

TABLE OF CONTENTS

4.5	Cultural Resources	4.5-1
4.5.1	Environmental Setting	4.5-1
4.5.2	Impacts and Mitigation	4.5-8
4.5.3	References.....	4.5-24

Tables

Table 4.5-1 UC Davis Campus Buildings 50 Years of Age or Older by 2015

Figures

Figure 4.5-1 Cultural Resource Survey Sites

4.5 CULTURAL RESOURCES

This section presents an evaluation of the potential for development under the 2003 LRDP to affect cultural resources that may be present on the UC Davis campus. It also assesses the effectiveness of mitigation measures implemented under the 1994 LRDP EIR (EIP Associates 1994) in avoiding or reducing the significance of impacts to cultural resources on the campus, in such that appropriate measures for continuing treatment of cultural resources on campus can be determined.

Paleontological resources are not addressed in this section, because the potential for development under the 2003 LRDP to result in impacts to paleontological resources was adequately addressed in the Initial Study (UC Davis 2002).

No scoping comments specific to cultural resources were received in response to the Notice of Preparation. One comment was received regarding a row of walnut trees along Russell Boulevard. These shade trees were reportedly planted by “the Farm Bureau women” in about 1920, an event commemorated by a plaque adjacent to the Russell Boulevard bike path. The campus was urged to be cognizant of these historical trees in campus planning and to plan to preserve them. The Russell Boulevard Avenue of trees and the associated segment of the Lincoln Highway are addressed below. Treatment and preservation of significant trees by the campus also are addressed under Section 4.4 Biological Resources (Volume I).

4.5.1 Environmental Setting

The project study area for this assessment is the 5,300-acre UC Davis campus, including central, south and west campuses and Russell Ranch. To date, Intensive development has focused primarily on the central campus. Most other areas of the campus have been devoted primarily to agricultural and low-density uses, with the exception of some clusters of more intensive academic and research development, and support service uses. Substantial development has taken place along the north and west side of the North Fork of Putah Creek on the central campus. More recently, development has taken place along the south side of the North Fork on the south margin of the central campus. The discussion that follows is drawn from the 1994 LRDP EIR (EIP Associates 1994:4.10-1 *et seq.*), and a recent summary of archaeological work on campus (Nadolski 2003b).

The UC Davis campus is adjacent to the City of Davis, near the southern end of the Sacramento Valley, on the west side of the Sacramento River drainage. The most significant natural watercourse on the campus is Putah Creek, an eastward-flowing tributary of the Sacramento River. Putah Creek runs along the southern margin of Russell Ranch and the west campus. The North Fork cutoff and the Arboretum Waterway, which run through a portion of the west campus and the southern end of the central campus, respectively, follow the historic channel of Putah Creek. Historic diversion of the creek formed the South Fork of Putah Creek, which runs along the southern edge of the central campus, south of I-80. Like many areas of California’s Central Valley prior to the widespread development of agriculture, the campus area once included extensive marshy areas and freshwater sloughs. Most of these dried up during the late nineteenth century as a result of river channelization and deliberate drainage for agricultural purposes. Extensive agriculture in the region during the past 150 years or more has included widespread deep plowing for cultivation of grains, field crops and orchards, as well as cattle grazing.

The present-day Mediterranean climate of the Davis area is characterized by hot, dry summers and wet, relatively mild winters, with most of the annual 17 inches of precipitation occurring in December and January, when there also may be heavy ground fogs. A series of cooler and wetter periods and warmer, drier periods during the last 10,000 years resulted in ecological variations affecting plant and animal distribution throughout the west. Before the erection of extensive levees beginning in the nineteenth century, the Sacramento River sometimes overflowed its banks for miles, and Putah Creek probably experienced similar, though lesser, annual overflows. Extensive prairie grassland and valley oak woodland characterized the region at historic contact, and it was rich in acorns and grass seeds, fish, waterfowl, tule elk, mule deer, antelope, and rabbits.

4.5.1.1 Ethnographic, Archaeological, and Historical Background

The following summary information is drawn from the summaries presented in the 1994 LRDP EIR (EIP Associates 1994), a recent summary of archaeology in the campus area (Nadolski 2003b), the results of an updated archaeological records search for the campus performed in 2003 (Shapiro 2003), and a report on an archaeological site on the campus, CA-SOL-397 (Shapiro and Tremaine et al. 1999).

The Sacramento Valley has been occupied by humans for at least 5,000 years. Archaeological investigations have identified a series of cultural horizons that, with subregional variations, were widespread over much of Central California in prehistoric times. These are characterized throughout time by hunting and gathering subsistence strategies. Chronological variations in diet, and particularly with the advent of reliance on acorns and increased use of anadromous fish, are variously attributed to changing technologies, changing environmental conditions, and subsistence pressure resulting from population growth. Burial types and associations, particularly shell bead and ornament types, have proven to be good chronological and typological indicators. Obsidian hydration also has been useful in comparative chronological placement of sites within the region.

The UC Davis campus lies in the ethnographic territory of the Patwin. Each Patwin tribelet was distributed among a principal semi permanent village and several satellite settlements. The principal villages were situated on large waterways like the Sacramento River, which provided an abundance of salmon and other anadromous fish, or at high points of land along streams or sloughs in the plains, with their excellent access to waterfowl. The hot and insect-infested marshy plains were avoided in summer. During the warmer months, groups might move en masse to terraces and other high points along tributaries in the plains and hills. Year-round, proximity to fresh water sources was an important factor in the locations of settlement.

Houses in principal villages were semi subterranean and earth-covered, and villages usually also had a semi-subterranean ceremonial sweathouse. Archaeologically, occupation sites are characterized by tightly flexed burials associated with artifacts, dark soils, chipped stone tools and tool debris, charcoal, animal bone and sometimes shell, shell beads and ornaments, and sometimes groundstone artifacts. Bedrock mortars are absent from valley sites, due to the absence of bedrock outcrops in the valley's deep alluvium.

The earliest direct historic contacts in the Davis area probably occurred during the Moraga expedition, 1806 to 1808. At this time, the Spanish sought to locate new mission sites, capture Indian runaways, and punish those who were hostile to the missions. Most significant in the

decimation of the Native population was the great malaria epidemic of 1833, which killed about 75 percent of the native population. The advent of the 1849 Gold Rush saw a huge inrush of people to the Sacramento area, with extensive travel on the Sacramento River. For natives of the area, increased competition for the use of land and resources, impacts on the essential river fisheries, introduced diseases, and even genocide followed. Few Patwin survived these events.

The southern part of Russell Ranch was part of a rancho granted to William Wolfskill in 1842. Farming on a large scale in support of the Gold Rush population began in the 1850s in the Davis area. Farming intensified rapidly over the subsequent decades, particularly after the establishment of a railroad line through Davis in 1868. The town of Davisville was laid out by railroad promoters. Wide scale flood control and irrigation projects undertaken in the first decades of the twentieth century eliminated thousands of acres of freshwater marsh and slough channels, altered drainages, and increased cultivable land. A “university farm” was established at Davis in 1906, and classes began there in 1909. Davis became a general campus of the University of California in 1959. This was reflected in a rapid increase in development on campus in the 1960s.

4.5.1.2 *Archaeological Inventory of the Campus*

The 1994 LRDP EIR identified archaeological sensitivity for the UC Davis campus, based on known site occurrences and finds in similar settings in the vicinity. Areas within 800 feet of the banks of the historic channel of Putah Creek and its tributaries and slough channels, and in the vicinity of known archaeological sites, were identified as sensitive for the presence of archaeological resources (Figure 4.5-1). In the 1994 assessment, areas of the campus that are close to these features—the majority of the central campus—have high potential to contain archaeological resources (in particular, prehistoric archaeological resources), that might be affected by project development in these areas. Because of the depositional setting of the campus—an active alluvial plain with recent deep sediments—prehistoric and even historic archaeological deposits are frequently buried. Thus, archaeological resources may not be visible on the surface and might be relatively unaffected by surface activity, but could be affected by excavation and grading. Archaeological sites may be present that are not readily identifiable prior to groundbreaking.

