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Memorandum

To: Jonathan Ikan, Cultural Resources Manager, NASA Ames Research Center

CC: Kathy Kwon, AECOM

Subject: Supplemental Section 106 Review Memorandum – Building 20 Rehabilitation Project, NASA Ames Research Center, Moffett Field, Santa Clara County, California (OHP NASA_2022_0420_001)

From: Trina Meiser, Senior Architectural Historian
Tricia Forsi, Architectural Historian

Date: September 6, 2023

1. Introduction

The National Aeronautics and Space Administration (NASA) Ames Research Center (ARC) proposes the Building 20 Rehabilitation Project (project or undertaking) at ARC, Moffett Field, Santa Clara County, California (Appendix A, Figures 1 and 2). As the lead federal agency, NASA is responsible for compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (54 United States Code 300101 et seq.), which requires federal agencies to take into account the effects of their activities and programs on historic properties, and its implementing regulations in 36 Code of Federal Regulations (CFR) Part (§) 800.

In 2022, NASA ARC retained AECOM Technical Services, Inc. (AECOM) to conduct a technical study for the project. At that time, the project scope of work involved rehabilitating a vacant former dormitory for use as a mix of dormitory and office space. The project included abatement measures to remove asbestos insulation and tile and lead paint, including lead paint on windows. Alterations to Building 20 to prepare it for occupancy included primarily interior mechanical, electrical, security, control, and plumbing upgrades; renovated bathrooms; and privacy enhancements between dorm rooms. Limited exterior work included new or modified utility connections, mechanical and electrical equipment replacement, new Americans with Disabilities Act (ADA)-compliant ramps and entrances, and repair or limited in-kind replacement of windows. The majority of the work occurred inside Building 20, and exterior alterations were limited to window repair, repainting, or in-kind replacement, and the installation of ADA-compliant ramps and entrances at an existing entrance in the primary façade and a secondary, rear entrance. The project activities were anticipated to alter character-defining features of Building 20, including the roof, front terrace, exterior door, windows, ornamental light fixtures, lobby, dining room, and flooring. NASA ARC initiated Section 106 consultation, determined that the project would adhere to the Secretary of the Interior's Standards for Rehabilitation, and made a Finding of No Adverse Effect. The SHPO concurred with that finding in a letter dated June 3, 2022 (OHP Reference NASA_2022_0420_001).

In 2023, NASA ARC revised the project to include the installation of exterior and interior security cameras, exterior and interior card readers, and two condensers in the courtyard between the south and west wings at the rear of the building. The purpose of this supplemental memorandum is to provide necessary information for continuing compliance with Section 106, including a description of the revised undertaking and supplemental assessment of potential effects resulting from the revised undertaking.

1.1 Project Location

Building 20 is located along South Akron Road on Shenandoah Plaza and is a contributor to the U.S. Naval Air Station (NAS) Sunnyvale Historic District (also known locally as the Shenandoah Plaza Historic District), which was listed in the National Register of Historic Places (NRHP) in 1994 (NRHP #94000045). Building 20 was built in 1933 as the Bachelor Officers Quarters, and most recently housed educational programs for Singularity University. The building is within the NASA Ames Research Park, which is an area of ARC designated as a

shared-use research and development and education campus for industry, academia, non-profits, and government. Several public and private entities lease offices and facilities in the research park.

1.2 Project Personnel

This study was conducted by cultural resources professionals who meet the Secretary of the Interior's Professional Qualifications Standards (36 CFR 61 Appendix A; 48 Federal Register 44738). Trina Meiser, M.A., Senior Architectural Historian, served as the Principal Investigator; Tricia Forsi, M.A., contributed to this supplemental memorandum; Jacqueline Mandler provided maps; and Kirsten Johnson, M.A., served as the lead verifier of this document.

2. Description of the Undertaking

The revised project scope of work involves the installation of [redacted] security [redacted] card readers at [redacted] entries [redacted] and two condensers in the courtyard between the south and west wings at the rear of the building.

