



Santa Susana Field Laboratory

Historic Resources Survey

The following describes the steps to identify and evaluate all buildings and structures on land administered by NASA within Areas I and II of the Santa Susana Field Laboratory (SSFL) in accordance with the National Historic Preservation Act.

NASA is committed to cleaning property now held by NASA at the SSFL to a level that is protective of health and the environment and that meets all regulatory requirements. As site investigation and cleanup are progressing, NASA is looking back at the SSFL legacy - taking stock of its resources and documenting its contributions to history.

The National Historic Preservation Act (NHPA) was signed into law in 1966 and remains the nation's primary law in effect today for the preservation of historic properties. Section 110 of the NHPA guides Federal agencies to become stewards of historic resources under their ownership or control, and provides broad direction for establishing programs to manage their historic resources. Executive departments and Federal agencies have put into place detailed guidance, or "how to's," for implementing the law through Executive Orders, the Code of Federal Regulations, The Secretary of the Interiors Standards, guidance documents, and other agency rules and guidelines.

Identifying Historic Properties

Historic properties are buildings, structures, districts, sites or objects that are listed, or eligible for listing, in the National Register of Historic Places (NRHP). The Register is administered by the U.S. Department of the Interior. The National Register Criteria for Evaluation, developed by the National Park Service, is a set of standards by which every property evaluated for NRHP eligibility is judged.

A property must first demonstrate its historical significance in at least one of the following four areas. Often more than one criterion may apply. The property must:

- A.** Be associated with events that have made a significant contribution to the broad patterns of history; or
- B.** Be associated with the lives of persons significant in our past; or
- C.** Embody architectural or engineering uniqueness in its design or construction; or
- D.** Have yielded, or may be likely to yield information important in prehistory or history.

for your information

A property also must retain historic integrity of those features necessary to convey its significance. These qualities include elements defined as follows:

- ◆ Location is the place where the historic property was constructed or the place where the historic event occurred.
- ◆ Design is the combination of elements that create the form, plan, space, structure, and style of a property.
- ◆ Setting is the physical environment of a historic property.
- ◆ Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- ◆ Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- ◆ Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.
- ◆ Association is the direct link between an important historic event or person and a historic property.

Ordinarily, properties must be 50 years or older to be considered eligible for NRHP listing. Some properties, however, can be eligible if they meet special requirements, called Criteria Considerations, (in addition to meeting one or more of the four Criteria and possessing integrity). A number of properties at the SSFL fall under Criteria Consideration G: properties of exceptional importance that have achieved significance within the past fifty years.

An Historic District is one of the five types of property that may be eligible for NRHP listing. An Historic District is defined as: A geographically definable area, urban or rural, possessing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united by past events or aesthetically by plan or physical development. A district may also comprise individual elements separated geographically but linked by association of history.

NASA's Historic Resources Survey

In the fall of 2007, historic preservation professionals from Archaeological Consultants, Inc (ACI), Sarasota, Florida and Weitze Research, Stockton, California conducted the historic resources survey of buildings and structures within the NASA-administered portion of Area I and all of Area II at the SSFL. **The purpose of this survey was to provide an overall historic context for the lands now administered by NASA at SSFL, and to identify all properties eligible for National Register of Historic Places listing.** The initial review encompassed 135 buildings, structures, and sites located within Areas I and II. The survey revealed that 60 of the facilities are temporary structures, sheds and pipelines used for generic purposes, with no specific historic function. The remaining 75 facilities are buildings and structures located within the Alfa, Bravo, Coca, Delta, Storable Propellant Area and Service Area complexes of Area II, which warranted additional evaluation. Researchers examined master plans, drawings, as well as historical documents and photographs at associated government and company History Offices (NASA, Air Force, Rocketdyne and Boeing), and reports on file at the California State Historic Preservation Office. Field investigations included telephone and on-site interviews conducted with previous and current employees of Rocketdyne (now Pratt & Whitney Rocketdyne) and the Boeing Company. The experiences of those interviewed provided insight regarding the historic functions of specific test stands and support facilities, and clarified some of the changes made over time to individual facilities and the landscape. All facilities were inspected and photographed.