Historically, development of the project area was primarily agricultural, and settlement was quite sparse. The ruins of a concrete reservoir, identified as the Briggs Well/Reservoir was documented and assessed in 1998, and was determined not eligible for the California Register of Historical Resources (JRP 1998). No associated irrigation system or evidence of associated settlement were identified in archaeological surveys in the area (Pacific Legacy 1998). Although redeposited historic materials are found in fill along the South Fork of Putah Creek (Nadolski 2003a), no intact historic archaeological deposits or features have been identified on campus. Historic features previously documented on or immediately adjacent to the campus are noted in Section 4.5.1.3. Since 1991, and systematically since the implementation of the 1994 LRDP, project sites on the campus routinely have been assessed for cultural resources sensitivity. Large-scale projects and those within the high-sensitivity zone have been subjected to archaeological surveys, usually accompanied by archaeological testing and followed by archaeological monitoring. Since 1991, extensive archaeological investigations (survey, testing, monitoring, and/or excavation) have been conducted on campus in conjunction with the development of campus projects (Nadolski 2003b).

The following archaeological sites on campus were identified the summaries presented in the 1994 LRDP EIR (EIP Associates 1994), a recent summary of archaeology in the campus area (Nadolski 2003b), the results of an updated archaeological records search for the campus performed in 2003 (Shapiro 2003), and a report on an archaeological site on the campus, CA-SOL-397 (Shapiro and Tremaine et al. 1999).

- CA-YOL-134: a prehistoric archaeological deposit including a variety of artifacts as well as human remains, originally recorded in 1972 as a “burial site”;
- CA-SOL-397: prehistoric site with midden deposit, artifacts and human remains;
- CA-YOL-118: prehistoric site with midden deposits and burials;
- P-48-222: recently discovered prehistoric site with a range of artifacts and human remains;
- CA-SOL-271: prehistoric archaeological deposit in an off campus parcel examined under a LRDP alternative;
- Kidwell site: prehistoric site recently recorded in an off-campus parcel considered for a LRDP alternative;
- CA-YOL-146: prehistoric artifact scatter.

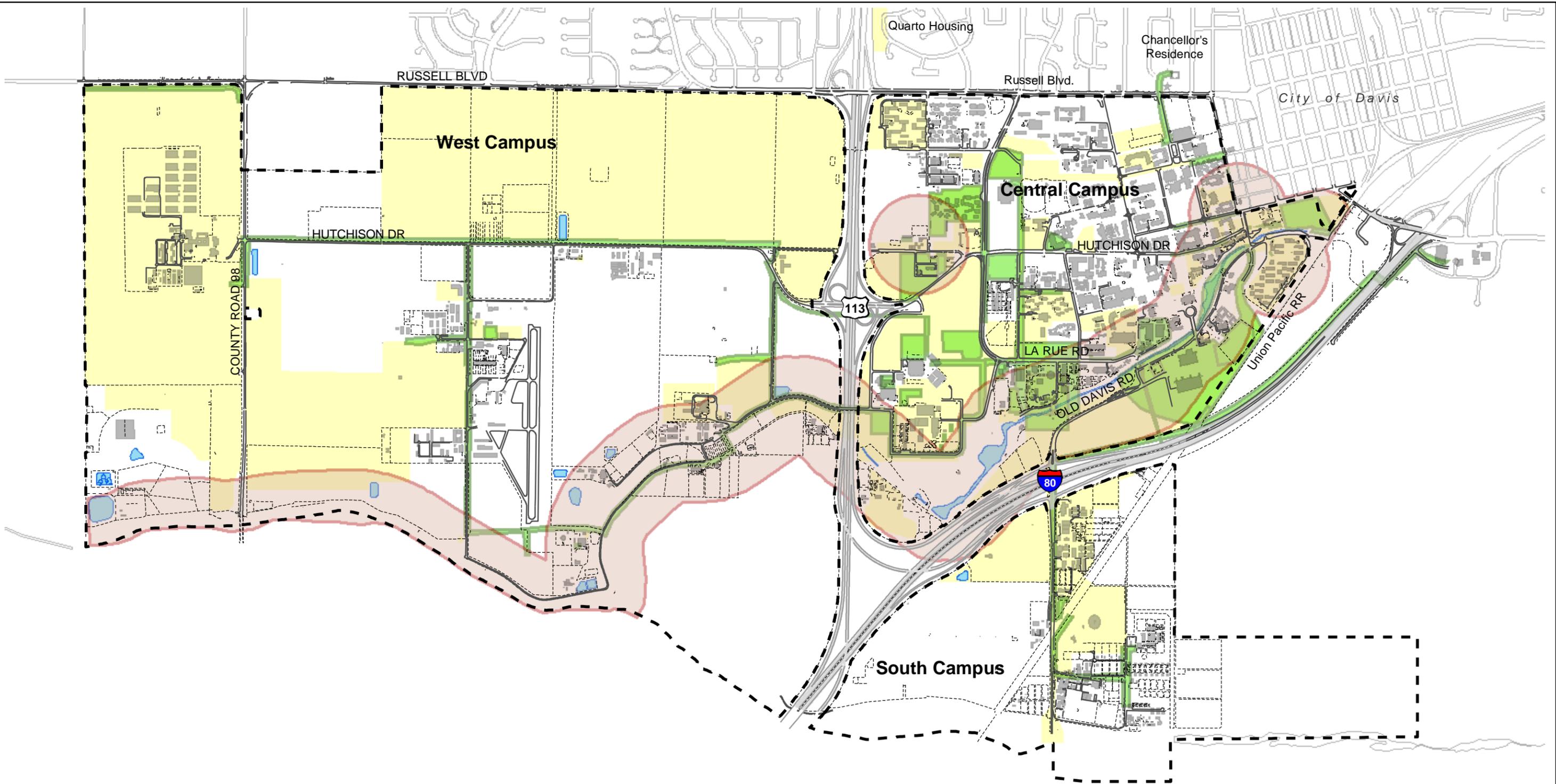
In addition, three possible site locations are noted in the campus vicinity; none of these has been confirmed through archaeological survey.

Archaeological survey, testing, and construction monitoring under the 1994 LRDP were useful in identifying and documenting two of the prehistoric archaeological sites listed above, and provided additional information about another previously recorded archaeological deposit that potentially would be affected by development. All three sites were within the designated high-sensitivity zone the vicinity of the historic channel of Putah Creek. The four additional prehistoric archaeological sites previously documented or reported on or near campus are also in the Putah Creek vicinity. These findings tend to confirm the assessment made in the EIR for the 1994 LRDP that areas within 800 feet of Putah Creek, or in the vicinity of known archaeological sites, are sensitive for the presence of archaeological resources.

No finds have been recorded to date outside the zones assessed as having high sensitivity. It is possible that these areas at a distance from natural watercourses were not much occupied prehistorically, so archaeological materials simply may not present. However, the lack of finds outside of the zone close to the creeks may also reflect the limitations of archaeological investigation. Many of the developments proposed on campus during the past decade were sited within existing development, where most or all of the ground surface was covered by paving, landscaping and buildings. Archaeological survey is of limited use in such a setting, because there are no natural soils to inspect. Subsurface testing with a soil auger or shovel probe to explore for buried archaeological deposits also may not be productive because these methods yield only very small samples. However, past archaeological investigations with auger, shovel, and small scale test excavations were informative in areas of previous archaeological finds in the high sensitivity zone on the campus, and helped to define suspected archaeological sites.