Two exterior security cameras would be installed at the façade and oriented towards the front door (Plates 1 and [redacted]

[redacted]

Two condensers would be installed at the rear of building in the courtyard between the south and west wings within 5' of the perimeter of the building (Plate 4). Each condenser unit will be 71-5/8" tall, 68-15/16" across, and 29-3/16" deep. Two existing condenser units already located along this wall will be removed.

Floor plans showing location of security devices are provided in Appendix B.

The following content was redacted from this public posting:

Plates 1 and 2 showing exterior building views

Plate 3. Limestone surrounds at main entrance.

Plate 4. Building 20, rear courtyard between west and south wing, view facing northeast. Red arrow indicates approximate proposed location of new condenser units.

3. Area of Potential Effects

The project APE was not altered as a result of the additional project scope of work and is the same as described in the 2022 memo (Appendix A; Figure 3).

4. Description of Building 20

Building 20 is a two-story Spanish Colonial Revival-style building with full attic and partial basement that faces northwest towards Shenandoah Plaza. The building has a T-shape plan featuring a symmetrical façade with a perpendicular wing on each end and a one-story perpendicular wing extending from the center of the rear of the main axis. The cross-gabled Spanish tile roof has shallow eaves and cement plaster clad flues capped with tile and vented by ornamental grille work, and sections of built-up roofing. Exterior details include integrally colored cement plaster wall surfaces and a projecting string course between the first and second floors. Entrances have

ornamental limestone surrounds, porches, and terraces at the primary, secondary and rear entrances, and six over six steel sash windows. The façade features a formal entrance with a wide concrete patio with shallow steps and balustrades leading to three arched openings with ornamental doors and light fixtures. Prior alterations to the building include the enclosure of two terraces on both sides of the south wing and infill of original window openings; the addition of fire escape stairs at the rear elevations of east and west wings; a roof enclosure in the southeast courtyard; and a single-story walk-in refrigerator addition at the south elevation of the rear wing (ARG 2000).

In 2000, Building 20 was documented in the *Building 20 Re-Use Guidelines* that assessed the building's condition and inventoried its features. Although the 1994 NAS Sunnyvale Historic District NRHP nomination stated that none of the buildings in the district had significant interior spaces, the 2000 reuse guidelines identified intact and significant spaces within the building. The reuse guidelines categorized features as significant, contributing, tertiary, and non-contributing (ARG 2000). The following list of the character-defining features incorporates the significant features identified in the 2000 reuse guidelines.

Exterior

- Roof – tile, rake, gabled form, gutters and roof leaders, collection boxes, and attic window vents.
- Flues and vents at roofline, caps, and grilles.
- Cladding, integrally colored stucco, banding course, base, and foundation vents.
- Limestone surrounds at windows and entrances.
- Arched entrances and ornamental door surrounds.
- Terrace and porches – steps, scored concrete, urns, cheek walls.
- Windows – six over six double-hung metal sash with projecting sills and second floor window railings.
- Exterior wood doors, transoms, copper alloy hardware.
- Ornamental light fixtures.

Interior

- Lobby – arched openings, doors, columns and ceiling beams, fireplace surround, wood partition, ornamental light fixtures.
- Dining room – ceiling and beams and ornamental light fixtures.
- Central corridor axis – volume of space.
- Flooring – terrazzo flooring and base, terrazzo border and base with resilient field tile (checked pattern).
- Tile drinking fountain surrounds.
- Stairs – ornamental rails, balusters, newel posts, glazed tile, and tile flooring.

5. Assessment of Effects

Per 36 CFR Part 800.5(a)(1), an adverse effect results when an undertaking may alter, either directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the historic property's integrity. The following assessment examines the additional project work for this undertaking for compliance with the Standards.

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 addition of security cameras, card readers, and condenser units would not alter the distinctive materials, features, spaces, or spatial relationships of Building 20. The installation of the security devices and the condenser units would minimally impact the distinctive exterior stucco where security cameras and card readers would be installed, the limestone surrounds at the main entrance, and configuration of the interior and exterior spaces.

