Countdown to Disaster: Perspectives in the Preservation of Cold War Era Cultural Resources

During the Cold War, the architecture of California military bases reflected three somewhat contradictory trends. First, for the comfort of its troops, especially the officer corps, the military built administrative and residential buildings that were commodious and fashionably modern. Second, as the military valued nimbleness and flexibility in its training, it relied heavily upon essentially temporary buildings for most operational purposes. Third, the military in California was heavily involved in weapons development and testing, giving California bases hundreds of permanent and odd-looking research and test facilities.

In the first category, the military adopted Modernism because it had the sleek look of the Cold War. Sometimes, military designers called upon well-known Modernist architects, such as Stanley Gogerty, who laid out the modern buildings at the weapons station at China Lake, or by unnamed architects at the Bureau of Yards and Docks, who designed the beautiful Building A33 at the Space and Naval Warfare Systems Command (SPAWAR), San Diego.

The vast majority of Cold War buildings, however, were built to be inexpensive and easily modified or moved. If one searches for the site of some great Cold War advance, odds are that it was accomplished in some variation on a Butler Building, which could be custom designed, but were engineered and constructed in a factory. This range of Cold War architecture was not built to last and probably will not last.

The third category includes a huge variety of buildings and structures associated with Cold War weapons development and rocket testing programs, which was especially vital in California. These were the opposite of the Butler Buildings; they were extraordinarily well-built, dedicated to specific purposes and not easily adapted. This includes the famous rocket test tracks at Edwards and China Lake; the massive rocket test stands and silos at Vandenberg and NASA’s Santa Susana; the great radar facilities like the PAVE PAWS at Beale; and “always-ready” Strategic Air Command bomber hangars at Travis. In terms of Cold War design that was historically significant and of intrinsic interest, these development and testing facilities are especially important.

The Department of Defense (DoD) and the National Aeronautics and Space Administration (NASA) manage the largest specialized real estate portfolio in the world. They have 507,000 buildings and structures and by 2025, over 67% of their entire inventory of buildings will be more than 50 years old. That number does not take into account the testing facilities such as rocket stands. As surplus properties are eliminated, several of these historic facilities are at grave risk.

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Although California does not lead the United States in National Historic Landmarks (NHLs), it has the most from the Cold War Era (1946-1989) and Space Program. California has 26 military and space-related NHLs out of a total of 137. Almost 20% of California’s NHLs are military, including resources from the Spanish, Russian, and American military occupation, along with space launch and testing facilities. California’s 2000 study of military establishments and contextual statements led to the defining of seven Traditional Military Eras:

- Colonial Era 1769-1846
- Frontier Era 1846-1865
- Traditional Era 1866-1902
- Modernization Era 1903-1918
- Interwar Era 1919-1938
- World War II 1939-1945
- Cold War Era 1946-1989

Following are just a handful of the California facilities that have been lost over the years.

North Island Naval Air Station provided a convenient site for aerial experiments because it had a mild climate, constant wind patterns, large areas of undisturbed land, and was away from people; a classic formula for military experiments of all kinds.

Drag Chute Experiment, NAS San Diego

In 1920, Hangar 17 became the first structure to house a 250 feet long lighter-than-air C-6 airship. The 16,000 plane program authorized by Congress in 1940 included construction of 48 non-rigid airships and led to the establishment of the Marine Corps Air Station at Tustin.

Lighter Than Air Hangar, NAS San Diego

The Variable Angle Launcher (VAL) was constructed in 1943 to test speed and angle of water entry of air-to-water torpedoes. Research began after the operational failure of many aircraft-dropped torpedoes during the Battle of Midway in WWII. The Morris Dam Test Facility near Azusa served the Department of Defense for 50 years, as a test site for the recovery of underwater ordnance as well as the testing of torpedoes. This full scale launch facility used compressed air for projection and was 332 feet long with a floating platform that allowed the angle and speed of entry of torpedoes into the water to be modified. The test facility, along with two dozen support buildings, was demolished in a pre-development agreement with the County of Los Angeles to return the land to its original configuration.
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Military facilities of the Cold War Era express the honest power and exotic nature of their operations, but can be difficult to interpret. Building 55 was built in the early 1950s as a permanent missile launching pad that took the place of several scattered temporary launch sites. Conventional (non-nuclear) weapon systems were tested in California.

Building 55, Naval Air Weapons Station, Point Mugu

The Supersonic Naval Ordinance Research Track (SNORT) at NAWS China Lake, formerly Naval Ordinance Test Station (NOTS) was established in 1942. The hardware components are now gone. The four-mile supersonic track created a cultural landscape, as sleds move at speeds up to Mach 4. Test tracks were also built at Edwards AFB but have been removed. This image of the water braking system can only be captured on film or movies like The Right Stuff or Space Cowboys. Again, the event is the resource and is difficult, if not impossible, to demonstrate on site within an interpretive statement. NAWS is also the home of Coso Rock Art, a 12,000-year-old archaeology site and a National Historic Landmark.

SNORT Rocket Sled, NAWS China Lake

The 1916 Battery Whistler was officially decommissioned in 1943 and in 1947 the Navy began using the site as a submarine research facility. Created by Dr. Waldo Lyon, the facility, housed in a corrugated metal utility building, contained a pool equipped to freeze salt water and to grow sea ice to study their physical properties on submarines. Research culminated in the USS Nautilus, the first nuclear-powered submarine to travel 1,000 miles, taking 74 hours, underneath the North Pole in 1958. Later studies included the building of a mock submarine conning tower to test ice cap breakthroughs. In 1960, Dr. Lyon was awarded Distinguished Federal Civilian Service Medal by President Kennedy. The Arctic Submarine Laboratory was demolished in 1996, two years before the death of Dr. Lyon, to expose the remains of the 1916 Battery Whistler, a resource felt to be more important.

