

LTA TRAILER INSTALLATION PROJECT
SECTION 106 TECHNICAL REPORT

NASA AMES RESEARCH CENTER
MOFFETT FIELD, CALIFORNIA
[18165]

PREPARED FOR:
NASA AMES RESEARCH CENTER HISTORIC PRESERVATION OFFICE

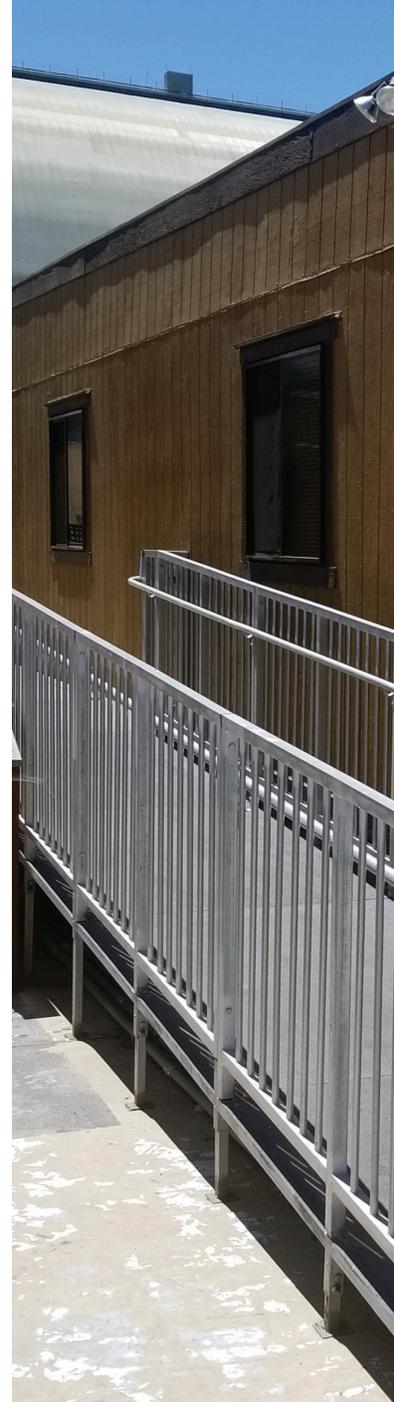


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I. INTRODUCTION

The United States, through the National Aeronautics and Space Administration (NASA), possesses the fee simple interest in the Moffett Federal Airfield (MFA) and NASA Ames Research Center (NASA ARC). As the lead federal agency, NASA is responsible for compliance with the National Historic Preservation Act of 1966, as amended through 2016, including Section 106, 36 Code of Federal Regulations (CFR) Section 800, which requires federal agencies to take into account the effects of their activities and programs on historic properties.

NASA has entered into an Adaptive Reuse Lease regarding the NASA ARC Eastside/Airfield area at MFA with Planetary Ventures (PV). As a licensee to PV, LTA Research and Exploration, LLC (LTA) proposes to construct a temporary trailer at MFA. The facility will be located between Hangar 2 and Hangar 3 on a site that is currently occupied by concrete and asphalt surface paving.

Nomenclature

For clarity, the proposed LTA trailer installation project will be referred to as “the Undertaking.”

PURPOSE

The purpose of this document is to provide necessary information for Section 106 consultation and the application of the Criteria of Adverse Effects to historic properties identified in the Area of Potential Effects (APE), pursuant to 36 CFR Section 800.5(a).

This document should be reviewed in conjunction with the Undertaking plans and documentation that have been provided as part of this Section 106 consultation submittal (see appendices).

LOCATION OF THE UNDERTAKING

The site of the proposed Undertaking is located at NASA ARC between the municipalities of Mountain View and Sunnyvale, California, on the southwest edge of the San Francisco Bay. The site of the Undertaking is approximately 27 miles southeast of San Francisco International Airport, and six miles northwest of San Jose International Airport. The Undertaking involves the placement of a temporary office trailer on the concrete surface between Hangar 2 and Hangar 3, just north of Structure 440 (fire protection reservoir). The Undertaking will only include above-grade interventions.

II. DESCRIPTION OF THE UNDERTAKING

HISTORIC CONTEXT

Moffett Federal Airfield

The installation now known as Moffett Federal Airfield was originally established as Naval Air Station (NAS) Sunnyvale, the West Coast base for the U.S. Navy's burgeoning Lighter-Than-Air aviation programs of the 1930s. By the time the air station was commissioned in 1933, the U.S. Naval Bureau of Yards and Docks had constructed Hangar 1, a campus of administrative and residential buildings for military personnel that were related to one another through their Spanish Colonial Revival architectural style, and a small airfield consisting of a landing strip and small diagonal runways in the area east of Hangar 1. The original campus had a formal plan and an axial orientation with Hangar 1; a symmetrical horseshoe-shaped roadway with a large central plaza was flanked by a number of the support buildings. A small community of residences for base staff was constructed around a cul-de-sac southwest of the main campus. The site was transferred to the U.S. Army Air Corps in 1935.