Native American consultation consistent with Public Resources Code (PRC) §5097 has been carried out on campus when human remains and other prehistoric materials have been

C:/data/ArcMap_projects/drp_EIR_cultural.mxd 4-22-2003



Legend

- Zone of Cultural Sensitivity
- Monitoring Sites
- Water Features
- Cultural Resources Survey Site

0 800 1,600 3,200 Feet

1 inch equals 1,600 feet



UC Davis
LRDP EIR
28649327

Cultural Resource
Survey Sites

Figure
4.5-1

discovered, and a Patwin representative routinely monitors archaeological projects and construction excavation in sensitive locations on the campus. At the request of the Patwin Most Likely Descendant, Native American human remains and associated artifacts have been reinterred, consistent with PRC §5097.98 and the California Native American Graves Protection and Repatriation Act.

4.5.1.3 *Historic Architectural Inventory of the Campus*

Records searches on campus and at the NWIC (Shapiro 2003) revealed the following previously recorded historic features:

- A segment of the Lincoln Highway that follows Russell Boulevard along the northern margin of the campus;
- The Avenue of Trees, a City of Davis Historic Landmark that consists of a double row of walnut trees along the Lincoln Highway;
- A portion of the Southern Pacific railroad between Davis and Cordelia, which runs along the margin of the campus;
- The Francis Russell Ranch historic complex, including a main house, three barns, a water tower, two sheds, gardens, a modern house and a chicken coop;
- The historic Gotfried Schmeiser residence (Russell Ranch area, adjacent to campus);
- A multiple listing of 48 old oak groves widely scattered throughout the county, one of which is associated with the Francis Russell Ranch.

The *California Inventory of Historic Resources* also lists Russell Boulevard between SR 113 and County Road 89 (presumably the same as the Lincoln Highway); the University House on the central campus, the Animal Science Building, and the Avenue of Trees (noted above).

Historic architectural features typically must be at least 50 years of age to be considered for listing on the California Register of Historical Resources (CRHR). The 1994 LRDP (EIP Associates 1994: Appendix G) included an inventory of buildings constructed on campus before 1962 (that is, buildings that would be at least 45 years of age at the conclusion of the 1994 planning period in 2005). This inventory listed 207 buildings and structures. Consistent with the 1994 LRDP mitigation measure concerning historic resources, the campus subsequently has evaluated the potential historic significance of all buildings older than 50 years old that would be demolished or significantly modified as a result of a campus project. Of the buildings that were evaluated, North Hall, South Hall, and the Hog Barn were identified as potentially eligible for the CRHR. North Hall and South Hall were renovated and adaptively reused in a manner that preserved their historic architectural integrity. The Hog Barn is being relocated from its current site to a nearby location, where it will be adaptively reused as a staff-training center. A Historic American Building Survey (HABS) report was prepared to document the building in its original context.

An inventory of buildings on campus by UC Davis in the fall of 2002 revealed 326 structures and buildings with construction dates in 1965 or before (that is, buildings that will be 50 years old by the end of the 2003 LRDP planning period (in 2015)). This listing included a number of

buildings that were not recorded in the 1994 inventory, such as the buildings at Russell Ranch (noted in the inventory above), which had not been acquired by the campus at the time of the initial inventory. Buildings that will be at least 50 years old in 2015 are listed in Table 4.5-1, by decade of construction. Buildings constructed after 1965 will not attain 50 years of age during the LRDP planning period and generally would not be eligible for consideration as historic resources under CEQA during the 2003 LRDP planning period, and are not considered in this analysis. Approximately 58 percent of the buildings and structures inventoried in 2002 were constructed in the 1960s; an additional 19 percent were built during the 1950s. Thus, although all of the inventoried buildings and structures now meet or will meet or exceed the 50-year age criterion for historical significance by 2015, almost 80 percent of these are of post-World War II construction. The oldest campus buildings date to the 1870s and are located on Russell Ranch. Many of the older buildings elsewhere on campus are agricultural facilities, although there are also a few older academic buildings. Many buildings on campus, such as greenhouses, lath houses and chicken houses, are utilitarian, architecturally undistinguished, and very similar to one another. These buildings are unlikely to qualify for CRHR listing unless they have exceptional historic associations, and are not listed on the table.

There has not been a systematic inventory of campus structures such as bridges and water towers; however, these are subject to the same significance evaluation criteria as campus buildings, and may qualify as historic resources if they are 50 years of age or older. The historic Lincoln Highway and associated Avenue of Trees are listed as landmarks on the City of Davis Register of Historic Resources, as noted above. The Southern Pacific Railroad alignment adjacent to campus, also has been recorded as a cultural resource, as noted above.

The 1994 LRDP included planning for the identification, assessment and treatment of significant historic landscape features on campus, such as the Quad on the central campus, and established rows of landscape trees along major roadway and at campus entrances. Examples include the historic “Avenue of Trees” along both sides of Russell Boulevard, and the Armstrong Walnut Grove in the area of the central campus’ South Entry. Trees and formal landscapes that may be of interest to the campus for aesthetic or biological reasons are addressed under Section 4.4 Biological Resources (Volume I). Historic plantings and other landscape features that contribute to the significance of historic architectural properties are addressed as cultural resources in conjunction with those properties.

4.5.2 Impacts and Mitigation

The following discussion addresses cultural resource evaluation under CEQA. The 2003 LRDP is not a federal undertaking, and is not required to comply with Section 106 of the National Historic Preservation Act (NHPA). National Register of Historic Places (NRHP) criteria of resource significance (set forth at 36 Code of Federal Regulations 60.4), do not apply to properties evaluated under the LRDP. However, the CEQA significance criteria and resource identification and mitigation procedures described below are generally consistent with the federal criteria and procedures. In the future, a specific project or project element proposed under the LRDP could be classified as a “federal undertaking” if that project or one of its elements requires a federal permit, license or funding. In such a case the licensing, funding or permitting federal agency, as the lead federal agency, would be responsible to ensure that cultural resources identification, assessment and treatment for the project is carried out consistent with the requirements of Section 106 of the NHPA. The significance criteria of the NRHP, set forth at