Arctic Submarine Laboratory, Battery Whistler, Point Loma

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President Franklin D. Roosevelt, knowing that US involvement into WWII was imminent, set out to increase training facilities on the West Coast. Work began in 1940 at the Naval Training Station and Naval Ship Yards with a schedule for opening in 1945 as home of the Pacific Fleet. Designed in the International Style of reinforced concrete by Allied Engineers & Architects, the design is credited to Architect Paul Williams, a well-known African-American Los Angeles-based architect. The landscaping was supportive of the master plan. Home to 25,000 civilian and military personnel and serving almost 700 battle-scared ships during WWII, it was demolished to make way for the expanded Port of Long Beach, the San Pedro Container Port.

At least parts of the following facilities have been retained—so far.

This Astrophysical Observatory was constructed in 1965, in use from 1968-1974, and decommissioned in 1981. The 60 foot diameter reflector was designed for a 10-year life, a programmatic reality with Department of Defense. Only the bottom concrete cone structural base is left (it was too expensive to demolish.) It is currently used by County Sheriff’s Search and Rescue Team to train officers to deal with hostage situations.

Chollas Heights Naval Radio Transmitting Facility

Constructed during the Modernization Era in 1917, the Chollas facility was the largest and most powerful radio transmitter in North America. It included three 600-foot tall towers with a copper antenna suspended mid-way between the towers. The facility was the first in the development of long range transmitter stations between Arlington, Virginia; Pearl Harbor, Hawaii; and Cavite, Philippine Islands. This high-tech communication system replaced strategically spaced naval ships at sea that had to transmit to one another due to the curvature of the earth. The buildings were rehabilitated but the towers and antenna, the most important features, were demolished.
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Hangar One in Sunnyvale, near San Jose, was built in 1932 to house the airship USS Macon. The 361,000 square foot, 17-story tall building is large enough to hold seven football fields. This engineering feat has been called the “Golden Gate Bridge of Silicon Valley.” After it was discovered that the building was leaching PCBs into the groundwater, the Navy considered 13 alternatives for hazard mitigation and was favoring demolition. At the urging of preservationists and the SHPO, an alternative to demolition was agreed upon by the Navy whereby the hangar would be transferred to NASA. Prior to transfer, the Navy is removing the siding and encapsulating the PCB-bearing paint on the steel frame. After transfer, NASA will be responsible for re-siding the hangar with in-kind siding, allowing for the survival and reuse of this engineering marvel.

Built in 1977, the Perimeter Acquisition Vehicle Entry Phased Array Warning systems (PAVE PAWS) at Beale AFB (near Sacramento) presents a very rare facility and directness of association as a resource of the late Cold War Era. This facility fits into the larger cultural resource theme of the Air Force Space Command Radar System. Other facilities were located in Cape Cod, Massachusetts and Clear AFS, Alaska to detect and track sea-launched missiles and ICBMs. These three sites communicated with each other and relayed the information to the Cheyenne Mountain Air Station. Larger Cold War Era contextual studies are needed to understand this resource.

The Goldstone Deep Space Communications Complex (GDSCC)—commonly called the Goldstone Observatory—is located in California’s Mojave Desert. Operated by ITT Corporation for the Jet Propulsion Laboratory, its main purpose is to track and communicate with space missions. It includes the Pioneer Deep Space Station, which is a US National Historic Landmark.

The Shuttle, or space transportation system, consists of one orbiter, two solid rocket boosters and motors, an external tank and three space shuttle main engines, collectively referred to as “the stack.” The activities from concept development and implementation for testing and processing for launch, recovery and landing of the stack took place across the country. As NASA began the process of retiring the Shuttle program, it consulted with SHPOs from Texas, Florida, Alabama, and California. Discovery was chosen as the “shuttle of record,” and NASA conducted detailed documentation of it. The Shuttle fleet is being transferred to various institutions across the country for display and interpretation. Testing, assembly, maintenance, and launch facilities are being evaluated for potential new uses, but many are obsolete for NASA’s ongoing missions and are slated for demolition.

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And the most threatened site now pending action by NASA:

**Santa Susana Field Laboratory (SSFL)**

The Santa Susana Field Laboratory was established by Rockwell after WWII to test engines for missiles, spacecraft and rockets in the Santa Susana Mountains north of Van Nuys where actor Tom Mix once filmed silent westerns. Selection and design of the site was influenced by the German test program, which had done most of its V-2 rocket testing at abandoned rock quarries. Santa Susana’s natural bowl area and canyons were very similar and the German expatriate scientists assisting the Americans knew how to use them. The facility was also used to develop lasers for defense and commercial applications. In the mid-1950s, Rockwell expanded its operation to include nuclear research and testing various small reactors.

Early in 1950, the concrete and steel Vertical Test Stand One was erected. Later that year, it was used to successfully test the Navaho engine, kicking off official testing at Santa Susana. Eventually, two more test stands were built in the bowl. The third, built in 1965, was used for the Apollo space program. Santa Susana was the first large-scale rocket test complex built in the US. On the opposite side of the canyon from the test stands was a reinforced concrete building that housed a control center—the brains of the operation.

After construction began in 1947, the Santa Susana Field Laboratory location was used by a number of companies and agencies. The first was Rocketdyne, originally a division of North American Aviation (NAA), which developed a variety of pioneering, successful and reliable liquid rocket engines. Some were those used in the Navaho cruise missile, the Redstone rocket, the Thor and Jupiter ballistic missiles, early versions of the Delta and Atlas rockets, the Saturn rocket family and the Space Shuttle main engine. The Atomics International division of NAA utilized a separate portion of the Santa Susana Field Laboratory to build and operate the first commercial nuclear power plant in the United States and for the testing and development of compact nuclear reactors, including the first and only known nuclear reactor launched into Low Earth Orbit by the United States, the SNAP-10A. Atomics International also operated the Energy Technology Engineering Center for the U.S. Department of Energy at the site. The Santa Susana Field Laboratory includes sites identified as historic by the American Institute of Aeronautics and

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Vertical Test Stand One

Astronautics and by the American Nuclear Society. In 1996, the Boeing Company became the primary owner and operator of the Santa Susana Field Laboratory and later closed the site.

In its heyday, the lab was a tense, heady place, staffed by young, idealistic scientists. Engineers worked seven days a week and two, sometimes three, shifts a day. Whether engines fired well, shut down early or blew up on the stands, the scientists learned. They relied on primitive test gear, using vibration monitors and oscilloscopes cannibalized from oil-drilling companies. What gauges they lacked to measure horrifically strong flame and thrust, they built from scratch.