The U.S. Navy regained control of the installation during World War II and reintroduced Lighter-Than-Air missions at the installation, by this time known as Moffett Field. Wishing to expand, the Navy acquired over 200 acres of land east of the existing airfield. Hangars 2 and 3 were built in this location between 1942 and 1943. Following the end of the war, the airfield transitioned to support training and testing missions associated with Heavier-Than-Air craft, including supersonic jets. During the late 1940s and 1950s, the Navy expanded the airfield runways and taxiways to meet the take-off and landing requirements of these enhanced aircraft. Additional buildings and airfield features—including explosive storage magazines, fueling pits, and a flight operations building—were introduced in support of these missions.

In 1994, Moffett Field was decommissioned from military use through the Base Realignment and Closure process, after which NASA assumed responsibility for the installation and it was integrated with NASA ARC.

DESCRIPTION OF THE UNDERTAKING

The Undertaking consists of the installation of a temporary office trailer between Hangars 2 and 3, immediately north of Structure 440 (fire protection reservoir) at the south end of the hangars. It will be used as office space for occupants and sub-contractors of Hangar 2 as the office space within the sheds is not yet ready for occupancy. The prefabricated structure will be 60' x 72' in size and will be 14' in height with a flat roof. Short flights of metal stairs will lead to all entrances, and the primary entrance will be accessed by stairs and a metal ramp. It is not anticipated that existing pavement will be removed, as the trailer has no permanent foundation and there will be no underground infrastructure. Electrical conduit will be connected overhead from existing poles, or on grade with approved wire covers. There will be no construction staging areas associated with the Undertaking. The trailer is anticipated to remain at this location for approximately two years. See **Appendix A-1 and A-2** maps of the undertaking's location and **Appendix B** for photographs of a trailer currently at MFA that is very similar to the proposed trailer.

III. AREA OF POTENTIAL EFFECTS (APE)

DEFINING THE APE

An Area of Potential Effects (APE) is a defined geographic boundary in which historic properties may be affected by an undertaking, including direct effects (such as demolition) and indirect effects (such as blocking a visual corridor) that impact the historic character of a property.¹ An undertaking would have an effect on a historic property if the action would result in changes to the character of any of the historic properties within the APE. An APE may include historic properties that are well beyond the limits of the undertaking.

BOUNDARIES

The following analysis for the current Undertaking involves an APE that represents those areas in which the scope of the Undertaking could potentially affect historic properties—if and where they exist—through physical means, or through visual, atmospheric, or audible changes that could affect a historic property's integrity of setting. For the current Undertaking, the APE boundaries are defined by a radius of 1,000' from the edges of the proposed trailer. The small-scale nature of the Undertaking is not likely to result in any indirect effects beyond this distance.

The APE encompasses the Area of Direct Impact (ADI), meaning the project site and footprint where direct effects to above and below ground historic properties could occur. Therefore, the ADI is limited to the portion of the surface paving between Hangars 2 and 3 on which the trailer will be placed. There are no vertical boundaries to the ADI, since the Undertaking does not involve any below grade work.

A map illustrating the location of the APE and ADI is included in **Appendix A-3 and A-4**.

IDENTIFICATION OF HISTORIC PROPERTIES WITHIN THE APE

Historic properties, as defined in 36 CFR Section 800.16(l)(1), include any district, site, building, structure, or object that is included in or eligible for listing in the National Register of Historic Places (NRHP).

Archaeological Properties

Several archaeological properties have been studied throughout MFA and the neighboring areas. Some of these investigations occurred over 100 years ago, while others were the subject of recent investigations as part of due diligence exercises for ongoing development of the airfield. In February 2017, the *NASA Ames Research Center Archaeological Resources Study*, prepared for NASA by AECOM, was published with the following intent:

In support of NASA's obligations under [the National Historic Preservation Act of 1966], this Archaeological Resource Study was prepared to identify the potential for archaeological resources at [NASA] ARC to inform and guide NASA's Management of archaeological cultural resources. This study also supports [NASA] ARC's Integrated Cultural Resources Management Plan (ICRMP), which contains guidance for the treatment of both archaeological and built environment cultural resources.²

In preparing the Archaeological Resources Study, an extensive records search was conducted of previous surveys, recorded resources, historic maps, Sacred Land Files from the Native American

¹ Seifert, Donna, *Defining Boundaries for National Register Properties Bulletin*, revised 1997: accessed <http://www.nps.gov/NR/publications/bulletins/boundaries/bound1.htm>

² AECOM, *NASA Ames Research Center Archaeological Resources Study*, prepared for NASA Ames Research Center (2017), 1.

