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NASA Ames Research Center
Moffett Field, CA 94035-1000
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Memorandum

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

CC: Kathy Kwon, AECOM

Subject: Continuing Section 106 Consultation on Building 19 First Floor Renovation, NASA Ames Research Center, Moffett Field, Santa Clara County, California (OHP NASA_2022_0923_001)

From: Trina Meiser, Senior Architectural Historian

Heather Miller, Architectural Historian

Date: August 1, 2023

1. Introduction

The National Aeronautics and Space Administration (NASA) Ames Research Center (ARC) proposes the Building 19 First Floor Renovation Project (project or undertaking) at ARC, Moffett Field, Santa Clara County, California. 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 project in support of its responsibilities under Section 106. At that time, the project scope of work involved the remodeling of interior first-floor office spaces for use by the United States Geological Survey (USGS) to increase existing office spaces from 88 offices, three conference rooms, and a training room to approximately 190 enclosed offices and semi-enclosed work pods, seven conference rooms, and three open space areas. Alterations on the interior of Building 19 included:

- partial demolition of existing office-related rooms;
- removal and replacement of bathrooms, mechanical and electrical systems, and plumbing;
- construction of new walls and partitions;
- security upgrades; and
- abatement of hazardous materials, including asbestos insulation.

The project also involved limited exterior work including new ramps and accessibility features at two entrances for compliance with the Americans with Disabilities Act (ADA), a storage-transfer lift, security card readers at exterior door entrances on the first floor, the addition of USGS program antennae, and other mechanical equipment, which required modification of two sash windows on the rear elevations of the building for mechanical ventilation.

AECOM assessed effects of the proposed project in 2022 and determined that although the project would alter character-defining features of Building 19, including the cement plaster surface of the exterior walls, double-hung metal sash windows, metal glazed exterior doors, lighting fixtures, and the arcaded loggia at the façade, the project would adhere to the Secretary of the Interior's Standards for Rehabilitation. Therefore, NASA ARC made a Finding of No Adverse Effect, and the SHPO concurred with that finding in a letter dated October 31, 2022 (OHP Reference NASA_2022_0923_001).

In April 2023, NASA ARC revised the project to include the infill of an additional exterior window and re-installation of the glass in the transom above the exterior entry door of Conference Room 1218. The purpose of

this supplemental memorandum is to provide necessary information for compliance with Section 106, including an assessment of potential effects resulting from the revised undertaking.

1.1 Project Location

Building 19 is on North Akron Road, north of Shenandoah Plaza within the NASA Ames Research Park at ARC, Moffett Field, Santa Clara County, California (see Attachment A; Figures 1 and 2). The NASA Ames Research Park 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. Building 19 is also within the U.S. Naval Air Station (NAS) Sunnyvale Historic District (known locally as the Shenandoah Plaza Historic District), which was listed in the National Register of Historic Places (NRHP) in 1994 (NRHP #94000045) (see Attachment A; Figure 2). Built in 1933 as part of the original NAS Sunnyvale campus plan, Building 19 is listed in the NRHP as a contributor to the district.

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; Heather Miller, M.A., contributed to this supplemental memorandum; Rob'yn Johnston, M.A., provided map figures; 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 removal and infill of an exterior window with reinforced concrete and re-installation of glass in the transom above the exterior entry door at Conference Room 1218 (see Attachment B for Project Drawing and Exhibit).

The exterior window would be removed and infilled with reinforced concrete to matching the thickness of the existing wall, and reinforced with #5 rebar, spaced 12" on center on both the top and bottom faces, and oriented in both the longitudinal and transverse directions (to be confirmed by analysis). The existing window framing and sills would be removed prior to placing the infill, which would be doweled into the existing wall, with the size and spacing of dowels matching the new reinforcement. Matching cement plaster would be applied to the reinforced concrete within the infilled window and painted to match the exterior wall. The infilled wall in the interior of Conference Room 1218 would be covered with matching drywall and painted to match the interior wall.