A turning point came in 1950 with the first successful test of the Redstone—a V-2 offspring carrying America’s first nuclear warheads and, in 1961, when Mercury astronaut Alan Shepard blasted off in the first manned US rocket flight.

In the fall of 2007 a historic resource assessment survey of the National Aeronautics and Space Administration (NASA)-owned facilities in Areas I and II was undertaken. The purpose was to provide an overall historic context for the facility and identify and evaluate all NASA-owned facilities at the SSFL in terms of the criteria of eligibility for listing in the National Register of Historic Places.

That evaluation included an initial review of a list of 135
Countdown to Disaster

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NASA-owned buildings, structures, and sites located within the SSFL. After archival study and field research, six test stands located in the Alfa, Bravo and Coca test areas, plus three associated control houses were evaluated as meeting the National Register criteria of eligibility in the contexts of the Cold War (Military) and Space Exploration, circa mid-1950s to 1991. In addition to the nine individually eligible historic properties, three historic districts were identified as eligible for listing in the National Register: The Alfa Test Area Historic District, the Bravo Test Area Historic District, and the Coca Test Area Historic District. Each is considered eligible in the contexts of the Cold War (Military) and Space Exploration. The relevant areas of significance are Military, Engineering, Transportation, and Space Exploration.

Total cleanup of Santa Susana is slowly moving towards returning the site to original open space. Current plans project that no structures will remain. There are those, however, who harbor the wish that some remnants of the site’s exciting history will be left for future generations to visit and ponder. The site played, after all, a central role in this nation’s race to develop vehicles to assure America’s dominance in space. Santa Susana and sites like it played an important part in Cold War and manned space flight history.

News to Me: What’s Happening at OHP

OHP and Social Media—Can You Hear Us Now?

The Office of Historic Preservation has jumped into the world of social media in an effort to encourage participation and feedback on our 2012 Statewide Historic Preservation Plan. As the State Plan team members began to use OHP Facebook and Twitter accounts to announce our listening sessions and other State Plan events, it became very clear how useful social media could be in increasing preservation education and public awareness, both part of OHP’s mission.

So what exactly do we mean by social media? Social Media is the term often used to describe a new set of web-based tools or new mobile technology that allows communication to turn into an interactive dialogue. Examples of social media include mobile apps, wikis, blogs, vlogs; more specifically Tumblr, Twitter, Facebook, YouTube, Foursquare, and text messaging. The distinction between newer media—Facebook, Twitter, YouTube—and more established media channels—email, websites—is quickly disappearing as these technologies converge and are joined by other hybrid channels—mobile phones and applications, text messaging. Social media is increasingly replacing traditional means of communications like direct mail, print advertising, radio, and billboards in engaging constituents and stakeholders.

As we move forward in preserving the tangible history of these sites, we continue to need improved or alternative mitigation and treatment options, the creation of a centralized repository/data clearinghouse, along with updated historic building cost/benefit analyses. Additional priority needs include creating useable historic contexts, developing best management practices for Traditional Cultural Properties, and improving tools for identifying and evaluating cultural resources in inaccessible areas like Santa Susana.

Many preservation organizations, such as the National Trust for Historic Preservation (NTHP) and the National Center for Preservation Technology and Training (NCPTT) have comprehensive social media strategies in place. The NTHP has around 29,000 Facebook fans (the measure of all worthiness, of course) and holds weekly twitter chats around specific subjects for their followers to engage in. NCPTT now offers training through live streaming technologies, cutting costs while furthering a critical part of their mission. To date, NCPTT offers 26 podcasts. It is worth noting with more than a little awe that those 26 podcasts, at a time when all preservation organizations feel the pinch of tight budgets and a decrease in training funds, have been downloaded 15,000 times!

While we at OHP are still in the process of fully developing our social media strategy, we have gotten the social media ball rolling by establishing a Facebook page (http://www.facebook.com/calshpo), a Flickr account (http://www.flickr.com/photos/calshpo) YouTube channel (http://www.youtube.com/user/calshpo) and Twitter account (http://www.twitter.com/calshpo). Like the NTHP and the NCPTT, we see enormous potential in using social media to help OHP staff meet a critical part of our mission: education, outreach, and technical assistance. YouTube is a new vehicle for us to provide
The 2012 California Preservation Conference will be held May 3 through 6 at the Oakland Marriott City Center. The theme this year is Old Roots, New Growth – Cultivating Communities. In case you’re wondering who should attend, it is probably simpler to say who should not, as you will probably locate one of more of your identities among the many groups who will benefit from attendance: preservationists, city and county planners, architects, landscape architects, community leaders, landmark and historic resource commissioners, historians, archaeologists, educators, attorneys, realtors, students, historic property owners, Main Street coordinators, members of Certified Local Governments, developers, contractors, craftsman, advocates of historic preservation, heritage travelers, and aware and involved citizens.

While Bay Area dwellers have long recognized Oakland as an up-and-coming cultural center, recent national recognition has others taking notice, too. Discover why the New York Times recently ranked Oakland number five in its “45 Places to Go in 2012” and why the Huffington Post called Oakland “the coolest new kid in the country.”

With support from the local host organization, the Oakland Heritage Alliance, as well as many other partners, including the Office of Historic Preservation, the conference will highlight Lake Merritt, the 1891 First Unitarian Church, Kaiser Center Lakeside Theater, University of California at Berkeley, Rosie the Riveter/World War II Home Front National Historical Park, the Peralta Hacienda, urban agricultural sites, the Oakland Fox Theater, and Redwood Regional Park, among others.

Highlights of this year’s conference include more than 30 sessions, tours, and workshops on issues facing California’s historic, cultural and natural resources, led by more than 100 experts in their various fields. There will be special events at some of Oakland’s most historic and architecturally significant venues, including CPF’s signature event, the Three Minute Success Stories, presided over by OHP’s genial and ingenious restoration architect, Tim Brandt. Tim promises the event will include the usual quotient of laughs, surprises, and yes, success stories exotically garbed in this year’s Arabian Nights theme.