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 addition of security cameras, card readers, and condenser units would not alter the historic character of Building 20. The installation of the security devices and the condenser units would minimally impact the character-defining exterior stucco, limestone surrounds at the main entrance, and significant interior spaces.

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.*

   No conjectural features would be added to Building 20 as part of the project revision.

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

   No alterations to Building 20 appear to have acquired significance in their own right. None of the non-original features of Building 20, including the south wing patio enclosures and walk-in refrigerator addition, exterior metal stairs and doors, or rear corrugated patio roof shed addition, have acquired significance that would require preservation.

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

   None of the distinctive Spanish Colonial Revival materials, features, or finishes on the building exterior would be removed or replaced as part of the project revision. [redacted]

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 project does not propose any work on deteriorated historic features. The security cameras, card readers, and condenser units are new features that would be distinctive from historic features. The condenser units would replace existing, non-historic condenser units.

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 project does not propose any chemical treatments. [redacted]

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

   The project does not propose any ground disturbance. A review of the 2017 archaeological baseline investigation indicates that the proposed work is in an area of low archaeological sensitivity (Appendix A, Figure 4) and was not identified as sensitive for either prehistoric or historic-period resources. However, in the event of discovery of unknown subsurface archaeological resources, NASA would follow its standard operating procedures for unanticipated discoveries as outlined in the 2014 Draft Integrated Cultural Resources Management Plan (AECOM 2014), which would halt work in the vicinity of the discovery and engage a qualified archaeologist to evaluate the discovery and determine the need for mitigation and consultation with the SHPO.

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.*

   The project does not propose any new additions or related new construction. The security cameras and card readers would be differentiated from historic materials.

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.*

    The addition of security cameras, card readers, and condenser units would not alter the essential form and integrity of the historic property or its environment and the removal of these additions would be reversible with minor repairs or patching of historic materials. The installation of the security devices and the condenser units would minimally impact the distinctive exterior stucco, limestone surrounds at the main entrance, and configuration of the interior and exterior spaces.

In summary, the additional project work meets the Standards for Rehabilitation. The addition of security cameras, card readers, and condenser units would not alter Building 20's historic character, character-defining features or materials, or its ability to convey its historic significance; it will not diminish its integrity.

6. Summary of Findings

Based on this analysis, the additional scope of work for the project would conform to the Standards for Rehabilitation and would not diminish the integrity of Building 20. No other contributors to the NAS Sunnyvale Historic District within the APE would be physically impacted by this project. The proposed undertaking would not alter, directly or indirectly, any of the exterior Spanish Colonial Revival characteristics of Building 20 or the NAS Sunnyvale Historic District that qualify it for inclusion in the NRHP. Therefore, the proposed undertaking would result in No Adverse Effect on historic properties per 36 CFR § 800.5(b).

7. References

AECOM, 2014. *Draft Integrated Cultural Resources Management Plan*. On file at ARC.

ARG (Architectural Resources Group, Inc.), 2000. *U.S. Naval Air Station Moffett Field, Building 20 Re-Use Guidelines*. On file at NASA ARC.

National Register of Historic Places (NRHP), 1994. U.S. Naval Air Station Sunnyvale, California, Moffett Field, Santa Clara County, California, NRHP # 94000045.