Heritage Commission (NAHC), and hundreds of geotechnical investigations that occurred at NASA ARC. Using these sources, the Archaeological Resources Study presents a series of maps that use the cumulative source materials and the records search to illustrate areas that are organized into four categories of archaeological sensitivity.

- *Heightened Historic-era Archaeological Sensitivity*: locations where pre-1931 development occurred, namely structures associated with agricultural activities in the area.
- *Heightened Prehistoric-era Archaeological Sensitivity*: locations where archaeological materials that reflect earlier periods of human occupation and activity, spanning an approximate 13,500 years.
- *Heightened Geoarchaeological Sensitivity*: locations where materials related to older periods of human activity that were subject to geological processes over thousands of years.
- *Low Archaeological Sensitivity*: areas within NASA ARC that were not designated within the aforementioned categories and were determined to have a low potential for containing archaeological resources.

These materials presented in the Archaeological Resources Study received concurrence from the California Office of Historic Preservation (OHP) in June 2017. According to the archaeological sensitivity maps included within the 2017 Archaeological Resources Study, the Undertaking ADI is located exclusively in an area that has been determined to have low archaeological sensitivity; no known archaeological sites are located in the vicinity. This, in combination with the known existence of previous ground disturbing activities at the project site (paving, and presence of existing utilities at depths below the maximum proposed grade disturbance), indicates that likely no archaeological historic properties are located within the Undertaking's ADI.

Above-Ground Historic Properties

Above-ground historic properties located within MFA have previously been studied in efforts to inform an understanding of the historic significance of properties throughout the area. These studies were used to determine whether the construction of the Undertaking may have potential effects on historic properties within the APE. The studies include the following:

- *US Naval Air Station Sunnyvale, California Historic District National Register of Historic Places Nomination*, Bonnie Bamberg, Urban Programmers: 1994.
- *Evaluating Historic Resources Associated with the Space Shuttle Program: Criteria of Eligibility for Listing in the National Register of Historic Places (NRHP)*, Page & Turnbull: 2007.
- *Historic Property Survey Report for the Airfield at NASA Ames Research Center, Moffett Field, California*, AECOM: 2013.

The Undertaking site is located within the boundary of the original NAS Sunnyvale Historic District; it is also located at the northeast portion of the Expanded NAS Sunnyvale Historic District. The original NAS Sunnyvale Historic District was listed in the NRHP in 1994. This discontinuous district includes the original portions of the NAS Sunnyvale installation campus, also known as Shenandoah Plaza, as well as Hangar 2, Hangar 3, and a small portion of the adjacent aircraft apron. The Expanded NAS Sunnyvale Historic District was identified as the result of consultation between NASA and the California Office of Historic Preservation (OHP) in 2013. Through this consultation, the boundaries of the district were expanded to form a NRHP-eligible extension. The expanded district boundaries encompass the airfield, its associated runways, and various support buildings and

structures, including the World War II-era ammunitions facilities at the northeast corner of the property.³

Based on the previous studies, above-ground historic properties are known to exist within the APE and are listed in the table below. Detailed information on all of the historic properties (including their historic use and the criteria under which they were evaluated) can be found in the documents identified in the previous studies listed above. Maps that show the locations of historic properties are included in **Appendix A**.

Table 1: NAS Sunnyvale National Register Historic District

Current Name/Historic Use (Building #)	Year Built	Status / Evaluation
Hangar 2 (46)	1942-1943	Found individually eligible for the NRHP through Section 106 review; contributing property to the NAS Sunnyvale Historic District
Hangar 3 (47)	1942-1943	Found individually eligible for the NRHP through Section 106 review; contributing property to the NAS Sunnyvale Historic District
Boiler House for Hangars 2 and 3/Heat Plant (55)	1943	Contributing property to the NAS Sunnyvale Historic District
Aircraft Parking Apron (MF1002)	1945	Proposed as a contributing property to the Expanded NAS Sunnyvale Historic District
East Parallel Aircraft Taxiway (MF1016)	c. 1946	Proposed as a contributing property to the Expanded NAS Sunnyvale Historic District

Non-Historic Properties

Of note, several buildings and structures in the APE that are within the boundaries of the original NAS Sunnyvale Historic District and the Expanded NAS Sunnyvale Historic District have not been identified as historic properties in the previous studies, as they were constructed outside the period of significance (POS) or do not contribute to the significance of the historic district. These include:

- Building 780: Telephone Remote Switch (1965)
- Structure 440: Fire Protection Reservoir, aka Water Retention Basin (1943)
- Structure 498: Covered HAZMAT Storage Area (1965)
- Structure 499: Ground Support Equipment Shed Shelter (no date)
- Concrete paving between Hangar 2 and Hangar 3 (no date)

Properties Within the Area of Direct Impact

Of the identified above-ground historic properties located within the APE and included in the tables above, none have the potential to be physically affected by the Undertaking. Therefore, no historic properties are located within the ADI.