The existing transom above the exterior entry door at Conference Room 1218 is currently infilled with plywood and an external air conditioning (AC) unit. The AC unit and plywood would be removed, and new glazing would be installed in the transom.

3. Area of Potential Effects

The APE for the revised project is the same as the previous project (see Attachment A; Figure 3).

4. Affected Historic Property

Building 19 is a two-story building with a south-facing façade, complex plan, frame construction, stucco siding, and a central low-pitched Spanish tile gabled roof (**Photograph 1**). The original portion of the building was constructed in 1933 and has a E-shaped plan with a primary gabled roof system covered in Spanish tile and Spanish Colonial Revival-style features, such as a prominent arcaded loggia in the first story of the façade (south elevation) and elaborate, molded ornaments at the main entrances. A one- and two-story, flat-roofed section was constructed at the rear of the building in 1933 as part of the original design, between the two gabled roof wings.

The arcaded loggia on the façade is flanked by two shallow, two-story, gable-roofed projections accessed by exterior concrete stairs and metal railings on the façade (south elevation) (**Photographs 2-4**). Secondary

entrances into the first floor of the gable-roofed projections are on secondary elevations and covered by the arcaded loggia. The secondary entry into the eastern projection provides access to Conference Room 1218, the subject of this project revision (**Photograph 5**). This entry consists of a multi-light, wood frame door with a transom infilled with an air conditioning unit and plywood. North of the door is a multi-light, wood-framed window.

Photograph 1. Building 19 façade (south elevation), view facing north. The red tile roof section is the original 1933-constructed building and Conference Room 1218 is located behind the stop sign.

Photograph 2. Building 19 façade (south elevation) showing arcaded loggia in the first story between the two shallow gable roof projections. Western projection in foreground on left and eastern projection obscured by tree in background at center-right, view facing northeast.

Photograph 3. Building 19 façade (south elevation) showing arcaded loggia in the story between the two shallow gable roof projections. Eastern projection in foreground on right and western projection obscured by tree in background at center-left, view facing northwest.

Photograph 4. Building 19 façade (south elevation) showing arcaded loggia in the first story, with eastern projection on far right, view facing northeast.

Substantial International-style wings were added to the east and west ends of the building in 1952, more than doubling the building's footprint. The façade of the original building was extended with perpendicular wings on either side (**Photograph 6**; **see Photograph 1**). The two-story wings have flat roofs with low parapets, stucco exterior walls, and symmetrical rows of fenestration containing metal double-hung sash windows in each story. The building was originally constructed as Bachelor Enlisted Quarters, but the interior has been highly modified and is currently used for offices. The west wing contains the NASA Exchange Lodge hotel.

Photograph 5. Building 19 façade (south elevation) showing Conference Room 1218 at east end of arcaded loggia in the first story (far right) inside the eastern projection, view facing east.

Photograph 6. Building 19 rear, north elevation, 1952-constructed eastern wing additions in foreground, view facing west. The red tile roof sections are part of the original 1933 building.

In 2017, NASA ARC consulted with the SHPO for a separate undertaking that involved partial rehabilitation of Building 19 for USGS offices on the second floor. Under that consultation, the interior was considered non-contributing to the significance of the building, but the wings added to the building in 1952 were considered contributing features, despite the listed periods of significance for Building 19 (1930-1935 and 1942-1946). Because the interior was considered non-contributing, the partial rehabilitation was determined to have no adverse effect on historic properties. SHPO concurred with the Finding of No Adverse Effect in a letter dated June 5, 2017 (OHP Reference NASA_2017_0508_001). The current project area was not included in that undertaking.

