Pine Hall	Stanford University	7/12	
Polya Hall	Stanford University	6/12	
Bing Nursery School	Stanford University	6/12	
Cluster III	Stanford University	5/12	
Humanities Center	Stanford University	5/12	
Redwood Hall	Stanford University	5/12	
Escondido II,III,IV Low Rises	Stanford University	5/12	
Faculty Club	Stanford University	5/12	
EV 5	Stanford University	5/12	
Student Observatory	Stanford University	5/12	
Fire and Police	Stanford University	4/12	

Building	Location	Number of Distinctive Characteristics	Listed
Escondido Village Ctr	Stanford University	4/12	
Inst. Res. in Soc.Sciences	Stanford University	4/12	
Cluster II Houses	Stanford University	3/12	
HRP Redwood Building	Stanford University	2/12	
Price, Wadsworth, Bleeker and Barnes Halls	Stanford University	2/12	

Only one listed example, Anthony Hall (also known as the Pelican Building) at UC Berkeley could be identified for this style; however Foothill College and Mills College have been surveyed and the Mills College Chapel and Foothill College masterplan buildings found eligible for listing on the California Register. The benchmark at 9/12 distinctive characteristics captures the listed example and the surveyed buildings found to be eligible, as well as the best example of this style at Stanford-- the Center for Advanced Study in the Behavioral Sciences (designed by Wurster Bernardi and Emmons), which received an AIA Honor Award. (The 9/12 benchmark at 75% also compares well to the 8/10 – 80% -- benchmark demonstrated for other styles.) As described in the Inventory sheets in Appendix B, it is the professional judgment of the Survey team that the Center for Advanced Study in the Behavioral Sciences retains integrity and meets the standards for listing on the California Register within this context.

By comparison to the Pelican Building, Foothill College and CASBS, Escondido Village I and Cluster I are not high style examples of Second Bay Tradition. Having been constructed as rental housing for students they lack the quality of materials and craftsmanship of truly fine examples. In addition, The Escondido Village I complex, also designed by Wurster Bernardi and Emmons, was previously evaluated and found not eligible for listing. With the exception of CASBS, none of the Second Bay Tradition buildings at Stanford meet the benchmark, and therefore these buildings do not sufficiently embody the style.

Regional Modernism 1950 -1974 at Stanford: Evaluation Summary

This was not one of Stanford's great eras for architecture – the accommodation of modern forms and the romantic Romanesque, Mission, and Spanish Colonial Revival materials that dominate the campus was not a happy marriage. UC Berkeley fared better with the transition from grey granite to unpainted concrete than Stanford did with buff color and red roofs.

Table 4.26: Modernism Evaluation Summary

ELIGIBLE	NOT ELIGIBLE
Brutalism	
	Mitchell Earth Sciences
	Lou Henry Hoover Bldg
	HEPL South
	Durand Bldg.
	Skilling Bldg.
	Lathrop Library
	Maples Pavilion
	CERAS
	Tresidder Union
	Avery Aquatic Center
	EV Mid, Hi Rises
	McCullough Bldg
	Varian Physics Lab
Mid-Century Modern	
	Stern Hall
	Credit Union
	Press Annex
	Florence Moore Hall
	Dinkelspiel Auditorium
	Post Office and Bookstore
	Stauffer Bldg I,II and Gazebo
	Ctr for Turbulence Res
	Crothers Hall and Crothers Memorial Hall
	Wilbur Hall

ELIGIBLE	NOT ELIGIBLE
Second Bay Tradition	
Center for Advanced Study in the Behavioral Sciences (seven buildings)	Cedar Hall
	Cypress Hall
	Spruce Hall
	Pine Hall
	Polya Hall
	Bing Nursery School
	Cluster I
	Cluster II
	Humanities Center
	Redwood Hall
	Escondido Village I
	Escondido II,III,IV Low Rises
	Faculty Club
	EV 5
	Student Observatory
	Fire and Police
	Escondido Village Ctr
	Inst. Res. in Soc.Sciences
	Cluster III
	Price, Wadsworth, Bleeker and Barnes Halls
	HRP-Redwood Building

Summary

Stanford's buildings were evaluated in the regional context of collegiate architecture by comparing Stanford buildings to recognized historic structures on other campuses. This comparison was facilitated by use of a benchmark tool that identified the number of distinctive characteristics of a particular style significant buildings display. The identification of distinctive characteristics and the evaluation of whether a building embodies a style is an established means for evaluating historical significance. This benchmarking tool was supplemented with professional judgment and consideration of integrity.

The results are unsurprising: the buildings that the Stanford community recognizes as the historic heart of the university meet the regional benchmark as historic resources. A number of secondary buildings, many of which have been altered over time, fall below the benchmark. Most of the 1950 -1974 buildings, forced to adopt the sandstone color and red-tiled roof of Stanford's signature style, do not represent Modern architecture as well as other examples in the region.

Potential Historic District Analysis

In addition to the evaluation of the individual buildings on the campus, the survey considered whether the significant historic properties might form a historic district. A historic district is defined by the National Register as:

> *A district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development.*[16]

In the survey context of collegiate architecture in the San Francisco Bay Area, a historic district should possess a significant concentration of eligible buildings of the same theme and period of significance. These properties should display visual continuity to convey the "sense of time and place" associated with the theme and historic period.[17]

Historic Districts and Collegiate Architecture in the San Francisco Bay Area

Within the regional context of collegiate architecture there are few formally listed historic districts. UC Berkeley acquired the National Register historic district State Asylum for the Deaf, Dumb and Blind (with 20 contributing buildings constructed between 1914 and 1949) which is now operated as the Clark Kerr Campus.[18] The State Asylum Historic District was found significant under criteria A, B and C. Four buildings at the former San Francisco State Teacher's College (now operated as a UC Extension campus), constructed between 1924 and 1935, were listed as a National Register district eligible under Criterion A for association with the development of formal teacher training programs in the state.[19]

Many of UC Berkeley's main campus National Register properties were listed in a "multiple property" nomination rather than as a historic district (originally 16 properties when listed in 1982, several more properties were added later).[20] These properties were constructed between 1873 and 1930.