Oakland has made great progress in preserving its industrial heritage and the surrounding East Bay has embraced many preservation initiatives. Oakland retains the gritty urban fabric upon which today’s grassroots “Art Murmur” phenomenon, hip new bars, and innovative “popuphood” small business incubators are founded. Learn how these achievements apply to preservation efforts throughout California by attending workshops, study tours, sessions and special events designed to serve a wide range of preservation interests.

The California Preservation Conference provides a once-a-year chance for professionals and grassroots community organizers alike to learn about new and ongoing preservation initiatives and activities across the state. Participants have a chance to network, learn, and gather inspiration and ideas, while sponsors and volunteers contribute to the success of this exciting and invigorating statewide historic preservation event.

For more information about the 2012 California Preservation Conference, please visit CPF’s website at www.californiapreservation or call (415) 495-0349.
New Listings in the National Register of Historic Places

Livermore Carnegie Library and Park
Livermore, Alameda County
Listed December 3, 2011

This Carnegie library in the city of Livermore was designed by architect William H. Weeks. Constructed in 1911, a sandstone fountain in front of the library was also designed by Weeks as part of the library’s park-like setting.

Auburn City Hall and Fire House
Auburn, Placer County
Listed December 19, 2011

Completed in 1937, this WPA Moderne civic building became the city of Auburn’s new city hall. It was designed by master architect George Sellon.

Auburn Fire House No. 1
Auburn, Placer County
Listed December 19, 2011

This ornate 1888 Stick/Queen Anne building housed both Auburn’s fire department and offices of a water company.

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New Listings in the National Register of Historic Places

(Continued from p. 9)

Auburn Fire House No. 2
Auburn, Placer County
Listed December 19, 2011

This distinctive 1891 Shingle Style building was Old Town Auburn’s firehouse for more than 50 years.

Auburn Masonic Temple
Auburn, Placer County
Listed December 19, 2011

Designed by architect Allen Fellows, this property combined two adjacent single-story commercial buildings with a second floor and a dramatic Gladding-McBean terra cotta façade in 1914.

Oddfellows Hall
Auburn, Placer County
Listed December 19, 2011

This 1894 Italianate commercial building became the home of Auburn’s Oddfellows Lodge and two retail stores.

(Continued on p. 11)
New Listings in the National Register of Historic Places

(Continued from p. 10)

Placer County Bank
Auburn, Placer County
Listed December 19, 2011

This 1913 Beaux Arts bank building was designed by San Francisco architect Charles Sumner Kaiser. Due to its role in Placer County gold mining, more gold was shipped to the San Francisco mint from this bank than any other bank in California.

Fresno County Hall of Records
Fresno, Fresno County
Listed December 22, 2011

This county records building was originally constructed in 1937, designed by Fresno master architect Henry P. Villalon in the WPA Moderne style. It was expanded with a complementary annex in 1955, designed by Maurice J. Metz.

Karasik House
Beverly Hills, Los Angeles County
Listed December 22, 2011

The narrowness of this Beverly Hills lot and steepness of the natural topography inspired an elongated two-story building form, representative of Frank Lloyd Wright Jr.’s lifelong concern for integration of the building and its site, and his innovative, theatrical flair.

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New Listings in the National Register of Historic Places

(Continued from p. 11)

West Point Inn
Mill Valley (vicinity), Marin County
Listed December 22, 2011

A rare surviving example of a San Francisco Bay Area rustic mountain lodge, built in 1904 at 1,800 feet above sea level on the southern slope of Mount Tamalpais.

John R. and Florence Porterfield Beardsley House
San Diego, San Diego County
Listed December 22, 2011

This Hacienda-style ranch house in San Diego County was the first commissioned work of master builder and architect Cliff May, and an outstanding example exhibiting all of the character-defining features of his early work.

Sinton House
San Francisco, San Francisco County
Listed December 22, 2011

 Significant for its association with Nell Sinton, recognized as one of California’s earliest prominent female abstract expressionists, the house was designed by John (Giovanni) Portoraro and altered for the artist’s use by William Wilson Wurster.

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New Listings in the National Register of Historic Places

(Continued from p. 12)

U.S. Highway 66 in California
Multiple Property Submission
Multiple Counties
Listed January 3, 2012

This multiple property document identifies historic contexts for properties related to the history of US Highway 66 within the State of California between 1926 and 1974. Eligible property types include highway and road-related structures, agricultural inspection stations, travel accommodations, automobile services, restaurants, commercial signage, town sites, and auto camps.

Wigwam Village No. 7
(U.S. Highway 66 in California MPS)
San Bernardino, San Bernardino County
Listed January 3, 2012

 Constructed between 1947 and 1949 and opened in 1950, this roadside motel exemplifies a unique type of roadside architecture designed to attract high-speed travelers on Route 66.

Hollywood High School Historic District
Los Angeles, Los Angeles County
Listed January 4, 2012

Associated with the entertainment industry and the development of Hollywood, the district includes five contributing buildings primarily in the Public Works Administration (PWA) Moderne style.

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New Listings in the National Register of Historic Places

(Continued from p. 13)

Renown (yacht)
San Diego Marriott Marina
San Diego County
Listed January 27, 2012

Significant under National Register Criterion C as an excellent example of a shallow-draft “Trumpy Yacht” designed and constructed by master naval architect, John Trumpy, Sr. (1879-1963), through his association with the Mathis Yacht Building Company of Camden, New Jersey.

Comstock House
Santa Rosa, Sonoma County
Listed January 27, 2012

Exhibiting the distinctive characteristics of a Dutch Colonial Revival house highly influenced by the First (San Francisco) Bay region tradition, it is also significant for its association with the residential development of Santa Rosa, California.

New Listings in the California Register of Historical Resources

AT&T Whitewater Repeater Station
Whitewater, Riverside County
Listed October 28, 2011

Built in 1930, the station embodies the distinctive characteristics of both the Pueblo Revival and Art Deco Architectural Styles.

(Continued on p. 15)
New Listings in the California Register of Historical Resources

(Continued from p. 14)

Legg Lake Play Sculptures
South El Monte Los Angeles County
Listed January 20, 2012

Construct in 1960, aquatic themed playground pieces were hand-crafted in concrete by artist Benjamin Dominguez. All are located along a quarter mile walking path adjacent to the eastern portions of Legg Lake and Center Lake within the Whittier Narrows Recreation Area.