Although the 1994 NAS Sunnyvale Historic District nomination specifically stated that none of the interiors retained architectural integrity or historic significance due to alterations over time, reuse guidelines prepared for

Building 19 in 2007 identified, in addition to exterior character-defining features, extant interior features that were significant, contributing, tertiary, or non-contributing.[1] The 2007 reuse guidelines stated, "the interior has undergone an extensive series of alterations resulting in the elimination of many character-defining features. At various times, alterations were made to the offices, restrooms, and hallways located in all wings. Further alterations were made to the interior materials and fixtures including the replacement of floor and ceiling materials, light fixtures, and the addition of partition walls. These alterations were made as upgrades but have resulted in the elimination of interior character-defining features" (ARG 2007:8).

The 2007 reuse guidelines (ARG 2007) identified the following list of the character-defining features of Building 19, including some interior features.

Significant Character-Defining Features

- Stepped water table base course.
- Cement plaster surface.
- Ornamental band – continuous throughout the façade at second floor windowsill.
- Double-hung metal sash windows with screens.
- Metal door, 3-lite and single-lite transoms, and frames.
- Clay tile roofing.
- Copper half-round gutters.
- Roof ventilators with copper ornamental grilles at roof ridge (original building).
- Lighting fixtures above exit doors.
- Metal double doors with 4-lite glazing, 5-lite transoms, and frames.
- Spanish Colonial Revival arched portal-limestone surround with Baroque ornamentation (original building).
- Arcaded loggia with impost molding.
- Window-size openings with wrought iron ornamental grills at two ends of arcade.
- Interior finishes, fixtures and furnishings including:
    - flooring/red ceramic tile,
    - double doors with 5-lite transoms,
    - single door with 3-lite transoms,
    - windows and frames,
    - stairs and railings (original posts and railings in the first phase are significant), and
    - marble thresholds and marble toilet room finishes.

ARG also defined *Contributing Features* as "important elements that contribute to the understanding of the original design. Alteration or removal of these features may be necessary for programmatic or building system requirements. However, removal should be minimized and where necessary mitigated" (ARG 2007:10).

Contributing Features

- Interior configuration.
- Metal door, metal transom, and frame at north elevation.
- Metal doors with glazing at north elevation.
- Collection boxes.
- Stepped parapet.
- Metal door with glazing and metal transom at south elevation.
- Metal door and glazing with 3-lite transom and frame at west elevation.
- Lighting fixtures – globe style fixtures, wall mounted or pendant.

[1] See *Building 19 Reuse Guidelines, NASA Ames Research Center, California* prepared by ARG and accessible at https://historicproperties.arc.nasa.gov/map_reuse/reuse_forms/19_reuse.pdf).

5. Assessment of Effects

The Criteria of Adverse Effect pursuant to 36 CFR 800.5(a)(1) are applied to assess effects of the undertaking on historic properties within the APE:

> 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 NRHP 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 NRHP. 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.

Several examples of adverse effects are listed in 36 CFR 800.5(a)(2). The following assessment examines the undertaking under each of those examples, including an analysis of compliance with the Standards for Rehabilitation.

(i) Physical destruction of or damage to all or part of the property

The project would remove and infill one exterior, double-hung, metal sash window with a screen, and remove existing infill within the transom above the exterior entry door at Conference Room 1218 and replace it with glass (see Attachment B for Project Drawing and Exhibit). The 2007 reuse guidelines identify double-hung, metal sash windows with screens were identified as significant character-defining features of Building 19, and metal doors with glazing and metal transoms on the south elevation as contributing features. However, Building 19 and the other contributing buildings to Shenandoah Plaza Historic District were listed in the NRHP for their collective Spanish Colonial Revival design, and the proposed exterior changes would not compromise the exterior Spanish Colonial Revival architectural features and details for which Building 19 is listed. No other historic properties in the APE would be physically impacted by this project.

(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 part 68) and applicable guidelines

With the SHPO's agreement, if a property is restored, rehabilitated, repaired, maintained, stabilized, remediated, or otherwise changed in accordance with the Standards, then it would not be considered an adverse effect. The following is an assessment of the undertaking for compliance with the Standards for Rehabilitation and guidelines (NPS 2017).