Appendices

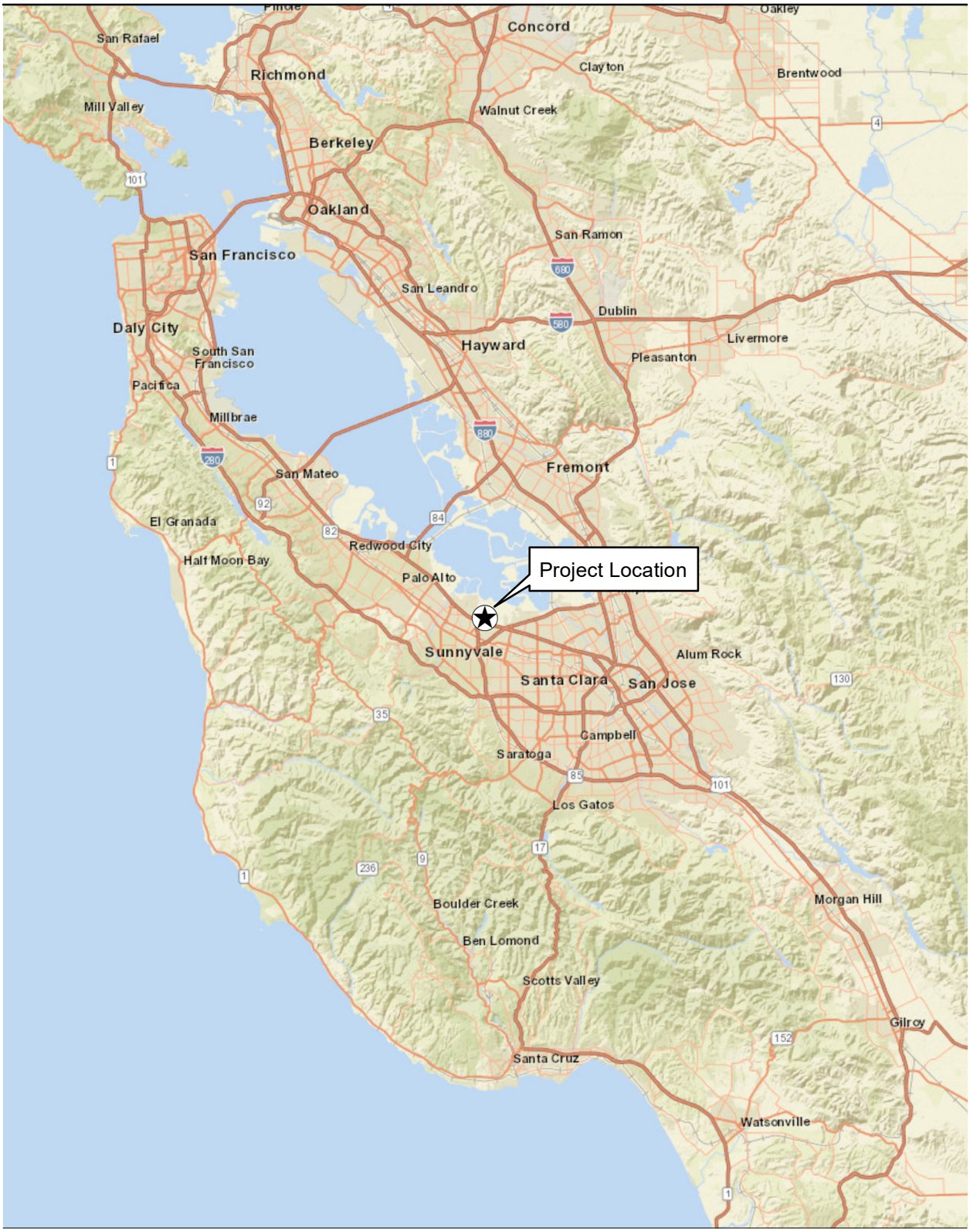
Appendix A: Figures

Appendix B: Level 1 Floor Plan with Security Camera and Card Reader Locations

Appendix A

Figures

Figure 1 – Project Location
Figure 2 – Project Site
Figure 3 – APE Map
Figure 4 – Archaeological Sensitivity Map



Source: ESRI, AECOM, NASA

0 5 10 20 Miles

Scale: 1 = 633,600; 1 inch = 10 mile(s)