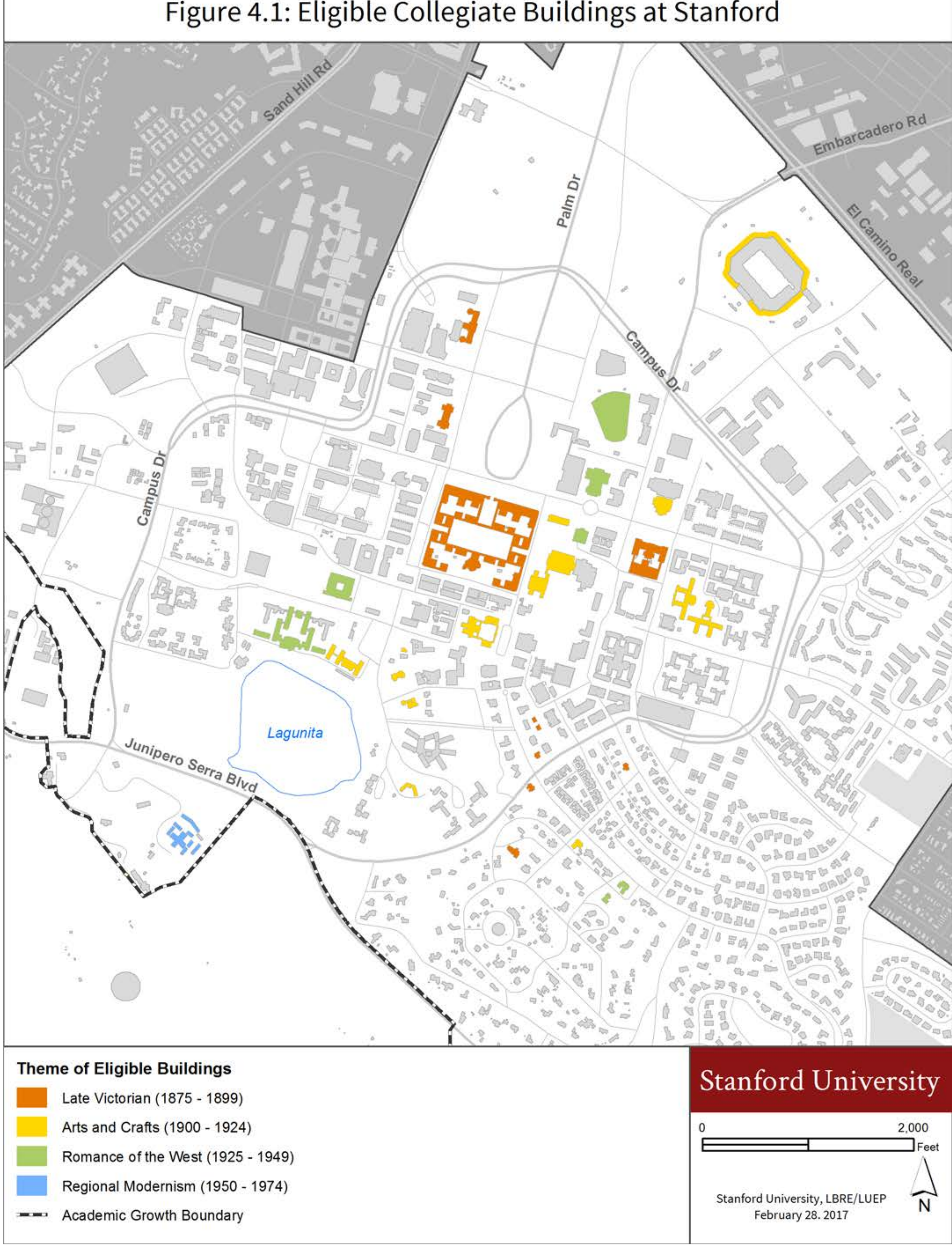
Mills College performed a detailed historic resources survey that identified 27 individual historic resources but did not identify a historic district.[21] Foothill College's historic resource survey found a potential historic district, comprising the 36 buildings constructed with the original 1961 master plan but no formal nomination or listing has been processed to date.[22] No other collegiate historic districts in the San Francisco Bay Area were identified by our research.

In all of the historic districts described above, the period of significance is relatively narrow and does not include the entire history of the institution. The California Historical Resources Commission and the Keeper of the National Register endorsed UC Berkeley's approach, which includes the listing of individual buildings, and the listing of individual building and *groups of buildings* in a Multiple Property Listing rather than as an historic district. This suggests that, for the context of collegiate architecture in the San Francisco Bay Area, the finding of historic districts has been confined to concentrations of buildings constructed during a specific period of significance.

Evaluation of Potential Historic Districts at Stanford

Stanford University's eligible buildings are shown on the map in Figure 4.1, color coded by theme.

Figure 4.1: Eligible Collegiate Buildings at Stanford



Theme of Eligible Buildings

- Late Victorian (1875 - 1899)
- Arts and Crafts (1900 - 1924)
- Romance of the West (1925 - 1949)
- Regional Modernism (1950 - 1974)
- Academic Growth Boundary

Stanford University

0 2,000 Feet

N

Stanford University, LBRE/LUEP
February 28. 2017

The overall pattern is patchy: small clusters of two or three buildings of the same theme. The exceptions are two building complexes: the 27 buildings and connecting arcades of the Main Quadrangle (Late Victorian), and seven buildings at the Center for Advanced Study in the Behavioral Sciences (Modernism). Each of these represents a single property composed of multiple buildings, designed by the same architect, and constructed as an interconnected complex.

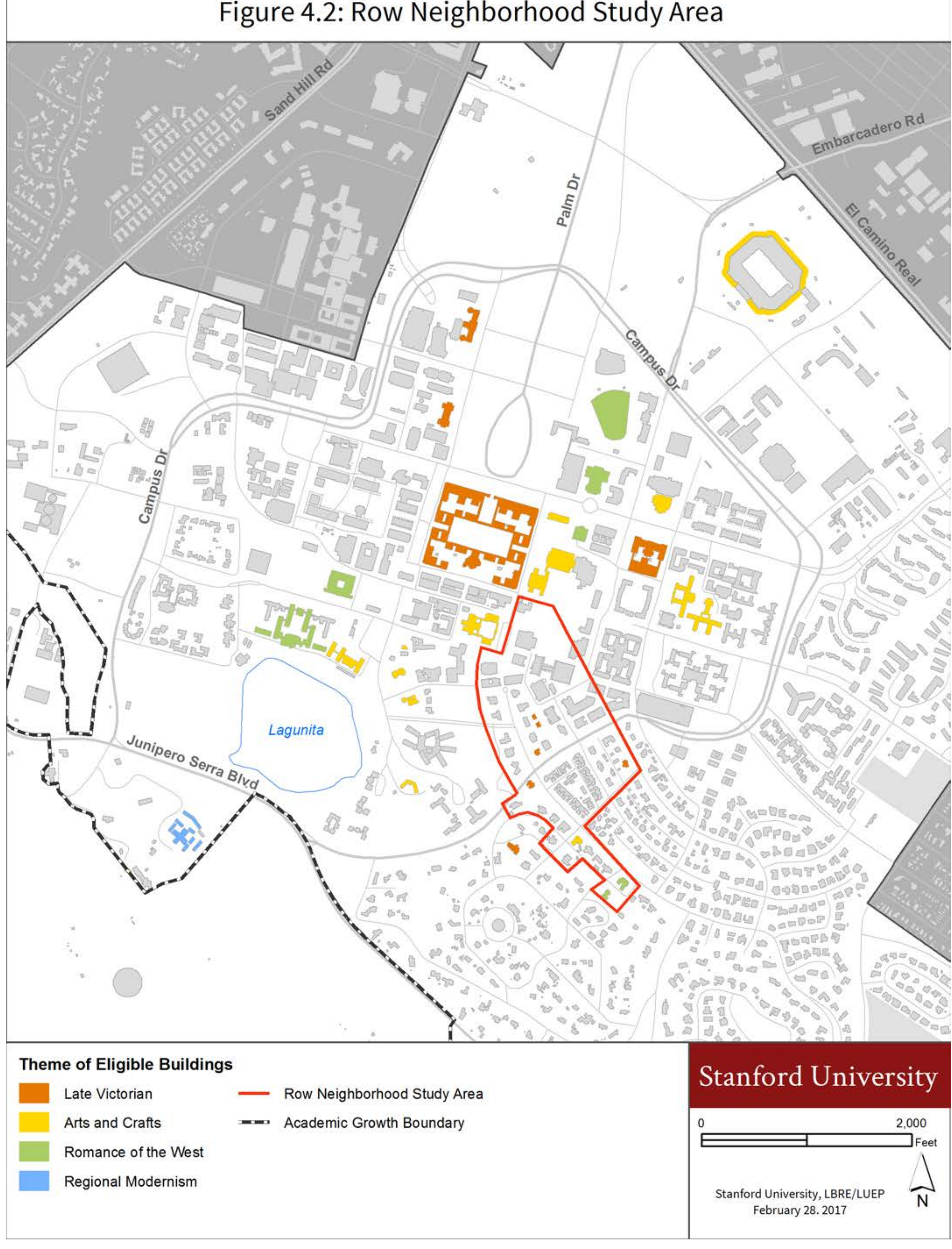
The two concentrations of eligible buildings found in this survey – the Main Quadrangle and the Center for Advanced Study in the Behavioral Sciences– are each a master planned group of buildings by a single architecture firm. They are more accurately described as single properties rather than as districts, similar to the large dormitory complexes (Roble Hall, Lagunita Court, Toyon Hall and Branner Hall) which were reviewed as single properties because they are physically connected by arcades. Twenty-five of the 27 buildings of the Main Quadrangle are also connected by arcades, with two small freestanding buildings flanking the rear of Memorial Church. Each of these complexes was reviewed and found eligible for listing as a unified whole. They appear to be eligible for listing as an individual property, and do not appear to be eligible as districts.