³ It should be noted that consultation between NASA and OHP expanded the boundaries of the NAS Sunnyvale Historic District to encompass the installation's airfield and adjacent aviation-related buildings and landscape features. The Historic Property Survey Report (HPSR) completed by AECOM and dated November 26, 2013 considered resources associated with the airfield for contributing status under an expanded period of significance, 1930-1961, and a list of potential contributors was assembled. OHP has not formally concurred with this list of properties, but has found it appropriate to consider them as historic properties during subsequent Section 106 consultation.

IV. APPLICATION OF THE CRITERIA OF ADVERSE EFFECT

The criteria of adverse effect on historic properties under Section 106 of the NHPA are defined in 36 CFR Section 800.5(a)(1) as follows:

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

According to 36 CFR Section 800.5(a)(2), examples of adverse effects on historic properties include, but are not limited to:

- i. Physical destruction of or damage to all or part of the property;
- ii. Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR Section 68) and applicable guidelines;
- iii. Removal of the property from its historic location;
- iv. Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
- v. Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;
- vi. Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
- vii. Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

To comply with Section 106, the criteria of adverse effect are applied to historic properties in the Undertaking's APE, pursuant to 36 CFR Section 800.5(a). A finding of no adverse effect may be appropriate when the undertaking's effects do not meet the threshold set forth in the criteria of adverse effect, or conditions are imposed to ensure review of rehabilitation plans for conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (codified in 36 CFR Section 68). If a finding of adverse effect is made, mitigation is proposed and resolution of adverse effects occurs through consultation in accordance with 36 CFR Section 800.6(a) to avoid, minimize, or mitigate adverse effects on historic properties.

FINDING OF EFFECT

Per the criteria of adverse effect pursuant to 36 CFR Section 800.5(a)(1) and examples provided in 36 CFR Section 800.5(a)(2), an analysis of the Undertaking reveals the following:

i. Physical destruction of or damage to all or part of the property.

The Undertaking would not damage or lead to the physical destruction of a portion or all of any historic property. Any potential physical impacts to historic properties are considered in the discussion of the Undertaking's adherence to the Secretary of the Interior's Standards for the Treatment of Historic Properties under ii, below. The Undertaking therefore would not cause an adverse effect under this example.

ii. Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR Section 68) and applicable guidelines.

The following section includes an analysis of the Undertaking using the *Secretary of the Interior's Standards for Rehabilitation*. Rehabilitation is considered appropriate to define the Undertaking, as this treatment encompasses projects that "mak[e] possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values."⁴

Rehabilitation Standard 1: *A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces and spatial relationships.*

The proposed Undertaking would not result in changes to the current use of any historic property, including nearby buildings and airfield features associated with the original NAS Sunnyvale Historic District and Expanded NAS Sunnyvale Historic District, such as Hangar 2, Hangar 3, Building 55 (Boiler House), MF1002 (Aircraft Parking Apron), and MF1016 (East Parallel Taxiway). The trailer, to be used as an office, will be placed outside the controlled area of the airfield and will have no effect on the existing aviation-related programs and uses of the site.

Therefore, the Undertaking would adhere to Rehabilitation Standard 1.

Rehabilitation Standard 2: *The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.*

The Undertaking involves the placement of a temporary trailer on a non-historic paved surface that appears to have previously had other structures on it, based on the existing pavement patching. The trailer will not touch any other buildings. The Undertaking will not require any trenching for utilities or construction staging areas. Thus, the installation will result in no physical alterations to any historic features or materials.

The proposed trailer will be rectangular in shape and one story in height. It will introduce a visual change to this space with the potential to affect Hangars 2 and 3 and Building 55 in particular. However, the potential visual impact of a new building will be negligible compared to the sheer size

⁴ "Rehabilitation as a Treatment," National Park Service Technical Preservation Services, accessed January 6, 2017, <https://www.nps.gov/tps/standards/four-treatments/treatment-rehabilitation.htm>.

of Hangars 2 and 3 and the trailer's similar scale relative to Building 55 and the non-historic buildings situated between the hangars. The location of the proposed trailer between the monumental hangars also blocks the view from other parts of the airfield. The historic spatial characteristics of Hangars 2 and 3, Building 55, MF1002, and MF1016 will remain intact. Thus, the historic character of the eastern portion of the NAS Sunnyvale Historic District and the Expanded NAS Sunnyvale Historic District will be preserved.

Therefore, the Undertaking would adhere to Rehabilitation Standard 2.