Figure 1
Project Location

Building 20 Rehabilitation Project

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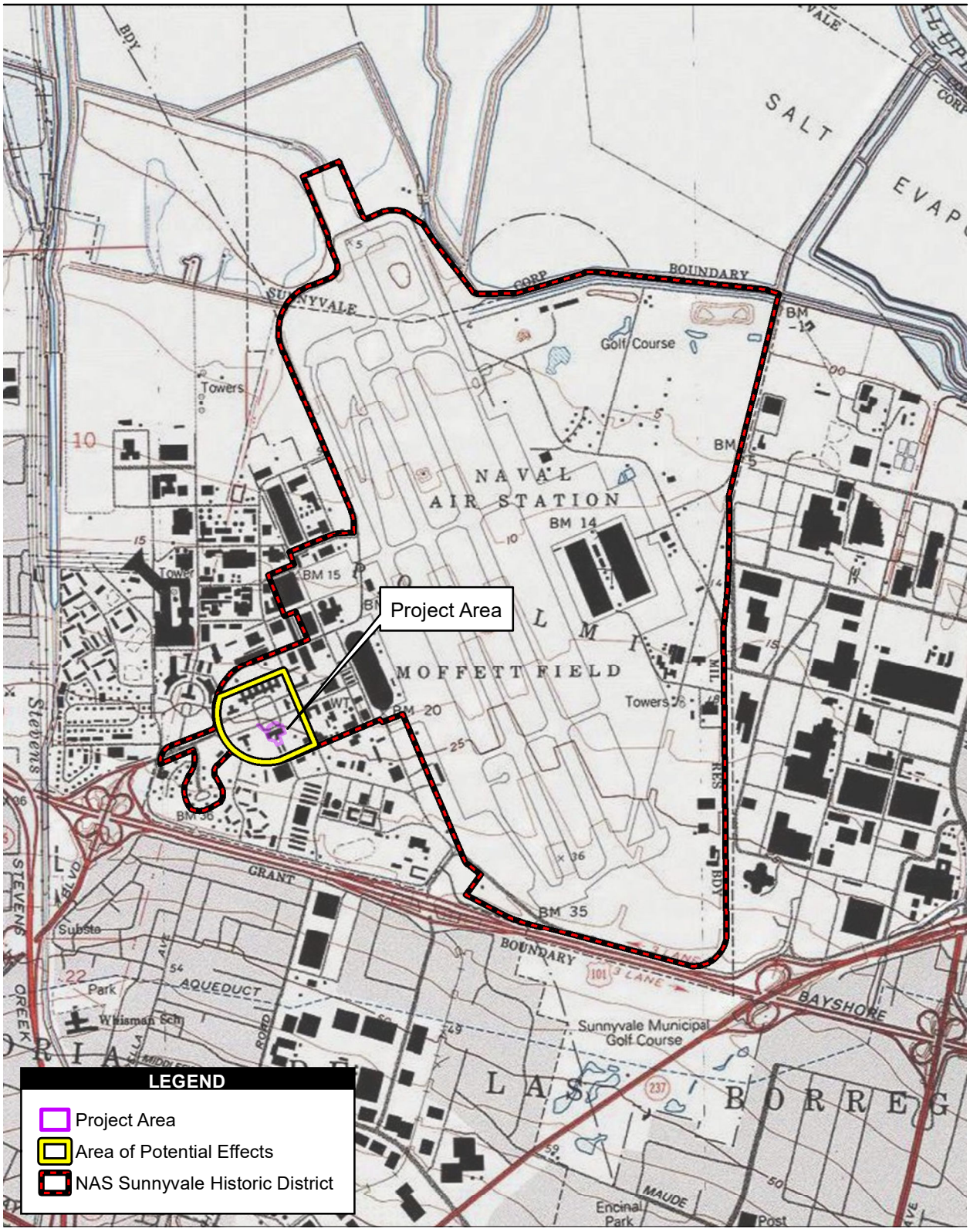

Source: ESRI, AECOM, NASA, National Geographic Society; USGS 7.5' Topographic Quadrangle: Mountain View

0 1,000 2,000 4,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Figure 2
Project Site