4.5 CULTURAL RESOURCES

**Table 4.5-1
UC Davis Campus Buildings 50 Years of Age or Older by 2015**

Constructed Between 1960 and 1965				
APCA Research Lab Animal Bldg	ARS W1	Regan Nova	TB 107	TB 119
APCA Research Unit	Regan Paloma	Regan Talara	TB 108	TB 120
ARS Q-1	Regan Indio	TB 100	TB 109-112	TB 121
Mann Laboratory	Regan Sereno	TB 101	TB 113	TB 122
Primate Center Administration	Regan Mech	TB 102	TB 114	TB 123
Primate Center Laboratory	Rotating Room 1	TB 103	TB 115	TB 124
Primate Center Animal Bldg	Regan Campo	TB 104	TB 116	ARS G-1
Animal Husbandry Sheep	Regan Rienda	TB 105	TB 117	ARS W3
Water Sci Eng Drain L2	Regan Central Commons	TB 106	TB 118	ARS-U2
Laboratory Animal Bldg C	Weather Station	Orchard 5600	Orchard 6300	Orchard 7100
Grounds Sheds Putah	Orchard 5000	Orchard 5700	Orchard 6400	Orchard 7200
ARS H-1	Orchard 5100	Orchard 5800	Orchard 6500	Orchard 7300
Food Science and Technology	Orchard 5200	Orchard 5900	Orchard 6600	Orchard 7400
Vet Med Lab Animal B	Orchard 5300	Orchard 6000	Orchard 6700	Orchard 7500
Vet Med Lab Animal D	Orchard 5400	Orchard 6100	Orchard 6800	Orchard 7600
Crocker Nuclear Laboratory	Orchard 5500	Orchard 6200	Orchard 6900	Orchard 7000
Hopkins Cold Storage	Putah Creek Lodge	TB 37	AHS Feed Scales	Starling Pen
IEHR Animal House 2	AH Hopkins Scales	ARS Hdqtrs	ARS K-3	Asmundsen Annex
Pomology Field House C	Pomology Field House B	Olsen Hall	Harrison Center	Sproul Hall
Pomology Field Hqtrs E	Pomology Field House D	AH Feed Lot	Mechanical 3	Hutchison Hall
Pomology Field House F	Solano 1100	Solano 1900	Solano 2800	Solano 3700
Young Hall Storage	Solano 1200	Solano 2000	Solano 2900	Solano 3800
Agricultural Service Shed 1	Solano 1300	Solano 2100	Solano 3000	Solano 3900
Agricultural Service Shed 2	Solano 1400	Solano 2200	Solano 3100	Solano 4000
Agricultural Service Shed 3	Solano 1500	Solano 2300	Solano 3200	Solano 4100
Agricultural Service Shop	Solano 1600	Solano 2400	Solano 3300	Solano 4200
IEHR Office and Lab	Solano 1700	Solano 2500	Solano 3400	Solano 4300
IEHR Pathology Clinic	Solano 1800	Solano 2600	Solano 3500	Solano 4400
IEHR Shop	Hangar Lounge	Solano 2700	Solano 3600	ARS V
Agronomy Instruction	AH Feed Mill	ARS Z-1	WS&E STO	ARS Z-2
Segundo Ryerseon	AH Feed Mill Grind	Freeborn Hall	ARS X7	ARS X6
WS&E Hydraulic Lab 2	Segundo Food Service	Segundo Bixby	Segundo Gilmore	Segundo Malcolm
Constructed Between 1950 and 1959				
WS&E Field Bldg	Hoagland Hall	Phytotron	Hoagland Annex	AH Dairy Scale
IEHR Animal House 1	Agricultural Practices Shed	Voorhies Hall	Poultry Shop	Wickson Hall
Animal Sciences Teaching Facility 1	Zoology Field Bldg	Robbins Hall	Dairy Cattle Feed	Mail and Custodial
Animal Sciences Teaching Facility 2	Agronomy Field Bldg	Facilities Services	Dairy Cattle Shed	Vet Med Beach Lab
Environmental Horticulture	Facilities Mechanical	Central Garage	Memorial Union	Dairy
Toomey Restrooms	Toomey Press Box	Toomey Storage	HE 1	Chemical Storage
Agricultural Service Shed E	Vet Med Lab Animal A	Plant Pathology Lab	Radiology XR2	Facilities Shops
Viticulture and Enology Field Bldg	Agricultural Practices Lab	Asmundsen Hall	Grhs R2	Veg Wash
Plant Pathology Chemical Store	Robbins Annex	AH Beef Scale	AH Sheep Shed	AH Beef Barn
Poultry Field Lab 1	Cruess Hall	HC 2	Cole E	Cole G
Cowell Student Health Center	Everson Hall	HC 2 Barn	HC 1	HC 2 Gar
Pomology Field House A	Pomology Field Lab 2	HE 1 Garage	ARS M-4	TB 14
Poultry House Brooder	Grounds Office	Mechanical Sewer	ARS Z-3	Vet Ves Ex B

**Table 4.5-1
UC Davis Campus Buildings 50 Years of Age or Older by 2015**

Constructed Between 1940 and 1949				
Agriculture Service Office	Grhs 032	Cole F	Hangar Office	Fire House
Grhs 03	Haring Hall	Hunt Hall	Veihmeyer Hall	Veg Crops Store
Agricultural Service Scale	TB 22	TB 3	TB 12	TB 20
Animal Husbandry Hay	TB 1	TB 7	TB 16	TB 15
Animal Resource Service L-1	TB 2	TB 9	TB 19	HB 1 Gar
Poultry Headqtrs	WS&E Hyd L1	Shields Library	Young Hall	Pomol Cut
Physpl Shed 2	Cole F	Hangar Office	Fire House	
Constructed Between 1930 and 1939				
Animal Resource Services K-1	Enology Lab Building	ABS Ins Cot	TB 13	Hickey Gym
Vet Med Large Animal Facility	HCD Child Development	Art Building Annex	TB 18	Facilities Shed 1
Animal Resource Services E	HCD Administration	Vet Dog Quar	ABS Hom MG	
Veg Crops Bulb Storage House	HCD Computer Lab	Grounds Tool Shed	ABS Nur Sch	
Constructed Between 1921 and 1930				
Animal Resource Service Storage	Walker Hall	Mechanical 1	TB 33	TB 174
Walker Annex	Agron Store	HD 5 Gar	TB 36	Pomology Headqtrs
Fire House Hopkins Tract	Bee House	Hart Hall	TB 35	AH Horse
AH Feed Laboratory	AH Horse Shed	AH Hopkins Barn	AH Shop	Hart Hall*
Constructed Between 1911 and 1920				
Architects & Engineers Barn	Cross Cultural Center	Cole D	TB 31	HA 2
AH Hog Barn (moved)	TB 24 (Bike Barn)	TB 34	South Hall	TB 30
Constructed Between 1900 and 1910				
Wyatt Pavilion	North Hall	Silo	TB 8	TB 26
RR-bath house	RR-chicken house	RR-shop	RR-leanto #2	TB 32
RR-bath filter house	RR-Barn #1	RR-Barn#2	RR-leanto #3	RR-bunkhouse #2
RR-garage and residence	RR-tack house	RR-Barn #	RR-resid. #2	RR-shower house
RR-tank house	RR-pumphouse	RR-leanto #1	RR-bunkhouse 1	
Constructed Prior to 1900				
Russell Ranch ("Main Residence")				

Note: Infrastructural elements such as wells are not included in this table. Greenhouses, lath houses, screen houses, poultry houses, and hangars are not listed. These common utilitarian structures are subject to routine upgrading and are unlikely to qualify for the CRHR unless they possess exceptional historical associations.

*Hart Hall was demolished and rebuilt in 1992, with only the façade preserved; thus the building does not preserve architectural integrity and it would not qualify for the CRHR.

AH=Animal Husbandry
 APCA=Animal Physiology Chronic Acceleration
 ARS=Animal Resource Services
 HCD=Human and Community Development

IEHR=Institute of Environmental Health Research
 RR=Russell Ranch
 TB=temporary building
 WS&E=Water Science and Engineering

36 CFR 60.4, also would apply. These are quite similar to the criteria for eligibility to the CRHR, described in Section 4.5.1, above. Because each federal agency has its own procedures to comply with Section 106 guidelines (36 CFR 800), the mitigation measures described below do not specify how compliance would take place. However, in the event that federal regulations became applicable, compliance would be required of UC and/or the project proponent as a condition of the funding, license or permit.

4.5.2.1 *Historical Resources Standards of Significance*

For the purposes of this EIR, as mandated by PRC § 21083.2 impacts of the proposed project on an historical resource would be considered significant if they would:

- cause a significant adverse change in the significance of a historical resource as defined in CEQA Guideline § 15064.5.