Rehabilitation Standard 3: *Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.*

The construction of the new trailer will be clearly contemporary in construction and design, although it will have a utilitarian aesthetic that is consistent with the setting. The design of the trailer will not include any conjectural features that could create a false sense of history. The surrounding site will remain in its existing condition.

Therefore, the Undertaking would adhere to Rehabilitation Standard 3.

Rehabilitation Standard 4: *Changes to a property that have acquired historic significance in their own right will be retained and preserved.*

The Undertaking would not adversely affect any properties or landscape characteristics that have acquired historic significance in their own right. The only thing that the trailer directly touches is the paved surface below, and this pavement has not been identified as contributing to the NAS Sunnyvale Historic District or the Expanded NAS Sunnyvale Historic District. The pavement does not appear to have acquired significance in its own right, either.

Therefore, the Undertaking would adhere to Rehabilitation Standard 4.

Rehabilitation Standard 5: *Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.*

There are no historic properties located within the ADI, and thus, none will be physically affected by the Undertaking.

Therefore, the Undertaking would adhere to Rehabilitation Standard 5.

Rehabilitation Standard 6: *Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.*

The Undertaking would not involve the treatment of any deteriorated features belonging to historic properties.

Therefore, the Undertaking would adhere to Rehabilitation Standard 6.

Rehabilitation Standard 7: *Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.*

The Undertaking would not involve harmful chemical or physical treatments of any historic materials belonging to historic properties.

Therefore, the Undertaking would adhere to Rehabilitation Standard 7.

Rehabilitation Standard 8: *Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.*

The Undertaking does not include any excavation, as the trailer will be placed on the pavement and electrical services will be supplied overhead via existing poles, or on grade with approved wire covers.

Therefore, the Undertaking does not have the potential to disturb archaeological resources and the Undertaking would adhere to Rehabilitation Standard 8.

Rehabilitation Standard 9: *New additions, exterior alterations or related new construction will not destroy historic materials, features and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.*

As described previously, the Undertaking involves the construction of a temporary trailer. The trailer will be differentiated from contributing buildings to the NAS Sunnyvale Historic District and Expanded NAS Sunnyvale Historic District through its prefabricated construction, while being compatible through its utilitarian aesthetic. It will also be compatible with the general scale and massing to other ancillary buildings located between Hangars 2 and 3, including Building 55. The trailer will not visually detract from the monumental size of the adjacent hangars, as the hangars are some of the largest properties of the historic district. The placement of the trailer will align with the linear placement of the other structures between the hangars.

Therefore, the Undertaking would adhere to Rehabilitation Standard 9.

Rehabilitation Standard 10: *New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.*

Given that the trailer associated with the Undertaking is intended to be temporary by design and will not alter the pavement, in the event that the proposed elements of the Undertaking are removed in the future, the environment of all historic properties would easily be reverted to their existing condition.

Therefore, the Undertaking would adhere to the Rehabilitation Standard 10

Summary of Analysis under ii

The Undertaking would adhere to the *Secretary of the Interior's Standards for Rehabilitation*, as described above, and therefore would not cause an adverse effect to historic properties under this example.

iii. Removal of the property from its historic location.

The Undertaking would not involve the removal of any historic property from its historic location and therefore would not cause an adverse effect to historic properties under this example.

iv. Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance.

Potential Effect of the Undertaking on Use:

The proposed Undertaking would be limited to a small area between Hangars 2 and 3. As described previously under ii, the trailer will not result in changes to the current use of Hangar 2, Hangar 3, Building 55 (Boiler House), MF1002 (Aircraft Parking Apron), and MF1016 (East Parallel Taxiway). The trailer will be placed outside the controlled area of the airfield and will have no effect on the existing aviation-related programs and uses of the site.

Potential Effect of the Undertaking on Physical Features within the Property's Setting:

The proposed Undertaking has the potential to affect the setting of Hangars 2 and 3 and Building 55. However, small non-historic support buildings and structures set between the two hangars and to the north and south of Building 55 are current and historical components of the historic properties' setting. The low height and small footprint of the trailer will not infringe upon the monumentality of the hangars. The trailer will be of a similar scale relative to Building 55 and the non-historic buildings situated between the hangars.

Therefore, the Undertaking would not cause an adverse effect to the character of historic properties under this example.

v. Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features.

As described in the Identification of Historic Properties section of this report, the Undertaking's APE has been found to contain historic properties that could potentially experience indirect effects—such as the introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's historic features—as a result of the Undertaking.