Savannah Memorial Park
El Monte, Los Angeles County
Listed March 7, 2012

The historic cemetery of the pioneer settlers who founded El Monte, California, many of whom were instrumental in developing the legal, educational, and social foundations of southern California.
Registration: Technical Tips on the Preparation of National Register Nominations
Jay Correia

On March 20, 2012, the Registration Unit participated in a webinar hosted by the National Park Service on the topic of technical issues with National Register nominations. The Registration Unit is charged with ensuring that nominations technically and substantively meet National Register standards. Although we rely heavily on the National Register Bulletins How to Apply the National Register Criteria for Evaluation (formerly Bulletin 15) and How to Complete the National Register Registration Form (formerly Bulletin 16A), we sometimes feel as if we operate in a vacuum, far from Washington, DC, the headquarters and center of the National Register program. We listened, then, with great interest and attention as National Register staff reviewed some of the most common mistakes they encounter on nomination forms. Here are some of the highlights from that session.

Photographs
Begin with overall shots of the resource, then move up and take detailed shots. Put simply, begin with the macro and progress to the micro. It is acceptable to submit electronic tiff images in color, and color prints are acceptable. Make certain that the photograph number matches the photo log in the nomination. Finally, do not print at too low “DPI” or Dots per inch setting. The National Park Service requires that photographs be printed at 300 DPI. If photos are referred to in the narrative, they should be in numerical order.

Resource Counts and Resources within Districts
For historic district nominations, count empty lots as resources. Although they are likely non-contributing, count them. If three empty lots lie adjacent to one another, count them as a single site. It may seem like an obvious comment, but make sure the resource count in Section 5 matches the inventory description in Section 7, and make sure both match the map!

We find it significant to note that National Register staff would like to see better explanations of WHY a non-contributing resource does not contribute to the significance of the historic district. Simple statements such as “does not contribute due to alterations” raise more questions than they answer. We suggest applicants use phrases such as “The house no longer contributes to the district because the front porch was entirely removed and replaced with a porch that lacks Queen Anne detailing,” or “The flat roof on this Mid-Century Modern house was replaced with a pitched roof, which dramatically alters one of the most important primary character-defining features of homes in this historic district.”

Maps
National Register staff expressed frustration when sketch maps do not show how the nominated resource relates to its surroundings. Please show surrounding blocks and streets; hard as it may be to accept, acknowledge that there is a world outside the boundaries of the nominated resource!

Period of Significance
The California OHP periodically receives nominations that identify periods of significance that pre-date the year the resource was constructed. Remember that periods of significance cannot pre-date the existence of a resource, and there can be no significant dates outside the period of significance. Think of the period of significance as the time when the resource being nominated played a significant role in history.

Proper Naming Convention
Pay close attention to page 8 in Bulletin 16A. The last name of the resource must always be first, and then state the building type. For example, Morgan, Julia, House, or Peterson, Captain and Mrs. AJ Residence. Once we learned that the correct naming convention is critical to the National Register’s filing system, we understood the importance of strictly following this rule.

Substantive Issue: Summary Statements of Significance
Most of the technical issues discussed above are easily corrected on nomination forms. During the webinar, however,
Registration: Technical Tips on the Preparation of National Register Nominations?

National Register staff noted that almost every nomination could benefit from stronger summary statements of significance. Applicants must write clear, concise summary statements of significance that use language taken directly from How to Apply the National Register Criteria for Evaluation (formerly Bulletin 15). We found it refreshing to hear National Register staff actually state that summary statements of significance ARE formulaic.

Bulletin 15 states “Properties can be eligible for the National Register if they are associated with events that have made a significant contribution to the broad patterns of our history.” For example, “The USS Macon is eligible for the National Register under Criterion A because it is associated with the events leading to the demise of the United States rigid lighter-than-air airship program.”

Similarly, Criterion C, in part, states: “properties may be eligible if they embody the distinctive characteristics of a type, period, or method of construction.” Applicants should echo this language in their nominations. For example, “The North Star House is eligible for the National Register under Criterion C because it embodies the distinctive characteristics of monumental Craftsman Architecture.” The body of the nomination must then demonstrate WHY the summary statement of significance is true.

Finally, bear in mind that the staff of the Registration Unit is here to answer your questions related to the technical and substantive requirements for writing National Register nominations. Please don’t hesitate to telephone us for help. We know how much blood, sweat, and tears go into the research and writing of nominations and want to help you get it right.

News to Me: What’s Happening at OHP

(Continued from p. 7)

technical information in a video format. Flickr allows us to provide access to some of the different types of media we have in our collection. Facebook will allow us to quickly connect and communicate with our partners. So, while it is true that some of us are over thirty and can’t text one-handed while multi-tasking, OHP has, in fact, arrived at the social media party. We hope you’ll stay in touch as we get up to speed and develop a comprehensive social media strategy. What happens when communication becomes a two-way street? We’re about to find out!

Ron Parsons—Gone But Not Forgotten

The Local Government Unit has lost a valued staffer in Ron Parsons, who handled CEQA issues since joining the unit. Ron left State service at the end of February to accept a teaching job to sustain him while he finishes his Ph.D. dissertation. Ron had an easy-going manner, a quick sense of humor, and was helping nudge the office into the 21st century by working on our Facebook page and lending a hand as we started Tweeting. Shortly before he left, he (at his own expense) represented the office at the ICOMOS conference in Paris in January, which was headquartered at the Ecole des Beaux Arts. He took notes and photographs, which he generously shared with us upon his return, accompanied by a running narrative about the art he stumbled upon in his favorite city. Thanks for the memories, Ron.

New Faces in Review and Compliance

Kathleen Forrest, an architectural historian, and Brendon Greenaway, an archaeologist, have joined the lengthening roster of OHP staff members who make up the Review and Compliance Unit.