Row Neighborhood District Analysis

In a prior analysis, a potential historic district was investigated in a residential area of the campus south of the main academic building center.[23] Known as "The Row," the area was Stanford's oldest residential neighborhood with dozens of fraternity and sorority houses interspersed with faculty homes along an eccentric diagonal street grid designed by Fredrick Law Olmsted. The neighborhood was first developed between 1890 and 1915. The detailed district evaluation documented the picturesque design qualities of this early residential subdivision, and after considering the many changes that have occurred to buildings and the street grid over time, concluded that there is not a significant concentration of resources in this area and thus no historic district. The County of Santa Clara hired a peer reviewer who concurred with this finding.[24]

It does not appear that there is a historic district on the Stanford campus. There is no significant concentration of buildings of the same theme with visual continuity such that a visitor to the campus would experience the impression of a unified "district."

Figure 4.2: Row Neighborhood Study Area



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[1] Munger Graduate Student Housing Project Stanford University California Environmental Quality Act Historic Resource Evaluation. Carey and Company. November 2005.

[2] Memorandum, April 3, 2014 Laura Jones and Barbara Schussman to Kavitha Kumar. County Review of Historic Resources on the Stanford University Campus.

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[5] Celebrating the Cultural Landscape Heritage of Mills College. Vonn Marie May, Robert Sabbatini and Karen Fiene. Center for the Book, Mills College, 2008.

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[8] Historic Structure Report, The Hearst Greek Theatre University of California, Berkeley, California. Frederic Knapp. 2007. Viewed at http://realestate.berkeley.edu/sites/default/files/hsr_greek_theatre_april2007.pdf.

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[18] https://npgallery.nps.gov/nrhp/AssetDetail?assetID=dfeababe-92be-4c35-9e6e-c368e0842229

[19] https://npgallery.nps.gov/nrhp/GetAsset?assetID=b459deb2-7f3d-4211-a842-762f77aeed43

[20] https://npgallery.nps.gov/nrhp/AssetDetail?assetID=f57a5eaf-5772-449f-8f05-0252c204b52c The San Diego State Teacher's College is also a National Register district.

[21] Celebrating the Cultural Landscape Heritage of Mills College. Vonn Marie May, Robert Sabbatini, Karen Fiene. Mills College 2008.

[22] Foothill College Historic Resource Evaluation Foothill College Facilities Master Plan. Architectural Resources Group. 2008.

[23] The Row Neighborhood: Historic Context and District Evaluation. E. Angoloti, S. Marfatia, F. Bill, L. Jones and K. Ozawa. February 2015.

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5: FINDINGS

Overview

The architecture of Stanford University expresses the tension between regional expressions and international movements in architecture. Stanford's best architecture is proudly regional in character. Not uninformed by outside influences, but choosing to celebrate the unique beauty, history and climate of California. Some of the architectural themes developed in Chapter 3 can be seen in other contexts in California, but rarely outside California. Spanish Colonial Revival, Mission Revival, Ranch and Mid-Century Modern are perhaps even more prominent in Southern California for example, while Shingle Style and Second Bay Tradition are much more prevalent in the San Francisco Bay Area. These regional variations helped to define the historic context for the survey, as well as the specialized nature of many of the property types associated with higher education.

Thematic and Regional Framework for Evaluation

The themes were developed within the four major periods of significance, by reviewing surveys and histories of campuses throughout the San Francisco Bay Area. We found some diversity in styles, as documented in Chapter 3, but for our purposes focused on those that have a presence on the Stanford campus. Thus there is little discussion of Gothic style for example, which is absent from our campus (and relatively rare in the region as well). We have used broad style categories to capture the spirit of each period. Many of these styles are eclectic blends of elements borrowed from historical referents and the lines between styles can be blurry. For example, in the Late Victorian period we have two styles associated with student fraternity, sorority and boarding houses: Neoclassical and Shingle Style. Another style, Queen Anne, while widespread in the region, has few surviving examples on the Stanford campus and tends to overlap in many features with Shingle Style. The context groups buildings with Queen Anne features into the Shingle Style for comparative purposes.

Within each theme, we identified the recognized historic landmarks on college and university campuses in the region. These were used as benchmarks to assess the qualities required to meet the test of California Register Criterion 3, embodying collegiate architecture of the region in each period. We reviewed the architecture of all the campuses in the region to develop the themes, and then relied upon the robust processes for listing as local landmarks and on the California and National Registers to set the benchmarks for determining historical significance across the region. There was remarkable consistency across themes that a property should display more than a simple majority of distinctive characteristics to truly embody its style and period of significance. This method also provided an external, objective check for evaluating Stanford's buildings. After this step, the property was also subject to professional judgment: consideration of its design quality and "artistic values," and assessment of integrity. Building additions were assessed for compatibility and some older additions were found to contribute to the significance of the property (e.g. Encina Hall and Encina Commons).

Within the collegiate framework some properties were also found eligible for listing on the California Register under Criterion 1 for association with significant events and Criterion 2 for association with persons who made important contributions to history.

Findings

The themes, styles and benchmarks were applied to nearly 400 buildings on the Stanford campus, yielding seventy-four historic buildings. These seventy-four buildings were recorded as forty-two collegiate properties as many of the collegiate properties contained more than one building – the Main Quadrangle for example contains twenty-seven significant buildings connected by arcades. In addition, eight non-collegiate properties were found eligible for listing for a total of fifty historic properties in the Survey Area (these properties are presented in Appendix C). Generally, older buildings were more likely to be significant than newer buildings. Care was taken to avoid a bias towards age but the pattern of hasty construction, cost cutting and design compromises in the Depression and post-War period did not produce much at Stanford in the way of great architecture. California regionalism still had a strong presence reflected in the survey findings.

By comparison, UC Berkeley's campus has forty-five identified historic buildings, with a number of other associated historic buildings in adjacent neighborhoods. Mills College has identified twenty-one historic buildings. Our survey method appears to yield results that are consistent with regional practices.

In a handful of cases, Stanford properties found eligible in prior evaluations did not meet the benchmark under this regional context and were re-evaluated as not significant. In one case, a building previously found ineligible was found eligible after re-evaluation. This reveals the strength of evaluating within an historic context, and of the regional benchmarking method. This method identified the more important regional examples and eliminated the lesser ones, yielding an impressive number of historic resources.