Historic Context

To evaluate whether a property is considered historic first requires placing that property in its proper historic context. The information gained through archival research and field investigations was compiled in a description of the overall history of the SSFL and the operations conducted on land that NASA administers there. The comprehensive report is very briefly summarized below.

NASA Test Stands

Land (now designated as Area II) was administered first by the U.S. Air Force (1954 to 1973) and since then by NASA. Between 1954 and 1957, Alfa, Bravo, Coca and Delta test stands were built by the architectural-engineering firm DMJM, forerunners in engineering U.S. military technical facilities. These were the first multiple, permanent test stands with an associated block house (control room). By design, the test stands were integrated with the natural setting where outcroppings of boulders and rock served to buffer the discharge rocket engine exhaust and water and provide blast and sound protection. Rocket engines for NASA missions – from Apollo to the Space Shuttle - underwent testing at Area II. All engine test stands at the SSFL are inactive today; the last (Alfa test stand 1) was deactivated in 2000. Several of the test stands: Alfa test stand 2, Bravo test stand 3, the original Coca test stands, (though Coca 2 is partially remaining) and Delta test stands 1, 2 and 3 have been dismantled.

NRHP-eligible Facilities

Survey results identified six NASA test stands and three associated control houses as eligible for nomination to the NRHP. These nine facilities are considered significant in the historic contexts of the Cold War (Military) and Space Exploration. They are eligible under Criterion A for their exceptionally important role in the development and testing of various rocket engines (Alfa, Bravo, Coca), and space boosters (Coca). They are eligible also under Criterion C for their specialized engineering and design.

The six test stands are:

Alfa 1 and 3 Test Stands (Building 727 and 729)

Bravo 1 and 2 Test Stands (Buildings 730 and 731)

Coca 1 and 4 Test Stands (Buildings 733 and 787)

The three associated structures are:

Building 208 (Alfa)

Building 213 (Bravo)

Building 218 (Coca)

The Alfa, Bravo and Coca Test Areas meet the definition of Historic District as the properties within each complex contain a concentration of properties (multiple test stands and associated structures integrated within natural settings) linked by design, historical events and function. For example, the test stands proper could not have functioned without their control houses, electrical stations, run-off channels and other related facilities. By plan, these resources - both man-made and natural - are united functionally, aesthetically and historically.



Alfa 3 Test Stand

Considering History in the Future

Preserving the richness of its history is important to NASA. As technology advances, infrastructure can become obsolete to the point where it can no longer be upgraded to support future missions. The historic survey provides NASA with an inventory of properties at the SSFL that are due special consideration when actions affect these structures. In accordance with the NHPA, NASA will complete Section 106 Consultation before moving forward with any undertaking (defined as a federally-funded project, activity or program) associated with managing the site. To initiate consultation, a Federal agency must first determine whether a proposed undertaking may have an adverse effect on the character or use of NRHP-eligible or listed properties. Some examples of potential adverse effects may include repair, demolition, rehabilitation, change in use, location or setting, or transfer of ownership.

The NHPA created the Advisory Council on Historic Preservation (ACHP) and directed that agency to pass regulations to administer Section 106 of the Act. The Section 106 implementing regulations are codified in 36 CFR Part 800, Protecting Historic Properties. Section 106 Consultation is a collaborative process in which NASA must present the area of potential effect of the undertaking to the State Historic Preservation Officer (SHPO), Indian Tribes as appropriate, and other stakeholders (consulting parties). Consulting parties offer suggestions that NASA must consider to avoid or minimize adverse effects to historic properties located in the vicinity where NASA plans to conduct activity. If a determination is made that the undertaking will cause adverse effects that cannot be avoided, then mitigations are necessary. Mitigations are activities that are agreeable to the Federal agency (NASA) and the consulting parties (SHPO, public, ACHP, etc.). Consultation is completed when an agreement document is executed such as a Memorandum of Agreement, which outlines agreed-upon measures (mitigations) that NASA will take before the undertaking can proceed. Recordation of historic properties is the most commonly-used mitigation. Recordation involves drawings, photographs, written description, video, web sites and other creative vehicles that document the property before any alteration is made. This documentation must be accessible by the public and benefit public understanding of the historic property. ■

For further information, please contact

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