The standards of significance for historical resources are based on Appendix G and § 15064.5 of the CEQA Guidelines. The 1994 LRDP EIR standards of significance were substantially the same as the current standards, and were derived from Appendix K in the CEQA Guidelines. The Appendix K standard has subsequently been revised. As currently worded in CEQA Guideline § 15064.5, historical resources include resources listed in, or determined to be eligible for listing in, the CRHR; resources included in a qualifying local register (such as the City of Davis Register of Historic Resources); and resources that the lead agency determines to meet the criteria for listing in the CRHR. These criteria may apply to any historic built environmental feature, and to historic or prehistoric archaeological sites. Properties or sites that are eligible for inclusion in the CRHR are termed “historical resources”. Under the provisions of CEQA Guideline § 15064.5(a)(3) generally, a lead agency should find that a property is historically significant if it determines that it meets one or more of the criteria for listing on the CRHR, which extend to any building, structure, feature or site that:

- (A) is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- (B) is associated with lives of persons important in our past;
- (C) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- (D) has yielded, or may be likely to yield, information important in prehistory or history

With few exceptions, to qualify as a historical resource a property must be at least 50 years old and also must retain physical integrity and integrity to its period of significance. For historic structures and buildings, significantly altering the setting, remodeling, or moving the structure may diminish or destroy its integrity. However, under some conditions, a building that has been moved or altered may still retain its historic significance. Landscaping or landscape features may in some cases contribute to the significance of an historic architectural property. Such elements would be assessed as part of the evaluation of the related historic architectural property. Archaeological sites may also qualify as historical resources under CEQA Guideline § 15064.5(a)(3). Archaeological sites most often are assessed relative to CRHR Criterion D (for potential to yield data important to history or prehistory). An archaeological deposit that has been extensively disturbed and archaeological artifacts found in isolation may not be eligible for listing on the CRHR, because the lack of stratigraphic context may reduce the potential for the resource to yield significant data. A resource that does not meet one of the criteria for eligibility to the CRHR is not a historical resource under CEQA, and impacts to such a property are not significant.

4.5.2.2 *Archaeological Resources Standards of Significance*

The 1994 LRDP EIR referenced CEQA Appendix K for standards of significance. The standards of resource significance, and for significance of impacts, are substantially the same as those applied in 1994, but have been supplanted by PRC § 5024.1, 14 CCR § 4850, which establishes the California Register of Historical Resources.

For purposes of this EIR, impacts of the proposed project would be significant if they would:

- cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guideline § 15064.5; or
- disturb any human remains, including those interred outside of formal cemeteries.

“Unique archaeological resources” are defined under CEQA through PRC § 21083.2(g). A unique archaeological resource implies an archaeological artifact, object, or site about which it can be clearly demonstrated that there is a high probability that it meets one of the following criteria:

- The archaeological artifact, object, or site contains information needed to answer important scientific questions and there is a demonstrable public interest in that information, or
- The archaeological artifact, object, or site has a special and particular quality, such as being the oldest of its type or the best available example of its type, or
- The archaeological artifact, object, or site is directly associated with a scientifically recognized important prehistoric or historic event or person.

For a resource to qualify as a unique archaeological resource, the agency must determine that there is a high probability that the resource meets one of these criteria without merely adding to the current body of knowledge (PRC § 21083.2(g)). An archaeological artifact, object, or site that does not meet the above criteria is a nonunique archaeological resource (PRC § 21083.2(h)). An impact on a nonunique resource is not a significant environmental impact under CEQA (CEQA Guideline §15064.5(c)(4)). If an archaeological resource qualifies as a historical resource under CRHR criteria, then the resource is treated as a historical resource for the purposes of CEQA.

Section 15064.5 of the CEQA Guidelines assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed under PRC § 5097.98. California Health and Safety Code § 7050.5(b) prohibits disturbance of human remains uncovered by excavation until the Coroner has made a finding relative to PRC 5097 procedures.

4.5.2.3 *CEQA Checklist Items Adequately Addressed in the Initial Study*

During the course of development at UC Davis, extensive excavation for buildings and infrastructure and extensive agricultural operations have not revealed the presence of unique paleontological or geological resources. It appears that the campus lacks unique paleontological and geological resources due to the deep alluvial deposition of fairly uniform soil types in the project area. No impacts would occur, and no additional analysis is required for these resources.

4.5.2.4 *Analytical Method*

Impacts to archaeological resources and human remains most often occur as the result of excavation or grading within the vertical or horizontal boundaries of a significant archaeological site. Archaeological resources may also suffer impacts as the result of project activity that increases erosion, or increases the accessibility of a surface resource, and thus increases the potential for vandalism or illicit collection.

Significant impacts to historic built-environment features (such as buildings, canals, bridges, and in some cases, associated landscaping) may result from demolition or physical alteration of the features. Significant impacts may occur if the setting of a historic structure or feature is altered by the introduction of incompatible elements, in cases where the property retains integrity of setting and the setting of the resource contributes to its significance.

Because the proposed project is the long range development plan for the campus, the project does not include specific footprints and areas of disturbance for new or redeveloped facilities and related grading and excavations. It must be assumed that any ground-disturbing activities in any area of campus where development will occur potentially could affect cultural resources.

Mitigation measures set forth in the 1994 LRDP EIR established a program of protocols for identification and treatment of archaeological and other cultural resources likely to be present on the UC Davis campus in areas that would be affected by development under the LRDP. These archaeological protocols established variable levels of intensity for project-associated archaeological work, based on the sensitivity of the presumed setting and the extent of ground disturbance anticipated for the project. These protocols were implemented through a series of archaeological studies, associated with specific proposed projects on the campus between 1994 and 2003. For the current analysis, these studies and their results were reviewed to assess the efficacy of the 1994 protocols in identifying and protecting archaeological resources (Nadolski 2003b), and to modify cultural resources sensitivity assessments and mitigation protocols, if necessary, for use under the 2003 LRDP.

In mitigation of potential impacts to surficial and buried archaeological sites and human remains, the 1994 LRDP EIR established tiered protocols to be implemented on the basis of archaeological assessment of site sensitivity, and the extent and depth of anticipated ground disturbance. These protocols appear to have been successful in identifying archaeological resources on campus and avoiding or mitigating the effects of development (Nadolski 2003b). In some cases, through consideration of cultural resources early in the planning process, it has been possible to redesign the proposed project to minimize or eliminate impacts on archaeological resources. Preservation in place is the preferred mitigation for archaeological sites that are historical resources (CEQA Guidelines §15126.4(b)(3)(A)).

With respect to built environment resources and potential historic landscapes, 1994 protocols required identification and assessment of structures, buildings and features 45 years old or older that were located on proposed construction sites. Buildings determined to be significant were to be preserved and reused when possible, or moved if necessary. If these measures were not feasible, or if a building would require major renovation, mitigation was to include extensive recordation and documentation of the building. A number of historic buildings or structures were identified in impact areas and were evaluated by qualified architectural historians. Mitigation for effects to CRHR-eligible buildings included recordation, preservation of architectural integrity and adaptive reuse in place, and relocation followed by adaptive reuse. The measures set forth in

the 1994 LRDP EIR appear to have been effective in identifying, assessing, and mitigating impacts to historic structures and buildings that might be affected by project development. These protocols are carried forward in the mitigation measures below, with some minor modifications.

Subsequent to the 1994 LRDP, the California State Historic Preservation Officer (SHPO) determined that, in some cases, recordation is not sufficient to mitigate the demolition of an historic resource (CEQA Guidelines §15126.4(b)(2)). Additional measures may be required to mitigate potential impacts of development under the 2003 LRDP upon the cultural resources environment in cases where a significant historic building would be demolished and the effects could not be adequately mitigated through recordation, but it may not be possible to fully mitigate such an impact. Project impacts usually can be mitigated to a less-than-significant level if necessary alterations to a building can be carried out in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (§15126.4(b)(1)).