Significant Properties: Criterion 1, Events

One property, the Main Quadrangle, was found eligible for listing under Criterion 1 for two separate events.

Table 5.1: Properties eligible for listing under Criterion 1, Events

	Property Name	Event Year	Event
1	Main Quadrangle	1891	Opening Day, Stanford University
2	Main Quadrangle	1937	Invention of the klystron

Significant Properties: Criterion 2, Persons

Four significant persons were identified including the university's co-founders Leland Stanford, Sr. and Jane L. Stanford and Herbert and Lou Henry Hoover. These four people were associated with eight extant properties that retain integrity to their respective periods of significance.

Table 5.2: Properties eligible for listing under Criterion 2, Persons

	Property Name	Person	Period of Significance
1	Main Quadrangle	Leland Stanford, Sr.	1891-93
		Jane L. Stanford	1891-1905
2	Cantor Center (Stanford Museum)	Jane L. Stanford	1891-1905
3	Sapp Center (Old Chemistry)	Jane L. Stanford	1903-05
4	Old Union	Herbert Hoover	1915-64
		Lou Henry Hoover	1915-44
5	Hoover Tower	Herbert Hoover	1940-64
6	Palo Alto Stock Farm Stable	Leland Stanford, Sr.	1878-93
7	Brick Stable	Leland Stanford, Sr.	1889-93
8	Encina Hall	Leland Stanford. Sr.	1891-93
		Jane L. Stanford	1891-1905

These eight properties are also eligible under Criterion 3 and are presented on the maps for their respective architectural themes below.

Significant Properties: Criterion 3, Architecture

Theme: Late Victorian (1875 – 1899)

The Stanfords' vision, inspired by the great civilizations of Europe, was monumental in scale and formal in style befitting a memorial by one of America's wealthiest families to their only child. Examples from Europe were emulated, great American designers were engaged, and under the leadership of Leland and Jane Stanford a new great American architecture emerged at Stanford. An eclectic fusion of classical ideas with the romantic, rustic forms of the California missions was rendered at monumental scale in local stone and the new technology of reinforced concrete. The extreme monumentality of the campus was softened by the loss of the ten-story Memorial Arch and the steeple of Memorial Church in the 1906 earthquake, but the iconic view through the Main Quad to Memorial Church and the foothills beyond remains a fitting memorial to the Stanfords' accomplishments and their gift to California in honor of their son.

Stanford's Main Quadrangle

Thirty-six buildings, recorded as ten properties, found eligible for listing on the California Register in this Historic Resources Survey include the Mission Revival/Richardsonian Romanesque sandstone buildings, Neoclassical and Shingle style buildings epitomizing the Late Victorian period:

Table 5.3: Stanford Campus Historic Resources, Late Victorian (1875 – 1899)

	Name	Year Built	Style
1-27	Main Quad – 27 Buildings	1891-1902	Richardsonian Romanesque with Mission Influence
28	Sapp Center (Old Chemistry)	1902	Richardsonian Romanesque with Mission Influence
29, 30	Encina Hall and Commons	1891	Richardsonian Romanesque with Mission Influence
31	Cantors Arts Center (Stanford Museum)	1891	Neoclassical
32	Lasuen House	1900	Neoclassical
33	Hammarskjold	1900	Neoclassical
34	Hillel-Ziff Center (Dunn-Bacon House)	1899	Neoclassical
35	Cooksey House (Synergy)	1900	Shingle
36	Owen House	1896	Shingle
37	Drell House	1892	Shingle

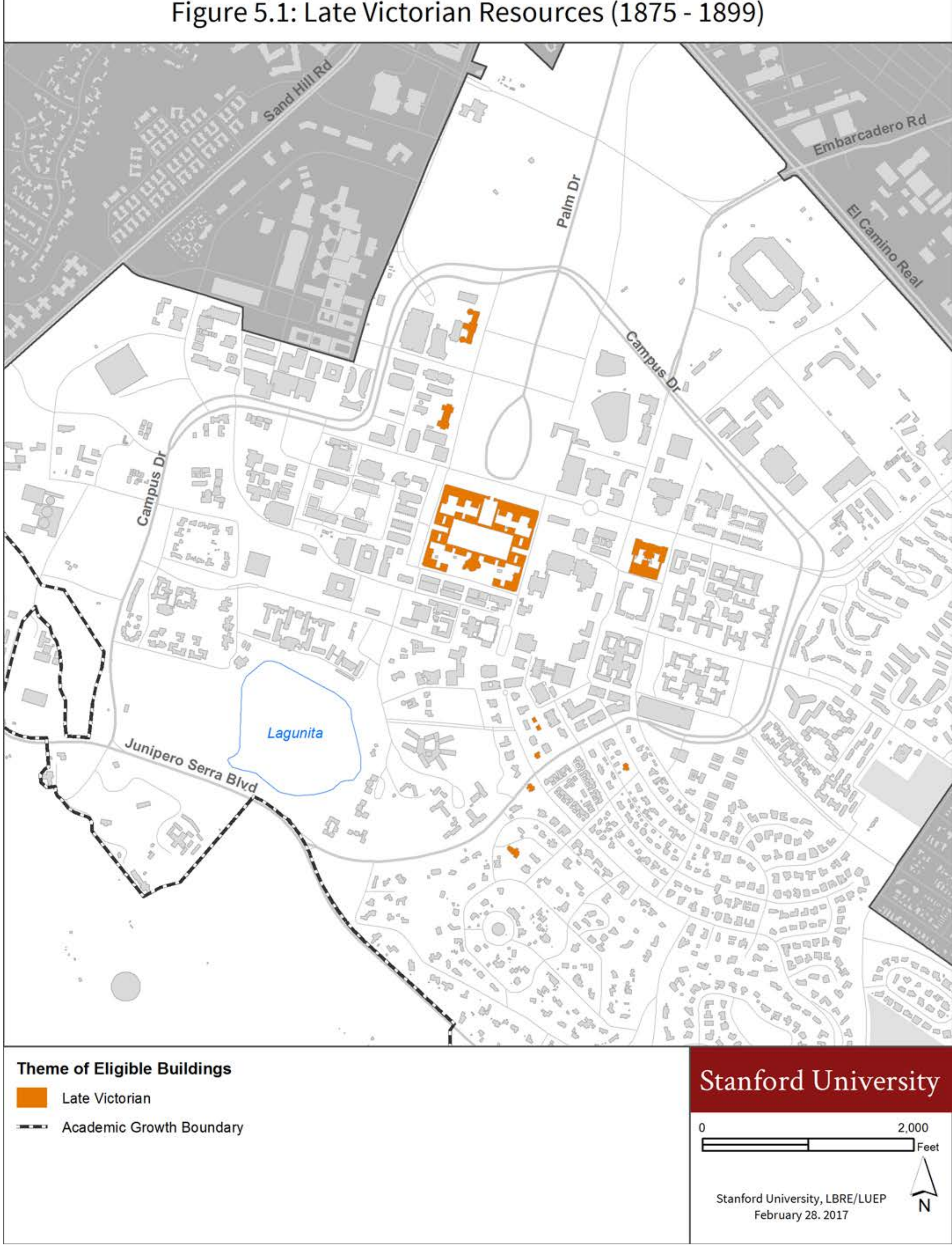


Figure 5.1: Late Victorian Resources (1875 - 1899)
Sand Hill Rd
Embarcadero Rd
El Camino Real
Palm Dr
Campus Dr
Campus Dr
Lagunita
Junipero Serra Blvd
Theme of Eligible Buildings
Late Victorian
Academic Growth Boundary
Stanford University
0
2,000
Feet
N
Stanford University, LBRE/LUEP
February 28. 2017

Theme: Arts and Crafts (1900 – 1924)

The campus took nearly a decade to recover from the 1906 earthquake and with the campus mobilized for the war effort around Camp Fremont, few buildings appeared until the end of World War 1. University leaders turned to local architects for assistance in expanding the campus. One firm, Bakewell and Brown, emerged as the dominating influence over this period. Their adaptation of European and Spanish Colonial styles evolved over time, reflecting the rapidly changing tastes and technologies of the early 20th Century. Hints of Art Deco and Moderne style can been seen on some buildings but the influence of the sandstone and tile Main Quadrangle was much stronger. Bakewell and Brown adapted the Beaux Arts style to this local setting in the substyle we described as Beaux Arts – Southern Influence.