Kathleen Forrest

Kathleen and her husband hail from Massachusetts originally and are the proud parents of Jack, a red-headed four-year-old whirlwind. Husband Adam Fresia works from home selling parts for muscle cars. She and Adam share a love of cars (NASCAR), rock and roll, and, of course, Jack. Kathleen traces her interest in architectural history to the experience of being a docent at The Mount, Edith Wharton’s home in Massachusetts. Visits to Western Europe, Mexico, and China have whetted her appetite for travel.
Recent Publications for Balancing Sustainability and Historic Preservation
Mark Huck

This article introduces three recent publications: one made available by the National Trust for Historic Preservation and two that the National Park Service has authored to further research the positive impact of existing and historic building reuse on the environment. Each of these documents brings an additional perspective to the utility and practice of sustainability on historic preservation in the United States today.

The first document is the much-anticipated report from the National Trust’s Preservation Green Lab, first commissioned in 2009. “The Greenest Building: Quantifying the Environmental Value of Building Reuse” was designed to demonstrate the energy effectiveness of rehabilitation across six building types: single family home, multifamily building, commercial office, mixed-use building, elementary school, and warehouse conversion. Four diverse climates were considered: Chicago, Atlanta, Phoenix, and Portland Oregon. Four environmental impact categories were considered for this evaluation: climate change, human health, ecosystem quality, and resource depletion.

The research scope was ambitious but necessary, as it was widely believed in the preservation community that quality rehabilitations compared favorably with new construction in energy efficiency, but rigorous research in support of that belief was lacking.

The report begins with an Executive Summary, which is fortunate since what follows are the hard numbers supporting the conclusions (spoiler alert) that reuse of existing and historic buildings DOES perform better than comparable new construction, UNDER specific circumstances. These circumstances are not surprising, as they are true for any project: a quality job performs best. Caveats are given: the environmental benefits of historic building retrofits may be reduced or negated depending on the type and quantity of materials selected.

Central to the analysis in this report is the concept of avoided impacts as opposed to embodied energy, which is the initial energy investment required to produce a material or product. It includes the energy needed for the extraction of natural resources, manufacturing, transportation, and installation. Thus, the embodied energy of a building reflects the total energy needed to produce all materials or assemblies, transport them to a building site, and assemble a building.

Recently, building and environmental scientists have been dismissive of the embodied energy approach to quantifying the benefits of building preservation; energy embedded in an existing building is often viewed as a “sunk cost,” because the energy expenditures needed to create a building occurred in the past, as did the environmental impacts associated with creating the building. In this view, the only value of building reuse is the avoidance of environmental impacts resulting from not constructing a new building.

One way to quantify the benefits of existing and historic building reuse is to characterize how long it would take for a brand new building performing 30% better than an average-performing existing building to overcome the negative climate change impacts attributed to the construction process. The report found that the “payback” period for a new building’s efficient operations to equal negative impacts from its construction was from 10 to 80 years!

One specific scenario performed worse than new construction: the warehouse-to-multifamily conversion, which performed poorly in the human health and ecosystem quality categories. This was due to the large amount and kind of materials selected for this particular building type conversion. It is noted, however, that this kind of conversion still has a positive impact on the climate change and resource depletion categories.

While the report acknowledges that building reuse alone cannot solve the problems caused by greenhouse gas emissions, it does demonstrate how retrofit and reuse for energy efficiency can offer significant emission reductions. This report is intended to serve as a resource for those who shape the built environment, to inform the crafting of governmental policies and to provide developers, designers and builders with responsible environmental alterna-

A solar panel installation that is not recommended

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tives to new construction. The report succeeds greatly in this, and is thus an important addition to research accomplished to date.

The Secretary of the Interior’s Standards for Rehabilitation and Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings

The Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings replaces the chapter on “Energy Conservation” in the Illustrated Guidelines for Rehabilitating Historic Buildings published in 1992. The current guidelines are meant to show that historic buildings have always been inherently sustainable, owing to the fact that they were constructed prior to reliance upon mechanical systems and are the result of a building tradition that passively manipulated material properties and environmental conditions to create comfort by necessity.

These updated guidelines are written in the same style as the original Guidelines, with treatments that are “recommended” and “not recommended.” The illustrated format makes it a good primer for members of the public wishing to maintain their own historic properties correctly, and is equally valuable to preservation professionals seeking a better understanding of the National Park Service’s application of the Standards.

The guidelines begin with an introduction to the Standards and the Illustrated Guidelines. A discussion of Sustainability follows, outlining initial steps to be taken. The first step is to understand lost original and existing energy-efficient aspects of the historic building, which is key to a successful sustainable rehabilitation. These original energy-efficient features may offer some of the best means of reducing the energy consumption of the historic resource.

The guidelines quickly depart from the traditional discourse of recommended rehabilitation treatments to focus on newer concerns of the current sustainability movement:

Window repair and replacement discussions include:
- retention and repair
- installation of interior or exterior storm windows
- installation of clear, low-e film on existing glazing
- retrofit of steel windows to improve thermal performance
- reuse of interior transoms and other borrowed light

A discussion of replacement windows appropriate to the historic resource is included.

Weatherization and insulation issues address:
- analyzing where energy is escaping
- working with the original design of the building to reduce energy usage
- whether and when to insulate
- finding and sealing air leaks
- being sensitive to invasive installation procedures.

Mechanical systems explore:
- whether to reuse original systems (preferred)
- consolidating systems that condition the whole building and eliminate patchwork systems
- designing systems and using equipment that might reduce or eliminate potentially invasive air delivery systems such as ductwork
- placement of systems where they are least visually intrusive.

Commissioning of mechanical systems is also discussed here, as is the consideration of a geothermal system, which, being underground, is by definition invisible.

Solar technology is a divisive issue, especially in California, where financial incentives encouraging installation of solar equipment have existed for several years. The Guidelines are very thorough in this regard, considering first whether any installation can be approached without detriment to the historic resource, and discussing options for:
- where appropriate on-site installations can be placed
- how they may be installed with least or no damage to original historic fabric

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- orientation to create the lowest profile possible

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- orientation to create the lowest profile possible

Several examples of inappropriate installations are included to illustrate what is considered non-conformance to the Standards, which is helpful.