Consistent with CEQA guidelines, the analysis that follows is designed as a tiered process: (1) to identify cultural resources that might be affected by a proposed project; (2) to determine whether the cultural resource is significant under CEQA standards—that is, whether it qualifies as an historical resource or a unique archaeological resource; and (3) to mitigate impacts to those cultural resources that are significant under CEQA standards. The principal variance here from the 1994 mitigation protocols is that cultural resources, in the current analysis, are not divided between archaeological sites and historic structures, but between those properties that are significant under CEQA and those that are not. The latter, once identified, require no further mitigation.

4.5.2.5 2003 LRDP Impacts and Mitigation Measures

LRDP Impact 4.5-1: Implementation of the 2003 LRDP could damage or destroy an archaeological resource or historic building or structure as the result of grading, excavation, ground disturbance or other project development.

Significance: Potentially significant

LRDP Mitigation 4.5-1(a): As early as possible in the project planning process, the campus shall define the project's area of potential effects (APE) for archaeological resources and, if structures are present on the site, for historic structures. The campus shall determine the potential for the project to result in cultural resource impacts, based on the extent of ground disturbance and site modification anticipated for the proposed project. Based on this information, the campus shall:

- (i) Prepare an inventory of all buildings and structures within the APE that will be 50 years of age or older at the time of project construction for review by a qualified architectural historian. If no structures are present on the site, there would be no impact to historic built environment resources from the project. If potentially historic structures are present, LRDP Mitigation 4.5-1(c) shall be implemented.

- (ii) Determine the level of archaeological investigation that is appropriate for the project site and activity, as follows:
- Minimum: excavation less than 18 inches deep and in a relatively small area (e.g., a trench for lawn irrigation, tree planting, etc.). Implement LRDP Mitigation 4.5-1(b)(i).
 - Moderate: excavation below 18 inches deep and/or over a large area on any site that has not been characterized and is not suspected to be a likely location for archaeological resources. Implement LRDP Mitigation 4.5-1 (b)(i) and (ii).
 - Intensive: excavation below 18 inches and/or over a large area on any site that is within 800 feet of the historic alignment of Putah Creek, or that is adjacent to a recorded archaeological site. Implement LRDP Mitigation 4.5-1 (i), (ii) and (iii).

LRDP Mitigation 4.5-1(b): During the planning phase of the project, the campus shall implement the following steps to identify and protect archaeological resources that may be present in the APE:

- (i) For project sites at all levels of investigation, contractor crews shall be required to attend an informal training session prior to the start of earth moving, regarding how to recognize archaeological sites and artifacts. In addition, campus employees whose work routinely involves disturbing the soil shall be informed how to recognize evidence of potential archaeological sites and artifacts. Prior to disturbing the soil, contractors shall be notified that they are required to watch for potential archaeological sites and artifacts and to notify the campus if any are found. In the event of a find, the campus shall implement item (vi), below.
- (ii) For project sites requiring a moderate or intensive level of investigation, a surface survey shall be conducted by a qualified archaeologist during project planning and design and prior to soil disturbing activities. For sites requiring moderate investigation, in the event of a surface find, intensive investigation will be implemented, as per item (iii), below. Irrespective of findings, the qualified archaeologist shall, in consultation with the campus, develop an archaeological monitoring plan to be implemented during the construction phase of the project. The frequency and duration of monitoring shall be adjusted in accordance with survey results, the nature of

construction activities, and results during the monitoring period. In the event of a discovery, the campus shall implement item (vi), below.

- (iii) For project sites requiring intensive investigation, irrespective of subsurface finds, the campus shall retain a qualified archaeologist to conduct a subsurface investigation of the project site, to ascertain whether buried archaeological materials are present and, if so, the extent of the deposit relative to the project's area of potential effects. If an archaeological deposit is discovered, the archaeologist will prepare a site record and file it with the California Historical Resource Information System.
- (iv) If it is determined through step (iii), above, that the resource extends into the project's area of potential effects, the resource will be evaluated by a qualified archaeologist, who will determine whether it qualifies as a historical resource or a unique archaeological resource under the criteria of CEQA Guidelines § 15064.5. If the resource does not qualify, or if no resource is present within the project area of potential effects (APE), this will be noted in the environmental document and no further mitigation is required unless there is a discovery during construction (see (vi), below).
- (v) If a resource within the project APE is determined to qualify as an historical resource or a unique archaeological resource (as defined by CEQA), the campus shall consult with the qualified archaeologist to consider means of avoiding or reducing ground disturbance within the site boundaries, including minor modifications of building footprint, landscape modification, the placement of protective fill, the establishment of a preservation easement, or other means that will permit avoidance or substantial preservation in place of the resource. If avoidance or substantial preservation in place is not possible, the campus shall implement LRDP Mitigation 4.5-2(a).
- (vi) If a resource is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease. The campus shall contact a qualified archaeologist to provide and implement a plan for survey, subsurface investigation as needed to define the deposit, and assessment of the remainder of the site within the project area to determine whether the resource is significant and would be affected by the project.

LRDP Mitigation 4.5-1(b), steps (iii) through (vii) shall be implemented.

- (vii) A written report of the results of investigations will be prepared by a qualified archaeologist and filed with the appropriate Information Center of the California Historical Resources Information System.

LRDP Mitigation 4.5-1(c):

- (i) Before altering or otherwise affecting a building or structure 50 years old or older, the campus shall retain a qualified architectural historian to record it on a California Department of Parks and Recreation DPR 523 form or equivalent documentation. Its significance shall be assessed by a qualified architectural historian, using the significance criteria set forth for historic resources under CEQA Guidelines Section 15064.5. The evaluation process shall include the development of appropriate historical background research as context for the assessment of the significance of the structure in the history of the University system, the campus, and the region. For historic buildings, structures or features that do not meet the CEQA criteria for historical resource, no further mitigation is required and the impact is less than significant.
- (ii) For a building or structure that qualifies as a historic resource, the architectural historian and the campus shall consult to consider measures that would enable the project to avoid direct or indirect impacts to the building or structure. These could include preserving a building on the margin of the project site, using it “as is,” or other measures that would not alter the building. If the project cannot avoid modifications to a significant building or structure, the campus shall implement LRDP Mitigation 4.5-2.

Residual Significance: Less than significant

The 1994 LRDP EIR analyzed the impact of campus development related to grading, excavation and other project development on archaeological resources and concluded that with mitigation the impact would remain significant and unavoidable. The EIR imposed mitigation measures including crew education, monitoring, survey, stop work provisions, avoidance procedures and data recovery as appropriate. The campus has implemented these measures for projects since 1994.

The analysis of the same impact under 2003 LRDP resulted in the conclusion that while the implementation of the 2003 LRDP could cause a substantial adverse change in the significance of an archaeological resource or a historic building, until a resource has been determined to be significant under CEQA criteria, no impact would occur. Further, it often has been possible to avoid all impacts to archaeological resources through project modifications or other protective measures.

Any UC Davis project that would disturb site soils or alter sites containing buildings has the potential to result in impacts to archaeological sites and to potentially historic buildings. Impacts could be significant if the site or building qualifies as an historic resource or unique archaeological resource under CEQA criteria. The measures described above would ensure that any historical resources or unique archaeological resources within the area that would be affected by each project would be identified. An archaeological resource or a building that is identified but that does not qualify as a historical resource or unique archaeological resource need not be further considered in the process. Impacts to such sites or structures would be less than significant. Similarly, where a site or structure does not extend into the project APE, or where it can be preserved through avoidance, use of a preservation easement or other measures, no impact would occur, or the impact would be less than significant. With the implementation of these identification, evaluation and protection measures, the impact would be less than significant.