Toyon Hall, A fine example of Beaux Arts- Southern Influence

Properties found eligible under this theme begin with Beaux Arts examples, but also include some Craftsman houses.

Table 5.4: Stanford Campus Historic Resources, Arts and Crafts (1900 – 1924)

	Name	Year Built	Style
1	Roble Hall	1918	Beaux Arts - Northern Influence
2	School of Education	1938	Beaux Arts - Northern Influence
3-5	Old Union Complex - 3 buildings	1915-1922	Beaux Arts - Southern Influence
6	Art Gallery	1917	Beaux Arts - Southern Influence
7	Green Library	1919	Beaux Arts - Southern Influence
8	Burnham Pavilion	1921	Beaux Arts - Southern Influence
9	Knoll	1918	Beaux Arts - Southern Influence
10	Green Library	1919	Beaux Arts - Southern Influence
11	Burnham Pavilion	1921	Beaux Arts - Southern Influence
12	Bechtel International Center	1919	Beaux Arts - Southern Influence
13	Toyon Hall	1923	Beaux Arts - Southern Influence
14	Branner Hall	1924	Beaux Arts - Southern Influence
15	Kingscote	1917	Craftsman
16	Black House	1919	Craftsman
17	La Maison Francaise	1909	Craftsman

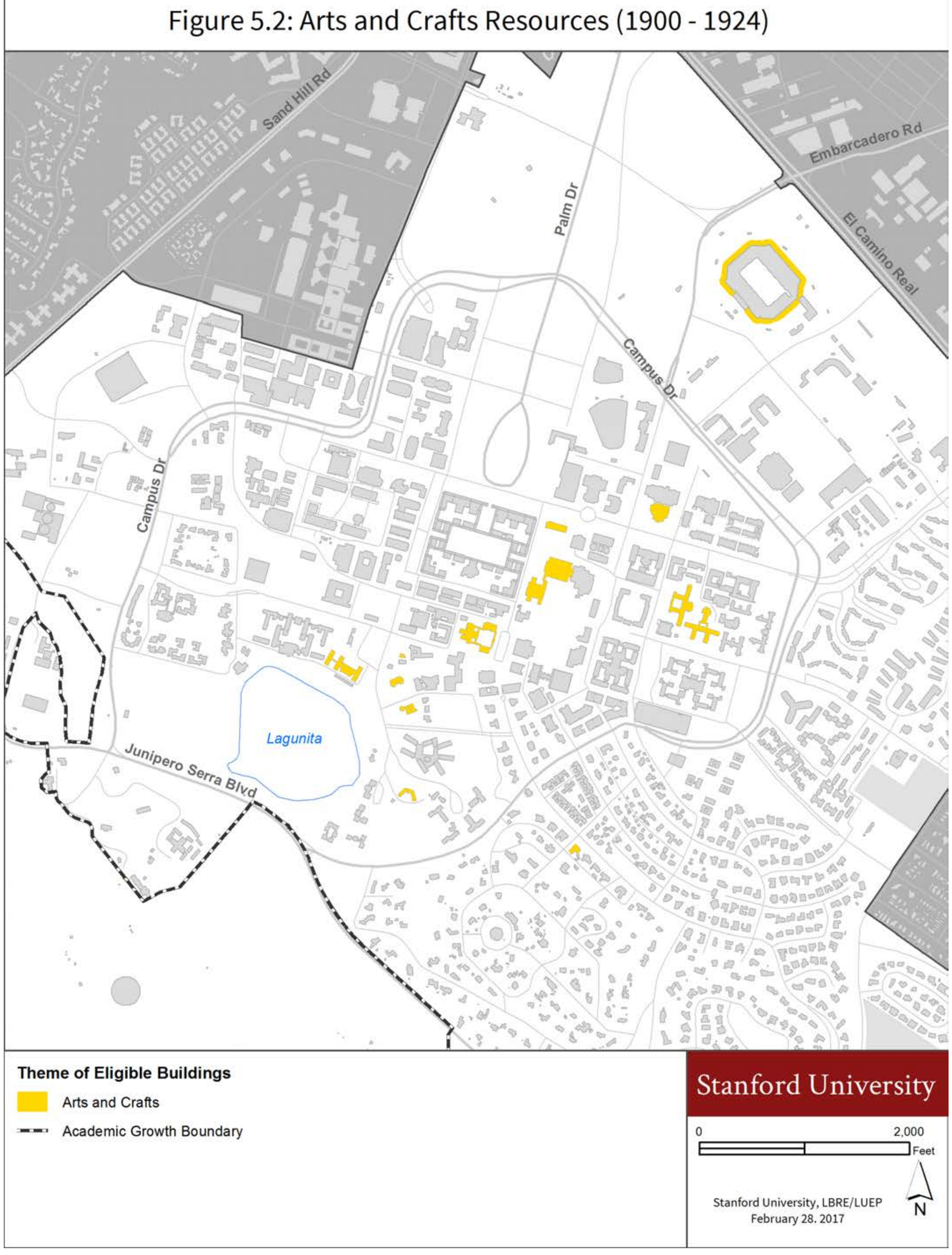


Figure 5.2: Arts and Crafts Resources (1900 - 1924)
Sand Hill Rd
Embarcadero Rd
El Camino Real
Palm Dr
Campus Dr
Campus Dr
Lagunita
Junipero Serra Blvd
Theme of Eligible Buildings
Arts and Crafts
Academic Growth Boundary
Stanford University
0
2,000
Feet
N
Stanford University, LBRE/LUEP
February 28. 2017

Theme: Romance of the West (1925 – 1949)

The pull of internationally popular “moderne” Streamline and Art Deco influences was largely overwhelmed by romantic reinterpretations of historical styles of the American West during this period on campuses in the region. At Stanford this was particularly strong given the dominance of the Main Quadrangle and Mission Revival was popular during this period both at Stanford and in the region.