Wind power and the prominent turbine equipment used must be considered in the context of both the historic property and its district. Emphasis is placed on whether wind turbines are still considered necessary after all other improvements have been implemented, and analysis of the installation’s life-cycle cost benefit.

Off-site renewable energy procurement is offered here as an alternative to on-site installation for all alternative energy equipment, always a good option.

Cool roofs and green roofs are reviewed as well. Since roofs are one of the more prominent elements of any building, care must be exercised in the selection of a roof treatment, whether it be solar roof shingles, a cool (white) roof, or visible vegetation, which in the past frequently signaled neglect! Flat roofs work well for this sustainability option, and successful (and unsuccessful) treatments are pictured here.

Site features and water efficiency can be a more benign sustainable design element for a historic property. Permeable surfaces are usually low key, being mostly flat to the ground. Working with the original landscaping, which may also have been an original passive sustainable feature, is usually a safe decision.

Daylighting is a sustainable rediscovery that historic buildings have always excelled at by necessity. The reopening of skylights and restoration of transoms is recommended. Reinstalling light control devices such as shades, awnings and shutters is encouraged. Adding modifications that enhance natural daylighting in historic buildings is permitted, but only where discreet. Adding visible skylights to prominent roofs is not recommended.

Overall, the Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings is a very useful and timely tool for everyone concerned with preservation and sustainability.

Preservation Brief 3, Improving Energy Efficiency in Historic Buildings, by Jo Ellen Hensley and Antonio Aguilar, National Park Service

This rewritten Preservation Brief replaces the original PB3 written by Baird Smith, itself a response to the energy crisis of the 1970s which contained many of the concepts still in use today. The rewritten PB3 responds more to the rigorous third party documentation concerns such as LEED, in the form of energy auditing and the commissioning of mechanical equipment. As a Brief, it is aimed more towards the preservation professional, though it is also a good source for the interested public and climate-conscious practitioners.

The Brief is conveniently divided into three sections: Inherent Energy Efficient Features, Energy Auditing, and Actions to Improve Energy Efficiency.

It is important to first acknowledge and identify any inherently sustainable features of a historic resource, and inventory their existence for reuse or rehabilitation.
This discovery gives any historic project a head start in its energy efficiency. Several of these features are likely present, as passive strategies for comfort were commonly employed.

Such features to be identified are:

- windows, courtyards and light wells
- walls acting as a thermal mass
- floor plans in cool climates, characterized by rooms surrounding central fireplaces, low ceilings, and small windows with shutters
- floor plans in warm climates, characterized by wide central halls, tall ceilings, breezeways and large porches
- roofs, which can respond to the local environment with wide overhangs for shade, no overhangs to allow for solar gain, steep roofs to shed snow and wind, and light roof color to reflect light and heat
- landscaping’s role in shading, evergreen or deciduous trees to block or transmit light and heat, or to block with windbreaks
- building orientation, to shed or capture wind and breezes

Before any sustainable design can be contemplated, an energy audit will discover where the energy weaknesses of a building are. Energy audits are used to:

- prioritize energy upgrades
- balance the cost of the improvement with the payback in energy savings

Once an inventory of sustainable and character-defining features is identified, and energy audits have located weaknesses in the building envelope, actions to improve energy efficiency can include:

- reduction of energy demands for heating and cooling by implementing operational changes
- upgrade mechanical systems and major appliances, then
- Weatherize and upgrade building components that may require alteration of the building may be considered. This is divided into:
  - minimal alteration, ("invisible" improvements such as air sealing, attic and basement insulation)
  - more invasive alteration (adding interior vestibules, replacing windows, adding insulation to walls, cool and green roofs)
  - weatherization that alters character-defining features, which should never be undertaken

This advice to upgrade equipment first and then to weatherize is in contrast to the California Public Utilities Commission and OHP, which recommend weatherization first to reduce heating and cooling loads, then mechanical right-sizing to reduce the energy demand from the equipment. The NPS is recommending mechanical equipment upgrades first as an invisible upgrade that does not impact character-defining features.

A special discussion about Moisture is included in a sidebar. Moisture and condensation within a wall are always prime concerns whenever considering the addition of insulation. Condensation within an inaccessible space, such as a wall, will eventually promote rot, mold, freeze-thaw or other damage. Special design consideration must be paid to the addition of assembly insulation.

Finally, alternative energy sources are discussed, such as the installation of solar panel, geothermal and wind equipment. Good and bad installation strategies are discussed.

All of these documents are available from the Sustainability page of the OHP web site at http://www.ohp.parks.ca.gov/sustainability. Together these documents provide useful guidance to practitioners and policy makers. Make them a part of your reference library!

NTHP link
http://www.preservationnation.org/issues/sustainability/green-lab/valuing-building-reuse.html

The Greenest Building: Quantifying the Environmental Value of Building Reuse


http://www.nps.gov/history/hps/tps/briefs/brief03.pdf
The Process:
Pursuant to 36 CFR Part 800.6 or 800.14(b), in consultation with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO) and/or the Advisory Council on Historic Preservation (ACHP), a Programmatic or Memorandum of Agreement may be considered the most efficient and appropriate method of managing effects to historic properties. Should this occur, the federal agency submits a draft document in hard copy and an electronic version (via e-mail to the corresponding reviewer) to OHP for review along with a cover letter explaining the undertaking’s consultation history and the document’s purpose and intent. The inclusion of an electronic copy allows for the input of all signatories to be concentrated in one document through the use of Track Changes. Always make sure to include copies (color when applicable) of all attachments such as maps, charts and treatment plans given time.

Then What?
After all comments from reviewing parties have been submitted to the lead federal agency, those comments are then integrated into what is hopefully the final draft. Getting to a final draft in which consensus between the parties is reached may take several iterations. As with the original, all signatories must carefully review the final draft for consistency, content and formatting. This process continues until all sides are satisfied with the result. Again, the duration of the above-outlined process can be lengthy depending on the complexity of the issues at hand, the resource types, and number of signatories, among other factors.