Visual Effects:

The 2013 Historic Property Survey Report (HPSR) that identified the Expanded NAS Sunnyvale Historic District specified visual relationships that assisted in conveying significance of the airfield, of which MF1002 (Aircraft Parking Apron) and MF1016 (East Parallel Taxiway) are a part. The HPSR identified the “expansive, open view from the south end of the runways looking north toward San Francisco Bay”⁵ as the primary significant view from the airfield towards its setting. Building upon this point, the HPSR specifically analyzed the historic district's setting and recognized that other areas surrounding the airfield have experienced new development since the end of the identified period of significance, 1961, but that this surrounding non-historic development does not impinge on the historic district's ability to convey its historic significance. In discussing the historic district's setting, the HPSR states,

Still, the visual relationships—most importantly to Hangar 1, but also to the bay and salt ponds to the east and north, and to Shenandoah Plaza and other features of the NAS Sunnyvale Historic District to the west—remain similar to their historic appearance before 1961, and continue to define the site's setting as they have since the 1930s. Therefore, integrity of setting is retained.⁶

⁵ HPSR, p. 4-3.

⁶ Ibid., p. 5-3.

As such, the HPSR acknowledged that the expanded district's significance as a long-operating airfield was most dependent on internal spatial and visual relationships among the Shenandoah Plaza administrative campus, the large hangars anchoring the airfield, and the various runways and taxiways situated at the center of the airfield. Views towards the airfield's setting to the west, south, and east are far less important in conveying the district's grounds for historical and architectural significance.

As described previously, the proposed office trailer would be located between Hangars 2 and 3 at the east side of the airfield. According to the 2013 HPSR, much of the areas surrounding the airfield have undergone alterations with new construction, but have left the integral spaces of the airfield intact. The placement of the Undertaking will continue to preserve these airfield spaces, which include the flat, expansive surfaces of MF1002 (Aircraft Parking Apron) to the north and south of Hangars 2 and 3 and MF1016 (East Parallel Taxiway) to the west of Hangar 2 within the APE. Also, this placement between the monumental Hangars 2 and 3 will obscure the proposed LTA trailer from the most significant visual corridors associated with the Expanded NAS Sunnyvale Historic District's setting, including across the airfield from Hangar 1.

The visual connections from vantagepoints on MF1002 (Aircraft Parking Apron) north and south of Hangars 2 and 3 have the potential to be affected, although the modest height and size of the LTA trailer, coupled with other obstructing features, reduces this potential for effect.

The visual setting of Hangars 2 and 3 and Building 55 is largely defined by the vast, paved surfaces of east MF1002 and the adjacent MF1016 taxiway, as well as the paved space in between the hangars that is occupied by small support buildings and structures – all of which, aside from Building 55, are not historic. The trailer will reflect the pattern of support facilities between the hangars in scale and linear placement.

As such, the visual aspects of the Undertaking will have an effect on the setting of Hangars 2 and 3 and Building 55, but not to the extent that would diminish historic integrity.

Atmospheric Effects:

Under the conditions described for the Undertaking, an increase in atmospheric effects would be related only to installation and eventual removal. This would be temporary in nature and not have any long-term effects on the integrity of setting of any historic properties. As such, the Undertaking would not result in any adverse atmospheric effects that would affect the historic integrity of any historic properties.

Audible Effects:

Under the conditions described for the Undertaking, the only audible elements to be introduced will occur during the installation and removal phases of the project. These audible aspects will be temporary in nature and will have no lasting effect on the integrity of any of the identified historic properties. Therefore, the Undertaking would not cause any adverse audible effects to the historic integrity of any historic properties.

In summation, the Undertaking would not cause an adverse effect to historic properties under this example.

vi. Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization.

The Undertaking would not involve the neglect of historic properties that causes their deterioration. Therefore, the Undertaking would not cause an adverse effect to historic properties under this example.

vii. **Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.**

The Undertaking would not involve the transfer, lease, or sale of historic properties out of Federal ownership or control and therefore would not cause an adverse effect to historic properties under this example.

Summary of Finding of Effect Analysis

The analysis provided in this section demonstrates that the proposed Undertaking would have no adverse effect. Although historic properties were identified in the APE, all proposed work complies with the Secretary of the Interior's Standards for Rehabilitation, the other Section 800.5(a)(2) examples, and would not alter the character and integrity of said historic properties, nor their ability to convey historic significance. The Undertaking would not result in any change to the character of a historic property's use or of physical features within a historic property's setting that contribute to its historic significance. It would not introduce visual, atmospheric, or audible elements that would diminish the integrity of a historic property's significant historic features. For these reasons, Page & Turnbull concludes that the Undertaking would result in no adverse effects on historic properties, and recommends a finding of No Adverse Effect.

V. CONCLUSION

The Undertaking, involving the construction of a temporary office trailer, would not have the potential to alter, directly or indirectly, any of the characteristics that qualify a historic property for inclusion in the NRHP. After consideration of the criteria of adverse effect, pursuant to 36 CFR Part 800.5(b), this analysis concludes that the Undertaking will result in no adverse effects on historic properties. As such, Page & Turnbull recommends a finding of No Adverse Effect.