LRDP Impact 4.5-2: Implementation of the LRDP could cause a substantial adverse change in the significance of a historical resource or unique archaeological resource, as defined in CEQA guidelines 15064.5, as the result of ground disturbance, alteration, removal or demolition associated with project development.

Significance: Significant

LRDP Mitigation 4.5-2(a): For an archaeological site that has been determined by a qualified archaeologist to qualify as an historical resource or a unique archaeological resource through the process set forth under LRDP Mitigation 4.5-1(b), and where it has been determined under LRDP Mitigation 4.5-1(b) that avoidance or preservation in place is not feasible, a qualified archaeologist, in consultation with the campus, shall:

- (i) Prepare a research design and archaeological data recovery plan for the recovery that will capture those categories of data for which the site is significant, and implement the data recovery plan prior to or during development of the site.
- (ii) Perform appropriate technical analyses, prepare a full written report and file it with the appropriate information center, and provide for the permanent curation of recovered materials.
- (iii) If, in the opinion of the qualified archaeologist and in light of the data available, the significance of the site is such that data recovery cannot capture the values that qualify the site for inclusion on the CRHR, the campus shall reconsider project plans in light of the high value of the resource, and implement more substantial modifications to the proposed project that would allow the site to be preserved intact, such as project redesign, placement of fill, or project

relocation or abandonment. If no such measures are feasible, the campus shall implement LRDP Mitigation 4.5-3.

LRDP Mitigation 4.5-2(b): For a structure or building that has been determined by a qualified architectural historian to qualify as an historical resource through the process set forth under LRDP Mitigation 4.5-1(c), and where it has been determined under LRDP Mitigation 4.5-1(c) that avoidance is not feasible, documentation and treatment shall be carried out as described below:

- (i) If the building or structure can be preserved on site, but remodeling, renovation or other alterations are required, this work shall be conducted in compliance with the “Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings” (Weeks and Grimmer 1995).
- (ii) If a significant historic building or structure is proposed for major alteration or renovation, or to be moved and/or demolished, the campus shall ensure that a qualified architectural historian thoroughly documents the building and associated landscaping and setting. Documentation shall include still and video photography and a written documentary record of the building to the standards of the Historic American Building Survey (HABS) or Historic American Engineering Record (HAER), including accurate scaled mapping, architectural descriptions, and scaled architectural plans, if available. A copy of the record shall be deposited with the University archives, Shields Library Special Collections. The record shall be accompanied by a report containing site-specific history and appropriate contextual information. This information shall be gathered through site specific and comparative archival research, and oral history collection as appropriate.
- (iii) If preservation and reuse at the site are not feasible, the historical building shall be documented as described in item (ii) and, when physically and financially feasible, be moved and preserved or reused.
- (iv) If, in the opinion of the qualified architectural historian, the nature and significance of the building is such that its demolition or destruction cannot be fully mitigated through documentation, the campus shall reconsider project plans in light of the high value of the resource, and implement more substantial modifications to the proposed project that would allow the structure to be preserved intact. These could

include project redesign, relocation or abandonment. If no such measures are feasible, the campus shall implement LRDP Mitigation 4.5-3.

Residual Significance: Less than significant

The measures described in LRDP Mitigation 4.5-1 ensure that any historical resource or unique archaeological resource that would be affected by a project is identified, evaluated, and protected. In some cases, however, preservation or avoidance is not feasible. LRDP Mitigation 4.5-2 provides for more thorough investigation and documentation of significant resources that will be affected by project activity, such that the scientifically and historically consequential information from and about the resource would be preserved. In most cases, impacts to unique archaeological resources and historical resources can be reduced to a less-than-significant level through preservation, avoidance, documentation and/or data recovery. This is borne out by case history on the campus since 1994. Due to early consideration of cultural resources in planning on the campus, it has been possible to avoid, reduce, minimize, or mitigate impacts through project redesign or project construction modifications, combined with recordation and data recovery. In most cases, implementation of these measures would reduce the impact to a less-than-significant level. Exceptions are described under LRDP Impact 4.5-3.

LRDP Impact 4.5-3: Implementation of the LRDP could cause a substantial adverse change in the significance of a historical resource or unique archaeological resource, as defined in CEQA guidelines 15064.5, and the values that contribute to the significance of the resource cannot be preserved through documentation and data recovery.

Significance: Significant

LRDP Mitigation 4.5-3: If a significant historic resource or unique archaeological resource cannot be preserved intact, before the property is damaged or destroyed the campus shall ensure that the resource is appropriately documented, as follows.

- (i) For a built environment feature, appropriate documentation is described under LRDP 4.5-2 (b) (iii).
- (ii) For an archaeological site, a program of research-directed data recovery shall be conducted and reported, consistent with LRDP Mitigation 4.5-2(a).

Residual Significance: Significant and unavoidable

For unique archaeological resources and archaeological historical resources, the preferred mitigation under CEQA is preservation in place of as much of the resource as possible, where feasible, through project modification or protective measures. In most cases, archaeological data recovery can mitigate those impacts that cannot be avoided to a less-than-significant level. However, there may be rare sites that are highly significant, where data recovery cannot fully preserve the values represented by the site.

For built environment historical resources, impacts in most cases can be reduced to less-than significant levels by appropriate treatment and documentation. However, CEQA Guidelines (15126.4(b)(2)) note that in some circumstances, documentation of an historical resource will not mitigate the effects of demolition of that resource to a less-than-significant level.

The cultural resource protocols included in the 1994 LRDP EIR have been an effective program for the protection of cultural resources on the UC Davis campus. The campus will continue to implement this overall program, with minor modifications, for projects undertaken under the 2003 LRDP, and will avoid impacts to cultural resources when feasible. While development under the 2003 LRDP could result in impacts to archaeological resources, implementation of LRDP Mitigations 4.5-1 and 4.5-2 in most cases would reduce these impacts to a less-than-significant level. However, on specific projects there may be occasions when a historical resource or unique archaeological resource cannot be substantially preserved in place. In rare cases, for an exceptionally significant resource, data recovery and documentation may not provide sufficient mitigation.

A archaeological site might be exceptionally significant because of the types of information it represents, because it had the potential to provide information that would be highly valuable to future research, or because it was highly valued by an ethnic group. Similarly, an historic building could derive exceptional significance because of its associations with a significant event or person not represented elsewhere, or because of exceptional architectural merit or construction. Some values of this kind are not fully preserved through documentation or data recovery.

Although the campus would prefer to preserve such a resource where possible, there may be cases in which avoidance or preservation of such a resource is not feasible. For example, preservation of a large or centrally located resource could completely preclude development of a critical project; or it might be necessary to demolish a highly significant historic building because it was unsafe and could not be restored; or to excavate through a highly significant archaeological site because the site soil was contaminated. In such a case, impacts to the resource could not be avoided. If a highly exceptional historical resource cannot be preserved in place, and if the historic values it represents cannot be fully captured through documentation and data recovery, impacts to the resource cannot be fully mitigated. Although LRDP Mitigation 4.5-3 would reduce the impact to the extent possible, the impact nonetheless would be significant and unavoidable.

* * *

LRDP Impact 4.5-4: Implementation of the 2003 LRDP could disturb human remains, including those interred outside of formal cemeteries.

Significance: Potentially significant

LRDP Mitigation 4.5-4(a): Implement LRDP Mitigation 4.5-1, 4.5-2 and 4.5-3 to minimize the potential for disturbance or destruction of human remains in an archaeological context and to preserve them in place, if feasible.