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.*

   Building 19 was historically used as a Bachelor Enlisted Quarters but has been used as an office building and lodging for at least 16 years. The intent of the Building 19 First Floor Renovation Project is to expand employee work capacity for USGS employees. Proposed exterior project work of the revised project would affect one window and the transom above one door. These minimal changes would not compromise the exterior Spanish Colonial Revival-style character-defining features for which the district, and in turn Building 19, is listed in the NRHP; therefore, the project revision meets this 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 project improvements would minimally change the distinctive materials, features, and configuration of the exterior of Building 19. Character-defining and contributing features of the building that would be affected are discussed below.

   <u>*Double hung metal sash windows with screens*</u> – The project would demolish the double hung metal sash window immediately north of the exterior entry door into Conference Room 1218 on the façade (south) and the opening would be infilled with reinforced concrete (Photographs 7 and 8). The removal of one of the more than 200 windows in the building would not substantially change the character of the historic windows throughout the building.

Photograph 7. Conference Room 1218 window and entrance at east end of arcaded loggia in the first story (far right) inside the eastern projection, view facing east.

Photograph 8. Detail of typical six-over-six metal sash window with screen.

Metal door with glazing and metal transom at south elevation – The revised project would re-install glass in the transom above the exterior entry door into Conference Room 1218, which currently lacks glazing and is infilled with plywood and an external AC unit (Photograph 7). Re-installation of glass in the transom would return the exterior entry to the original configuration and appearance.

Overall, the distinctive materials, features, and configuration that contribute to Building 19's eligibility would be retained. Therefore, the project revision meets this 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.*

   No conjectural features would be added to Building 19 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.*

   The wings constructed in1952 are considered contributing features, but there are no proposed changes to these building elements as part of the project revision.

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.

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 revision does not propose any work on deteriorated historic features. Glass would be re-installed in the transom, which is currently infilled with plywood and an AC unit.

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 revision does not propose any chemical treatments.

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

   The project revision does not propose any ground disturbance. There are no known archaeological resources within the project footprint, 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 revision does not propose any new additions or related new construction. As described under Standard 2, matching cement plaster finish and matching paint would be applied to the infilled area of the window on the building exterior and would not significantly alter the features, spaces, and/or spatial relationships that characterize the building.

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 project revision does not propose any new additions and adjacent or related new construction.

In summary, the revised Building 19 First Floor Renovation Project meets the Standards for Rehabilitation because the no new additions or related new construction is proposed, re-installation of glass in the transom would return the exterior entry to the original configuration and appearance, and the removal of one window would not compromise the exterior Spanish Colonial Revival-style character-defining features for which the district, and in turn Building 19, is listed in the NRHP.

(iii) Removal of the property from its historic location

No historic properties within the APE would be relocated as part of this project revision.

(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

Building 19 would continue to be used as an office and guest lodging. The setting of Building 19, as well as the setting of all historic properties within the APE, would remain the same.

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

No visual, atmospheric, or audible elements would be introduced by this project revision.

(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

This standard is not applicable.

(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

This standard is not applicable.

6. Summary of Findings

The proposed undertaking would not alter, directly or indirectly, any of the exterior Spanish Colonial Revival characteristics of Building 19 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.), 2007. *U.S. Naval Air Station Moffett Field, Building 19 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.