Building 20 Rehabilitation Project

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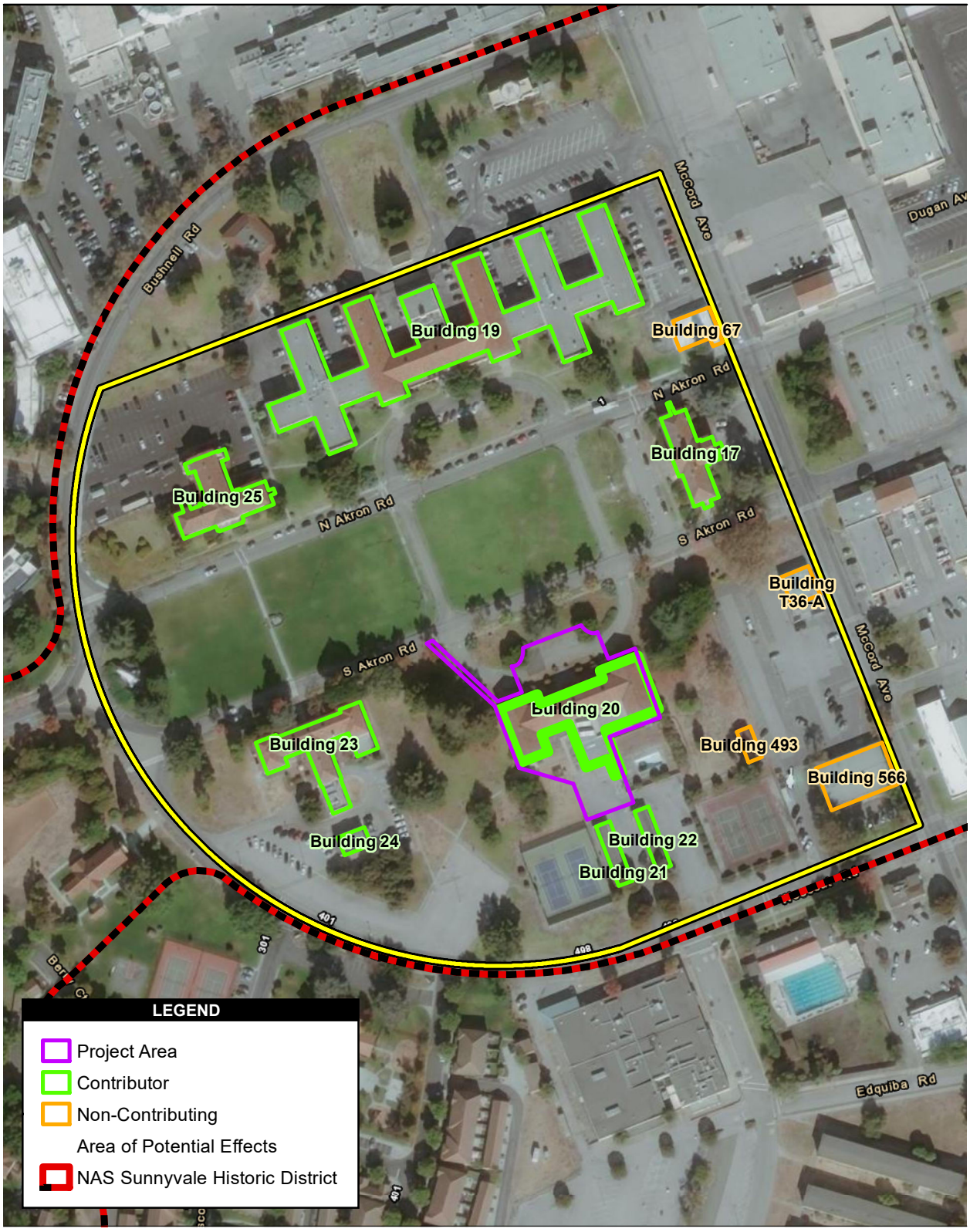

Source: ESRI, AECOM, NASA

0 100 200 400 Feet

Scale: 1 = 2400; 1 inch = 200 feet

Figure 3
APE Map

Building 20 Rehabilitation Project

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The following content was redacted from this public posting:

Figure 4. Archaeological Sensitivity Map

Appendix B. Select Project Plans