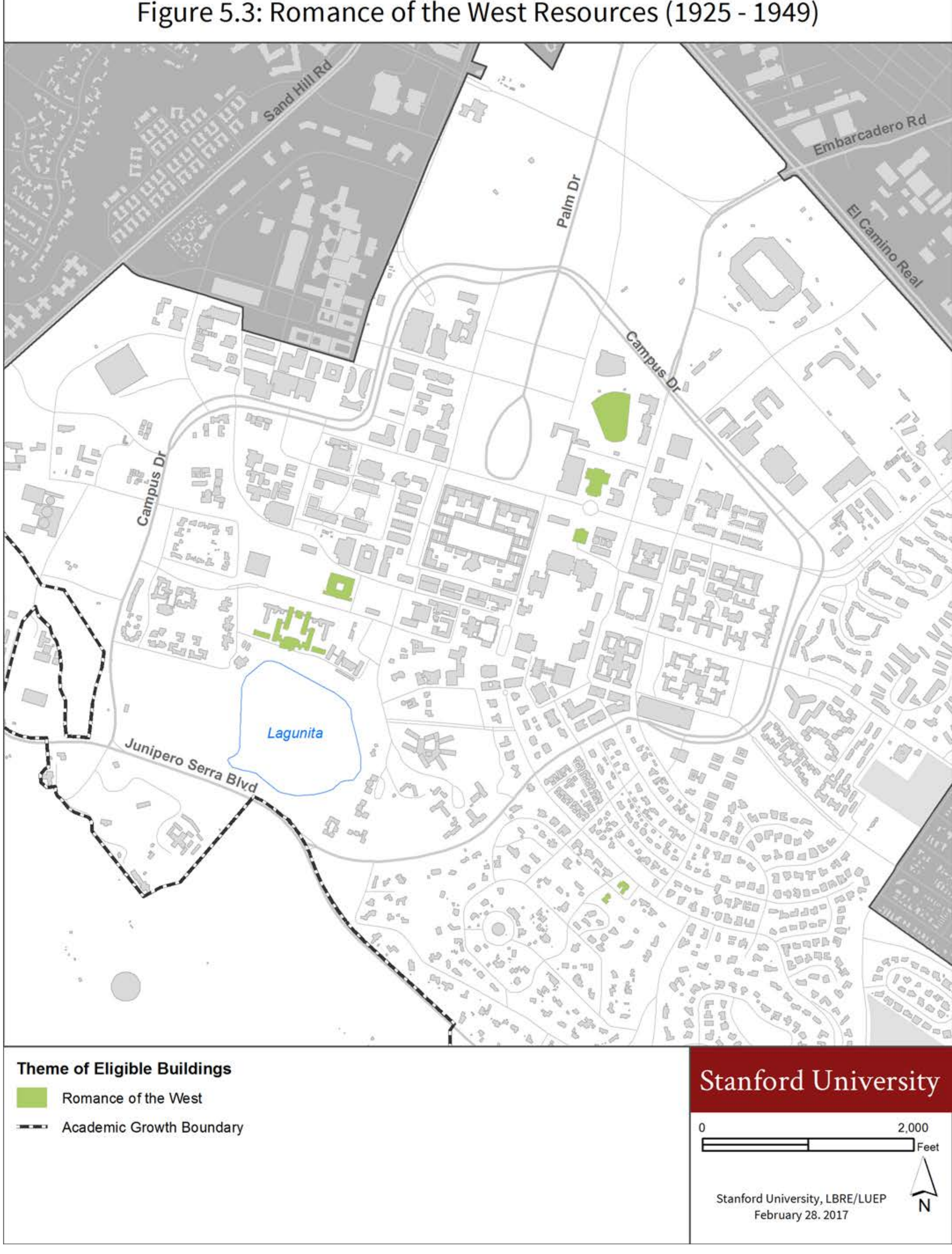
Lagunita Court, Romantic Mission Revival

One national trend that found a home at Stanford – and at other colleges in the region – was the emergence of American Colonial Revival style fraternity and sorority houses which became ubiquitous throughout the United States during this period. Within the regional context, two former Greek houses appear eligible under the theme. Spanish Colonial Revival was also popular in California during this period and Roble Gym is a fine example of the style.

Table 5.5: Stanford Campus Historic Resources, Romance of the West (1925 – 1949)

	Name	Year Built	Style
1	Roble Gym	1931	Spanish Colonial Revival
2	Hoover Tower	1940	Mission Revival
3	Lagunita Court	1934	Mission Revival
4	Memorial Hall	1937	Mission Revival
5	Slavianskii Dom	1939	American Colonial Revival
6	717 Dolores	1915	American Colonial Revival

Figure 5.3: Romance of the West Resources (1925 - 1949)



Theme: Regional Modernism (1950 – 1974)

During the Second World War, function triumphed over form in wartime factories and military installations and after the war the taste for clean, honest, modern forms continued. A young generation of architects brought a different approach to the design of the Stanford campus. Briefly the advocates for change had a champion in Stanford President Donald Tresidder, but with his untimely death in 1948 the campus yielded to pressure from conservative trustees and donors and an unhappy compromise was reached: the monumental concrete of Brutalism or the glassy walls of Mid-Century Modern married to the red-tile hipped roof and sandstone color of the earlier campus. These buildings, inflexible and often of mediocre execution, were set down wherever space could be found to put them, often in total disregard of the master plan. Many buildings of this era have already been replaced; none of the Brutalist or Mid-Century Modern examples that remain appear to be eligible for listing on the California Register.

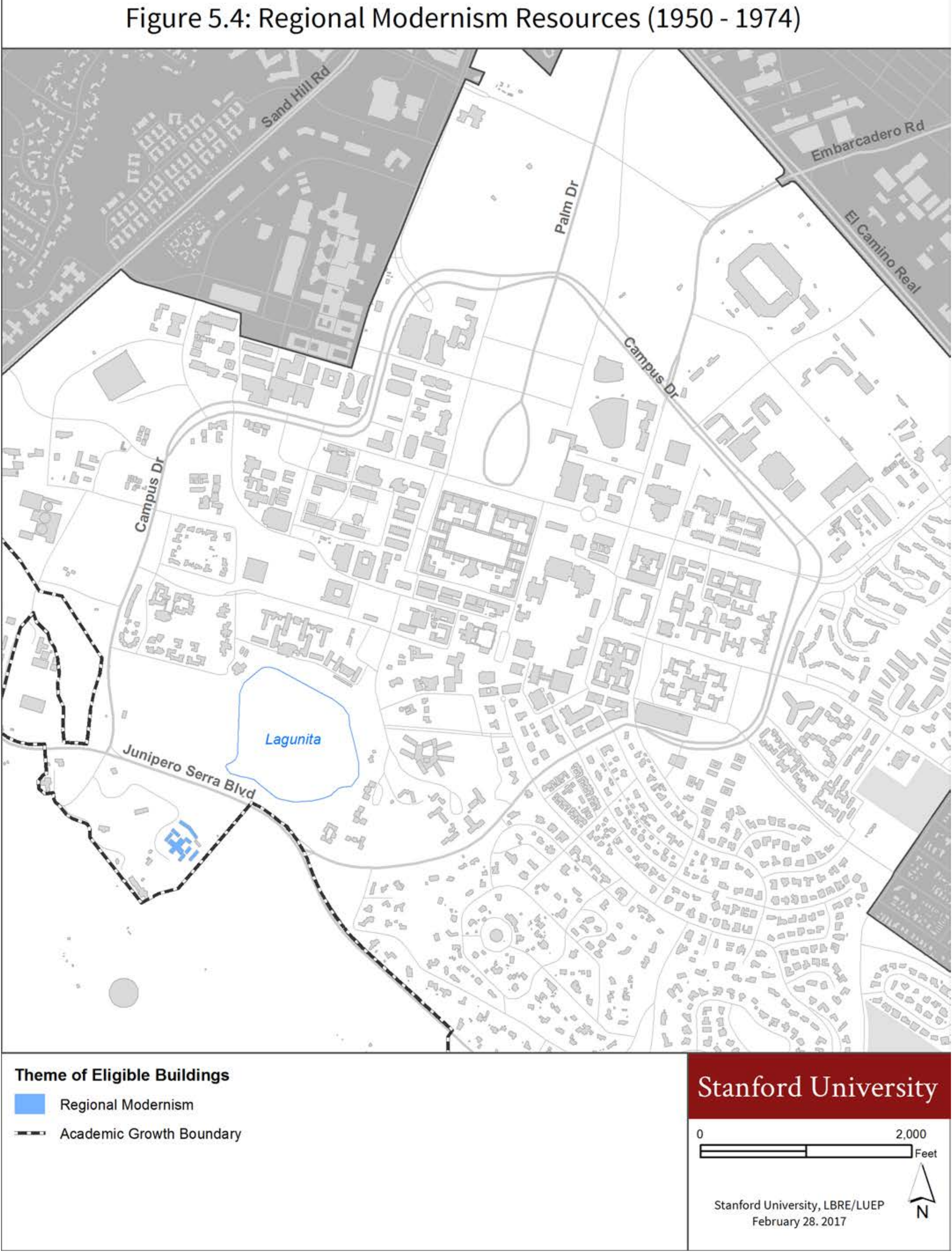
The regional expression of Shingle and Craftsman Style evolved into Second Bay Tradition, bringing vernacular forms in wood and concrete into the modern era. One particularly fine example of Second Bay Tradition at Stanford has been found eligible for listing: The Center for Advanced Study in the Behavioral Sciences, designed by Wurster Bernardi and Emmons in 1954.