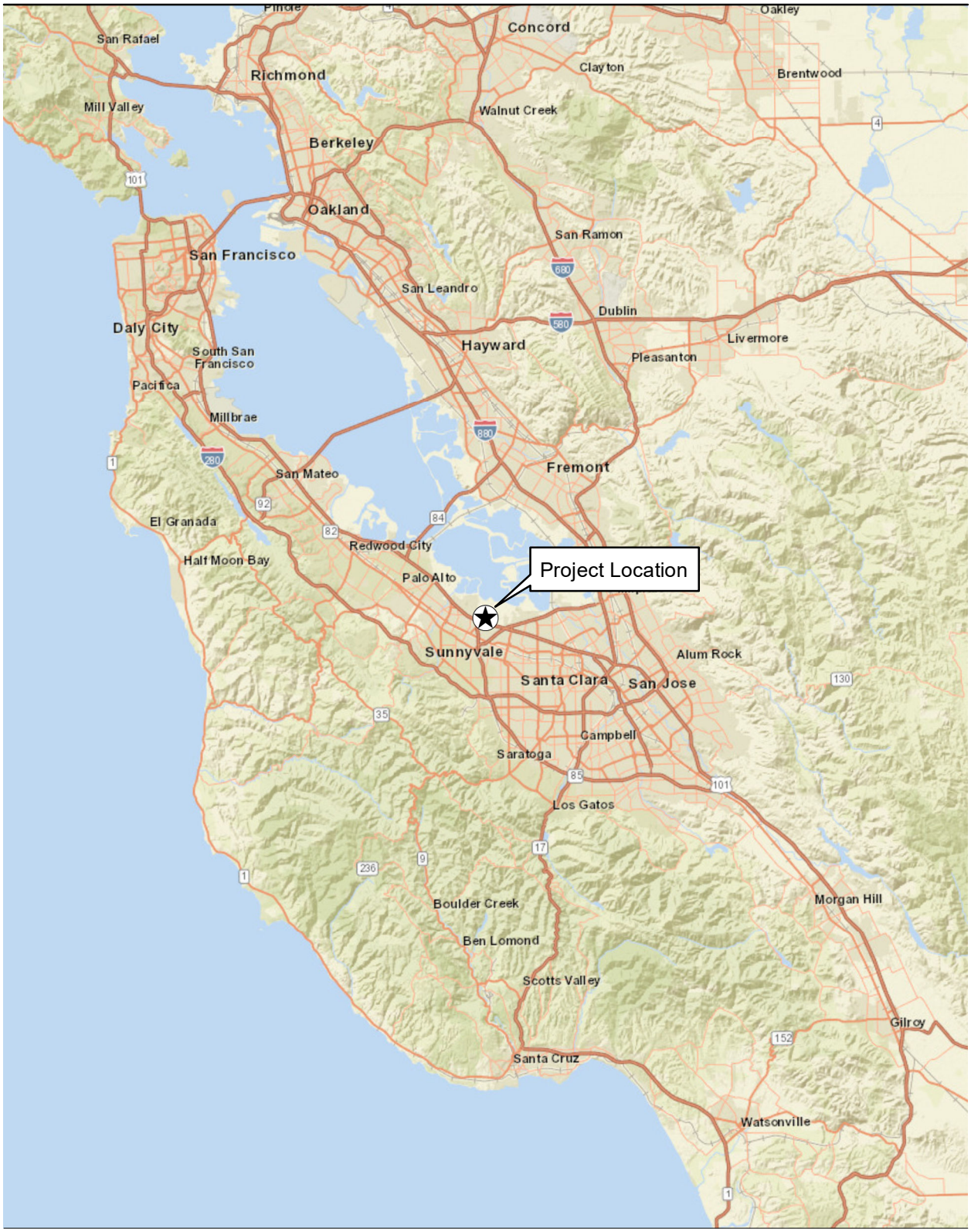
Attachments

Attachment A: Figures

Attachment B: Project Drawing and Exhibit

Attachment A

Figures



Source: ESRI, AECOM, NASA

0 5 10 20 Miles

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

Figure 1
Project Location

Building 19 First Floor Renovation Project