APPENDIX A: UNDERTAKING MAPS

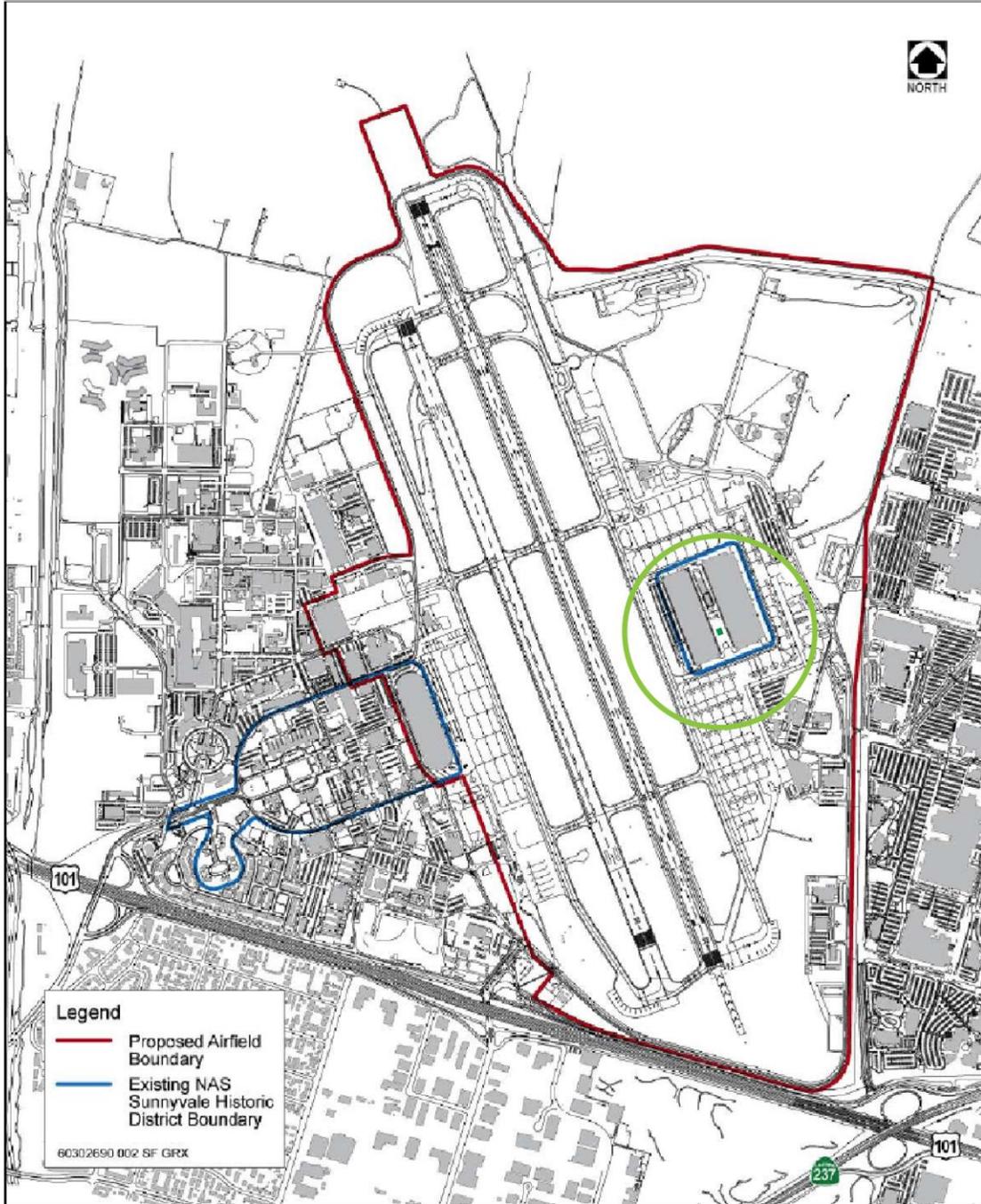
- A-1 Contextual Map of the Undertaking's Location
- A-2 Proximate Map of the Undertaking's Location
- A-3 Map of the Undertaking's Area of Direct Impacts (ADI), Area of Direct Impacts (ADI), and Identified Historic Properties (Historic District Boundaries)
- A-4 Map of the Undertaking's Area of Potential Effects (APE), Area of Direct Impacts (ADI), and Identified Historic Properties (Contributing Airfield Features)



Figure A-1: Contextual Map of the Undertaking's Location. Source: Google Earth, edited by Page & Turnbull, 2018.



Figure A-2. Proximate Map of the Undertaking's Location. Source: Google Earth, edited by Page & Turnbull, 2018.