Center for Advanced Study in the Behavioral Sciences

Table 5.6: Stanford Campus Historic Resources, Regional Modernism (1950 – 1974)

	Name	Date	Style
1-8	Center for Advanced Study in the Behavioral Sciences – 8 buildings	1954	Second Bay Tradition

Figure 5.4: Regional Modernism Resources (1950 - 1974)



6: PRESERVATION PROGRAMS

The survey has established a historic context for evaluation by identifying themes and periods of significance. These themes were applied to identify potential historic properties on the Stanford campus. This chapter addresses the implementation of preservation programs to ensure the proper treatment of these historic resources and the compatibility of adjacent new construction.

Santa Clara County Oversight

Projects requiring a building permit or planning approval are subject to specific requirements developed by the County of Santa Clara to ensure preservation of historic properties on the Stanford campus. Presently, three documents guide oversight on the County level:

1. Community Plan Policies
2. General Use Permit Conditions of Approval
3. Memorandum of April 2014

The specific conditions related to historic preservation for each of these tools are briefly summarized below.

Community Plan Policies

Santa Clara County adopted the Community Plan for Stanford University in 2000 (SCP). Five policies related to heritage resources were included in the Resource Conservation (RC) chapter of the plan:

- SCP-RC 22 Maintain informational databases and formal inventories of heritage resources as the basis for local decision-making regarding historic buildings, archaeological and paleontological sites, heritage trees, and landscape features.
- SCP-RC 23 Protect heritage resources, including sites and structures, and trees in campus development through careful land use planning, individual project design, project review, use of appropriate guidelines, and other implementation measures.
- SCP-RC 24 Protect the integrity of significant archaeological sites and other heritage resources. Ensure the confidentiality of archaeological site locations in conformance with state laws.
- SCP-RC 25 Take into account the need to protect archaeological and paleontological resources in any environmental enhancement activities involving creek restoration and flood control.
- SCP-RC 26 Give priority to the avoidance or adaptive reuse of historic structures over demolition whenever possible.

General Use Permit Conditions of Approval

The conditions of approval adopted in 2000 provide specific requirements to ensure that the permitted development is consistent with the policies. Requirements for potential historic structures are as follows:

> *O.1. For any building project that involves demolition of a structure that is 50 years old or more, Stanford shall submit an assessment of the structure regarding its eligibility for listing to the County Planning Office. If the County Planning Office determines that the structure is listed or potentially eligible for listing on a federal, state, or local list of historic resources, or is a potential historic resource, then a site-specific analysis of the impact and any feasible mitigation measures shall be prepared as part of the environmental review of the project and the demolition will be referred to the Santa Clara County Historic Heritage Commission for its recommendation prior to County consideration of approval of a demolition permit.*
>
> *O.2. For any proposed building project that involves remodeling, alteration, or a potential physical effect on a structure that is 50 years old or more, Stanford shall meet the following requirements:*
>
> a. *If the structure is included in the Santa Clara County Heritage Resource Inventory, or is determined by the County Planning Office to be eligible for listing or is a potential historic resource, the remodeling shall be conducted following the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings, or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995).*
> b. *If the structure is not on the County Inventory, but is 50 or more years old, Stanford shall assess the structure to evaluate whether it appears eligible for inclusion in the Inventory, and will submit its assessment to the County Planning Office. If the County Planning Office determines that the structure is potentially eligible for the Inventory, or is a potential historic resource, the County Planning Office will submit the assessment to the Santa Clara County Historic Heritage Commission for review. If the structure is determined to be eligible for listing on the County Inventory, then the mitigation described in Condition O.2.a shall be required.*

Memorandum of April 2014

The County of Santa Clara and Stanford University agreed to a series of interpretations to provide more detail regarding implementation of the General Use Permit conditions. These interpretations included the following key provisions:

- A procedure for "stamping" construction documents to certify that the proposed project has been reviewed by a qualified professional and found consistent the Secretary of the Interior's Standards and Guidelines
- A procedure for submitting a "statement of compatibility" prepared by a qualified professional for new construction within 75 feet of a historic property
- A clarification regarding review of interiors of historic properties that host public programs (museums, concert halls, athletic competition venues); the verification of consistency with the Standards and Guidelines would apply to alteration of primary interior spaces within these facilities.

Maintenance of Historic Properties

The following business units of the university manage and maintain historic properties on the academic campus:

- Land Buildings and Real Estate
- Residential and Dining Enterprises
- Department of Athletics and Physical Education
- Faculty-Staff Housing Office

Each business unit is independently responsible for budgeting and implementation of maintenance programs. However, all alterations to historic properties – even “replacement in kind” of a roof or repainting of a building exterior – are subject to university-wide guidelines and review procedures. These safeguards include:

- Central Campus Design Standards
- Historic Stewardship Guidelines
- Main Quad Guidelines

Stanford’s academic buildings are maintained by Land Buildings and Real Estate (LBRE). LBRE has developed an additional tool for ensuring that buildings are appropriately maintained: Levels of Service for building maintenance. This process ensures that adequate funding and supervision are devoted to historic buildings. Maintenance projects on historically significant buildings require review by a qualified professional, even in cases where a building permit is not required.

The University Architect’s office reviews maintenance projects across all units of the university to ensure compliance with Stanford’s guidelines and standards; for historic properties University Architect’s office staff also employ the Secretary of the Interior’s Standards and Guidelines for the Treatment of Historic Properties. Housing properties managed by Faculty-Staff Housing are reviewed by Heritage Services.

Stanford’s Preservation Professionals

Stanford University is committed to excellence in the stewardship of its historic campus. A team of experienced preservation professionals oversees stewardship activities, assisted by expert consultants when necessary. The University Architect’s staff includes five professional architects meeting the qualification standards as architects and one meeting the standards for architectural history. Heritage Services staff includes four professionals meeting qualification standards in archaeology and history. Together the Stanford preservation team has more than a century of professional experience. Statements of qualifications are included in Appendix D.