Finally Finished?
Now, after significant effort, it appears that all signatories have reached an agreement on the content, format and purpose. What happens next? The document should again be closely proofread for formatting accuracy and to eliminate any words, phrases or symbols that may be out of place, superfluous or incorrect altogether. Next, the signature page should be properly prepared to accurately reflect the names and titles of all signatories and the signature date. Careful attention should be paid to this page to safeguard against any last minute delays caused by erroneous information. It is not uncommon for this apparently straightforward detail to be the last obstacle to execution. Currently, the appropriate signature line for OHP agreement documents should be pro-

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vided as such:

Milford Wayne Donaldson, FAIA
California State Historic Preservation Officer

An original signature page should be created for each signatory. For example, if there are three signatories, then three separate, original signature pages with wet signatures should be prepared, with all blocks on one page whenever possible. It is the responsibility of the lead agency to obtain all signatures before forwarding them to OHP or the ACHP for final signature. The SHPO always signs these documents last (unless the ACHP is a signatory, in which case they sign last) and retains one original copy of the signature page and document while returning the remaining originals to the lead agency for distribution to all appropriate parties. Please remember to include the mailing address and party to whom you would like the signed copies returned. The agreement is then considered effective upon the signature date of the SHPO (or ACHP). Should the undertaking occur on tribal lands with a governing THPO, (in which case the THPO assumes the role of the SHPO), it can be considered effective upon the THPO’s signature.

Along with these technical aspects, close attention should always be paid to the governing regulations for the entire procedure, as stipulated in 36 CFR Part 800.6 and 800.14. We hope this information proves useful for those with all levels of experience with agreement documents and the Section 106 consultation process. If you have further questions, please contact our office or the ACHP for assistance.

News to Me: What’s Happening at OHP

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Brendon Greenaway

Brendon comes to us from the Thousand Oaks area of Southern California, but was born in New Zealand (his mother’s home) and moved to England as a baby (birthplace of his father). Seeking less heat, smog, and congestion, he did his undergraduate studies at Humboldt State. He loves exploring the out-of-doors, where he mountain bikes, surfs, hikes, and has recently taken up snowboarding and spear fishing. He’s been reading Kerouac, Vonnegut, and Hunter Thompson, listens to jazz, rock and roll, and has a list of travel destinations at the ready. Something of a study in contrasts, Brendon retains a smidgin of English reserve, but has been persuaded to exchange jacket and tie for the more casual OHP uniform of most days.

Welcome to you both. We look forward to the pleasure of knowing you better.
The mission of the **Office of Historic Preservation** and the **State Historical Resources Commission** is to provide leadership and promote the preservation of California’s irreplaceable and diverse cultural heritage.

To fulfill our mission we:

* Partner with local, state, federal, and tribal agencies, non-profit organizations, and the general public to help ensure cultural resources are appreciated and maintained as a matter of public interest and community pride;
* Carry out mandated responsibilities and administer programs under federal and state historic preservation laws.
* Offer technical assistance and preservation training in order to create a better understanding of the programs OHP administers;
* Support sustainability and adaptive reuse of historic resources in ways that preserve historic character and provide economic benefits;
* Maintain the statewide Historical Resources Inventory and make available information about the state’s historical and archaeological resources; and,
* Encourage recognition of the vital legacy of cultural, educational, recreational, aesthetic, economic, social and environmental benefits of historic preservation for the enrichment of present and future generations.

**Upcoming Events in Historic Preservation**

The **Office of Historic Preservation** is sponsoring a workshop **April 30-May 4, 2012 on Geophysical Applications in Archaeology** of interest to archaeologists, Native American monitors, agency managers, and others, which will address three geophysical methods—magnetic gradient survey, electrical resistance survey, and ground penetrating radar (GPR). Dr. Lewis Somers and David Maki of GeoScan Research/ArchaeoPhysics will teach the workshop at Mission Antonio de Padua. Dr. Robert Hoover, who has conducted research on site for 30 years, will orient and introduce the class. For more information, contact Dr. Hoover, 1144 Buchon Street, San Luis Obispo, CA 93401, (805) 544-0176, ulrich1614@aol.com.

The regularly-scheduled quarterly meeting of the **State Historical Resources Commission** will be held in conjunction with the CPF Conference in Oakland, beginning at 9:00 a.m. on Thursday, May 3, 2012. Location is the Alameda City Hall, Council Chambers Conference Room, 3rd Floor, Alameda, California 94501. For more information, see the OHP website at [http://ohp.parks.ca.gov/?page_id=21372](http://ohp.parks.ca.gov/?page_id=21372).

The **California Council for the Promotion of History**, whose 32nd Annual Conference will be held October 18-20, 2012, has put out a call for papers to be presented at the conference in Woodland. This year’s conference will delve into the movers and the movements that exemplify and define California. CCPh seeks individual papers, panels, or roundtable discussions. Papers should be emailed or post-marked by May 16, 2012. For more information, see the Annual Conference page at [www.ccphhistoryaction.org](http://www.ccphhistoryaction.org) Program contact email is: ccphprogram@californiahistoryaction.org

The **National Center for Preservation Technology and Training**, in partnership with the **Presidio Trust**, is offering a three-day workshop **Green Preservation: A LEED Technical Review and Exam Preparation Workshop** at the Presidio, San Francisco, on May 22 to 24, 2012. The workshop will feature case studies and have a historic preservation emphasis. Please register no later than May 18; those registering before April 27 will be eligible for a $100 discount. For more information or to register, visit [http://ncptt.nps.gov/leedpresidio](http://ncptt.nps.gov/leedpresidio). More information is available by contacting Sarah Marie Jackson, email sarah.m.jackson@nps.gov or by phone at 318/356-7444.

On **Thursday, June 14, 2012**, celebrate Oakland’s historic preservation stewards with the **Oakland Heritage Alliance** at their OHA Partners in Preservation Awards Ceremony at 7:00 pm in the Chapel of the Chimes in Oakland. For more information, see [http://www.oaklandheritage.org/Events.html](http://www.oaklandheritage.org/Events.html)

The **California Preservation Foundation** (CPF), in partnership with the **Berkeley Architectural Heritage Association** and the **City of Berkeley** invites you to a free lecture on the **Secretary of the Interior’s Standards & Sustainability**, Tuesday, June 19, 2012 at 7:00. Contact Baha for location at [http://berkeleyheritage.com](http://berkeleyheritage.com)