Source: Data compiled by AECOM in 2013



Figure A-3. Map of the Undertaking's Area of Potential Effects (APE), Area of Direct Impacts (ADI), and Identified Historic Properties (Historic District Boundaries). Source: 2013 HPSR by AECOM, edited by Page & Turnbull, 2018.

APPENDIX B: PROPOSED PROJECT



Figure B-1. Photograph of a trailer that is currently located on the property east of Hangar 3. The LTA trailer will be nearly identical in type and size. Source: SARES | REGIS.



Figure B-2. The trailer will feature stairs to all doorways and a ramp and stair to the main entrance. Source: SARES | REGIS.

APPENDIX C: EXISTING CONDITIONS | SITE PHOTOGRAPHS



Figure C-1. Bird's eye view of Hangars 2 and 3 and the area between them, looking north. Source: Google Imagery, 2018.



Figure C-2. Area between Hangar 2 (left) and Hangar 3 (right). Looking northwest toward Hangar 2 and Building 780. Source: Page & Turnbull, June 2018.



Figure C-3. Area between Hangar 2 (left) and Hangar 3 (right) at open concrete paving which will be the future location of the LTA trailer. Looking north toward Building 780. Source: Page & Turnbull, June 2018.

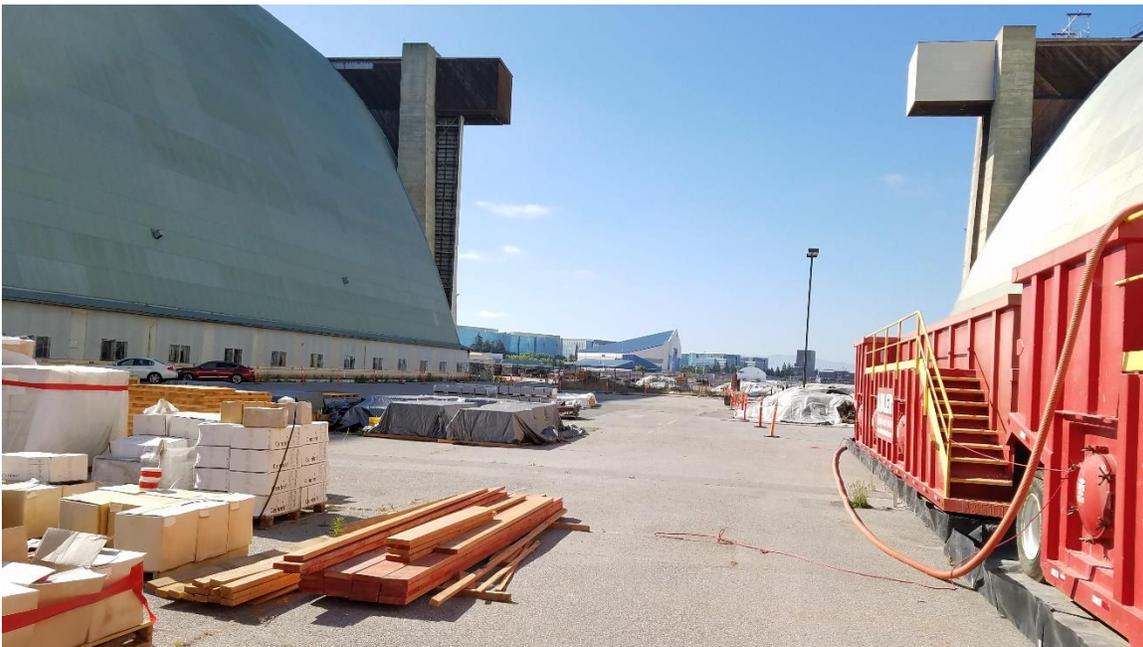


Figure C-4. Area between Hangar 2 (right) and Hangar 3 (left) at open concrete paving which will be the future location of the LTA trailer. Looking south toward the fire prevention reservoir (not visible as it is sunken). Source: Page & Turnbull, June 2018.



Figure C-5. Structure 440 (fire protection reservoir) at the south end of the area between Hangars 2 and 3, looking north. Source: Page & Turnbull, 2014.



Figure C-6. Building 780 (telephone remote switch) and Building 55 (boiler house) and the west side of Hangar 3, looking north. Source: Page & Turnbull, 2014.



Figure C-7. Building 55 (boiler house for Hangars 2 and 3) and the east side of Hangar 2, looking southwest. Source: Page & Turnbull, 2014.



Figure C-8. Structure 498 (covered HAZMAT storage area) at forefront and Structure 499 (ground support equipment shed shelter) at the back, toward the north end of the area between Hangars 2 and 3, looking northwest. Source: Page & Turnbull, 2014.



Figure C-9. Structure 499 (ground support equipment shed shelter) at the north end of the area between Hangars 2 and 3, looking northwest. Source: Page & Turnbull, 2014.

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