The university is also fortunate to have the oldest campus historical society in America: the Stanford Historical Society. The University Architect’s office presents quarterly updates to the Board of Directors of the Stanford Historical Society and solicits their feedback and advice.

Stanford's Preservation Achievements

University programs and projects have received numerous preservation awards. A list of highlights is presented below.

National Trust for Historic Preservation

- 10 Year Seismic Rehabilitation Program

Governor's Award for Historic Preservation

- Seismic Rehabilitation Program
- Historic Houses

California Preservation Foundation

- Memorial Church Restoration
- Language Corner Rehabilitation
- Building 30 Main Quad Restoration
- Hanna House Stabilization and Preservation
- Toyon Hall Rehabilitation
- Peterson Building Rehabilitation and Infill
- Arizona Garden Restoration

Conclusion

Stanford University, in close partnership with the County of Santa Clara, has developed robust historic preservation tools and strategies. The current comprehensive effort to survey all buildings on the academic campus is a major step forward in ensuring that the university meets its preservation goals.

APPENDIX A: INVENTORY

This section presents inventory forms summarizing the findings of the survey. Each Inventory Form includes a recent photograph, a brief description of the property and basic information about its construction history. The form also identifies the property type (and where property type has changed over time it includes the original property type), theme and period of significance under which the property was evaluated. The findings of the current survey effort are summarized regarding eligibility for listing on the California Register under Criteria 1, 2 and 3. Finally, the form reports the findings of previous evaluations of the property and the findings of the current survey effort. A property can contain multiple buildings designed as a unified complex and programmatically linked to one another.

For non-eligible properties the Inventory Form is the record document that demonstrates that the property is not a historic resource and that further historic preservation mitigation efforts will not be required.

Properties that are found eligible for listing on the California Register have summary Inventory Forms and are further documented in Appendix B with DPR forms that provide more detailed information. The DPR forms are the record documents for historic properties that guide historic preservation treatment and project review.

This section also includes a table of fifteen utility structures that were found as a group not to be eligible for the California Register. These structures are of prefabricated or utilitarian design. The table is the record document that demonstrates that the structures have been reviewed and found not to be historic resources. Accessory structures directly associated with properties constructed before 1975 are described on the Inventory forms, and for properties found to be historic, accessory structures have also been evaluated.

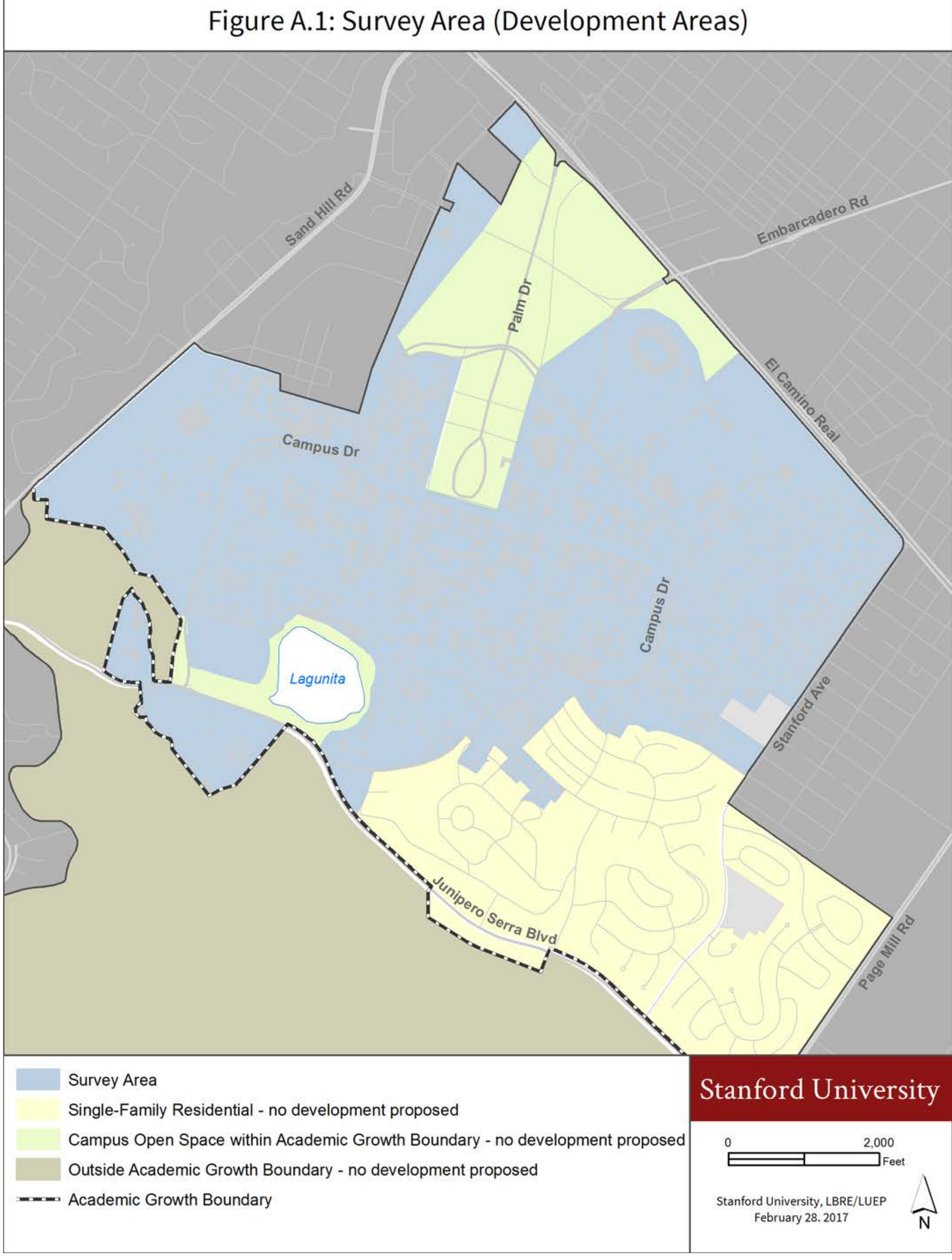


Figure A.1: Survey Area (Development Areas)
Sand Hill Rd
Embarcadero Rd
Palm Dr
El Camino Real
Campus Dr
Campus Dr
Lagunita
Stanford Ave
Junipero Serra Blvd
Page Mill Rd
Survey Area
Single-Family Residential - no development proposed
Campus Open Space within Academic Growth Boundary - no development proposed
Outside Academic Growth Boundary - no development proposed
Academic Growth Boundary
Stanford University
0
2,000
Feet
Stanford University, LBRE/LUEP
February 28. 2017
N

Property Type Key

Academic Property Types

- Teaching and Research Buildings (faculty offices, classrooms, laboratories, libraries) AC-T/R
- Athletics and Physical Education Buildings (gymnasium, stadium, sports pavilion) AC- A/PE
- Museums/Theaters/Concert Halls/Places of Worship AC- M/T/ CH/PW
- Service Buildings (student unions, bookstore, bank, child care, post office, fire and police station, non-academic staff offices, faculty club) AC- Ser
- Support Buildings (shops, storage buildings, utility and infrastructure buildings) AC-Sup

Residential Buildings

- Multi-family Apartment Complexes Res-MF
- Group Quarters – Houses Res-GQ-H
- Group Quarters – Dormitories Res-GQ-D

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