LRDP Mitigation 4.5-4(b): Provide a representative of the local Native American community an opportunity to monitor any excavation (including

archaeological excavation) within the boundaries of a known Native American archaeological site.

LRDP Mitigation 4.5-4(c): In the event of a discovery on campus of human bone, suspected human bone, or a burial, all excavation in the vicinity will halt immediately and the area of the find will be protected until a qualified archaeologist determines whether the bone is human. If the qualified archaeologist determines the bone is human, or if a qualified archaeologist is not present, the campus will notify the Yolo or Solano County Coroner (depending on the county of the find) of the find before additional disturbance occurs. Consistent with California Health and Safety Code § 7050.5(b), which prohibits disturbance of human remains uncovered by excavation until the Coroner has made a finding relative to PRC 5097 procedures, the campus will ensure that the remains and vicinity of the find are protected against further disturbance. If it is determined that the find is of Native American origin, the campus will comply with the provisions of PRC § 5097.98 regarding identification and involvement of the Native American Most Likely Descendant (MLD).

LRDP Mitigation 4.5-4(d): If human remains cannot be left in place, the campus shall ensure that the qualified archaeologist and the MLD are provided opportunity to confer on archaeological treatment of human remains, and that appropriate studies, as identified through this consultation, are carried out prior to reinterment. The campus shall provide results of all such studies to the local Native American community, and shall provide an opportunity of local Native American involvement in any interpretative reporting. As stipulated by the provisions of the California Native American Graves Protection and Repatriation Act, the campus shall ensure that human remains and associated artifacts recovered from campus projects on state lands are repatriated to the appropriate local tribal group if requested.

Residual Significance: Less than significant

Human remains have been found on the campus in the context of prehistoric archaeological deposits. No historic burials or formal cemeteries have been identified on campus. Development that includes excavation and grading has the potential to uncover, displace, and destroy human remains. Avoidance of disturbance of archaeological sites may reduce the potential for such impacts. The implementation of LRDP Mitigation 4.5-4(a-d) will ensure that human remains in archaeological and isolated contexts will be protected from destruction that might result from development, through identification, Native American consultation, preservation in place or recovery, respectful treatment and study, and reinterment. The 1994 LRDP EIR did not identify impacts to human remains as a separate impact, but addressed human remains in the context of archaeological mitigation. The 1994 LRDP EIR concluded that impacts to archaeological sites (including human remains) were significant and unavoidable even after mitigation because, even

with data recovery, destruction or removal from the place of origin reduces the value of the resource. However, based on the results of archaeological work carried out on the campus since 1994, it appears that the mitigation protocols and campus practices in place have been effective in minimizing resource loss, and in ensuring that human remains encountered during excavation are appropriately treated. With respect to human remains, the Native American Most Likely Descendant for the campus has been favorable toward the study of human remains recovered archaeologically, because this can provide information that is valued as a source of history and culture by local Native people. For these reasons, the implementation of the identified measures will reduce the impact to a less-than-significant level.

4.5.2.6 *Cumulative Impacts and Mitigation*

LRDP Impact 4.5-5: Development under the 2003 LRDP would contribute to cumulative damage to and loss of the resource base of unique archaeological resources and historical resources (including archaeological sites and historic buildings and structures) in Yolo and Solano counties.

Significance: Significant

LRDP Mitigation 4.5-5: Implement LRDP Mitigations 4.5-1 through 4.5-4.

Residual Significance: Significant and unavoidable

Any disturbance of native soils carries the potential to result in impacts to archaeological resources. Campus development under the 2003 LRDP, and other development in Yolo and Solano counties over time would be anticipated to result in some impacts to historical resources and unique archaeological resources. These impacts may be significant if a significant resource is disturbed or destroyed. UC Davis cultural resources protocols, as stipulated in the mitigation measures above, will minimize the impact of development under the 2003 LRDP on unique archaeological resources and historical resources, because the campus will carry out a continuing program of archaeological investigation, which will in most cases enable the campus to avoid or preserve unique archaeological resources and historical resources, and will appropriately recover data from and document resources that cannot be preserved in place. While data recovery is acknowledged to be destructive of the physical resource, campus investigations to date have been successful in preserving at least part of each discovered site, in reducing physical impacts through project modification, and in recovering substantial new archaeological and cultural information. Historic campus buildings that have been affected by development have been appropriately recorded, moved, and/or adaptively reused. Human remains have been archaeologically recovered, studied to provide archaeological and cultural information, and reinterred, with full consultation with Native American representatives. Because the campus mitigation program thus has proven effective in preventing or mitigating damage to unique archaeological resources and historical resources, the mitigation program is considered to have reduced the campus impacts to less-than-significant levels in all cases to date.

However, while the campus contribution to the destruction of the cultural resources database is minimized by the protocols in place, there may in the future be an occasion when a significant historical resource on the campus cannot be preserved. If, in a rare exceptional case, the values

represented by that resource are such that they cannot fully be mitigated through data recovery or documentation, then the campus impact would be significant and would not be fully mitigable, as explained under LRDP Impact 4.5-3, above.

Further, while the campus has policies and programs in place that have been effective in protecting the significant resource base, the campus has no authority over the programs and actions of other agencies, and cannot ensure that the actions of other agencies will not result in unmitigated impacts to unique archaeological resources and historical resources. Over time, despite preservation policies in place, some unique archaeological resources and historical resources in Yolo and Solano counties could be damaged or destroyed. There may be instances elsewhere in the region, as also may occur on the campus, in which there would be impacts to an exceptionally significant historical resource that cannot fully be mitigated by data recovery or documentation. While campus projects under the 2003 LRDP would make only a minimal contribution to these impacts, any such impact would contribute to a cumulative regional impact, and the impact would be cumulatively significant. Because there are no measures that can fully mitigate this impact, and because UC Davis cannot guarantee implementation by other agencies of measures to protect historical resources and unique archaeological resources, the impact is considered significant and unavoidable.

4.5.3 References

- EIP Associates. 1994. *University of California, Davis, Long Range Development Plan, 1994-2005, Environmental Impact Report, Public Review Draft*—April 1994. Prepared for University of California, Davis, Planning and Budget Office. April.
- JRP Historical Consulting Services. 1998. Draft Inventory and Evaluation of the Ruins of a Concrete Reservoir Located on the UC Davis Campus. Prepared by JRP for the UC Davis Office of Resource Management and Planning.
- Nadolski, John. 2003a. Pacific Legacy. Personal communications with Sally Morgan, URS Corporation, regarding extent of archaeological assessment preliminary findings by Pacific Legacy for UC Davis. January 29, 2003; March 18, 2003.
- Nadolski, John. 2003b. *Draft Summary of Archaeological Findings on the UC Davis Campus*. Prepared for UC Davis ORMP by Pacific Legacy. March 2003.
- Pacific Legacy. 1998. Archaeological Investigation for the Proposed North Interstate 80 Enterprise Reserve. Prepared by Pacific Legacy for the UC Davis Office of Resource Management and Planning. March, 1998.
- Shapiro, William. 2003. Letter report of results of archaeological records search for the UC Davis campus. Prepared for UC Davis ORMP by Pacific Legacy. August 11.
- Shapiro, Lisa A. and Kim J. Tremaine et al. 1999. *Archaeological Investigations at CA-SOL-397 on the University of California, Davis Campus, Yolo County, California*. Prepared by Biosystems Analysis, Sacramento, California for University of California, Davis, Office of Planning and Budget. January.
- State of California. 1998. *CEQA Guidelines*, revised 1998.

UC Davis. 2002. *UC Davis Long Range Development Plan*. Initial Study. Prepared by the Office of Resource Management and Planning.

Weeks and Grimmer. 1995. *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*.