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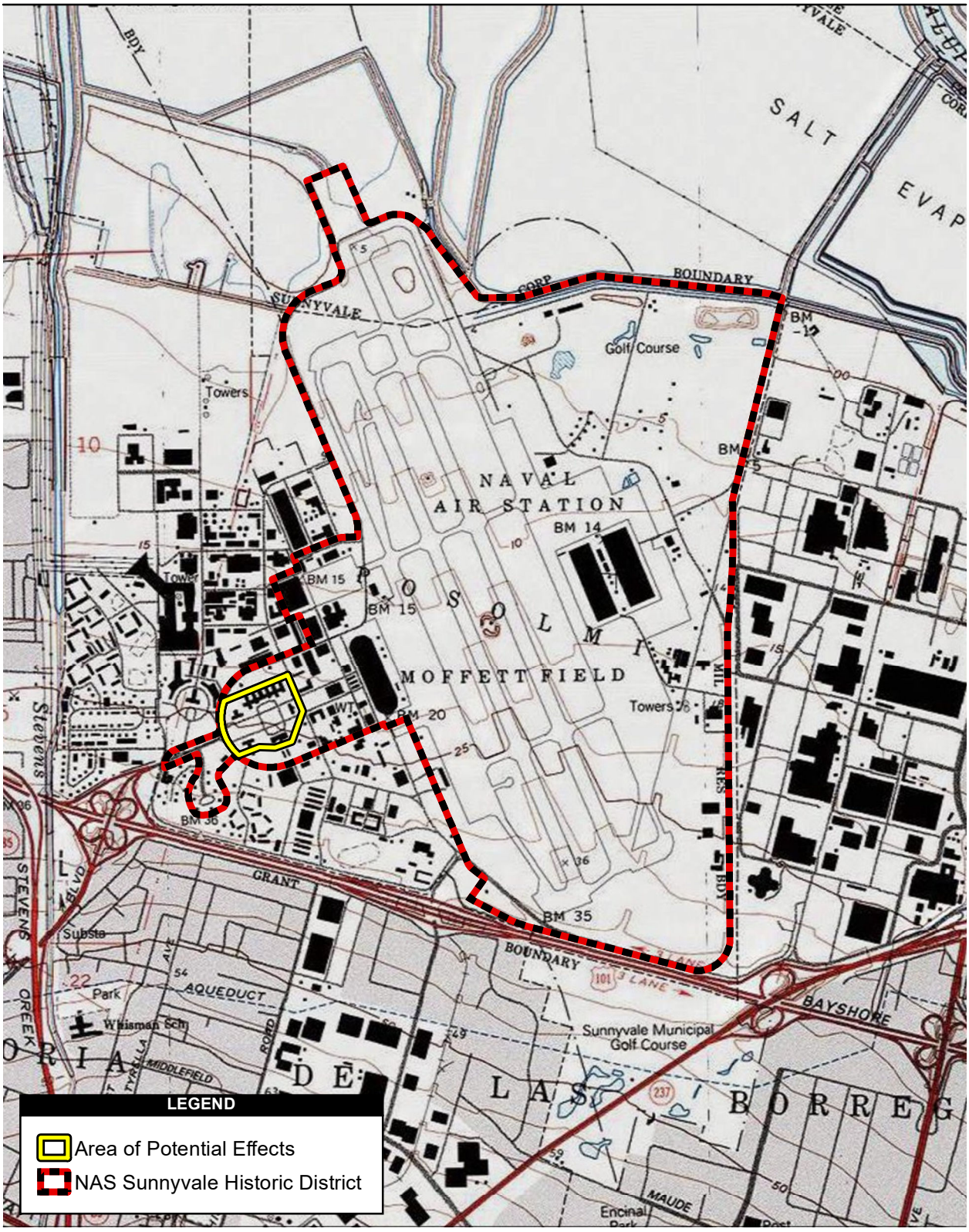

Source: ESRI, AECOM, NASA, National Geographic Society; USGS 7.5' Topographic Quadrangle: Mountain View

0 1,000 2,000 4,000 Feet

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

Figure 2
Project Vicinity Map

Building 19 First Floor Renovation Project

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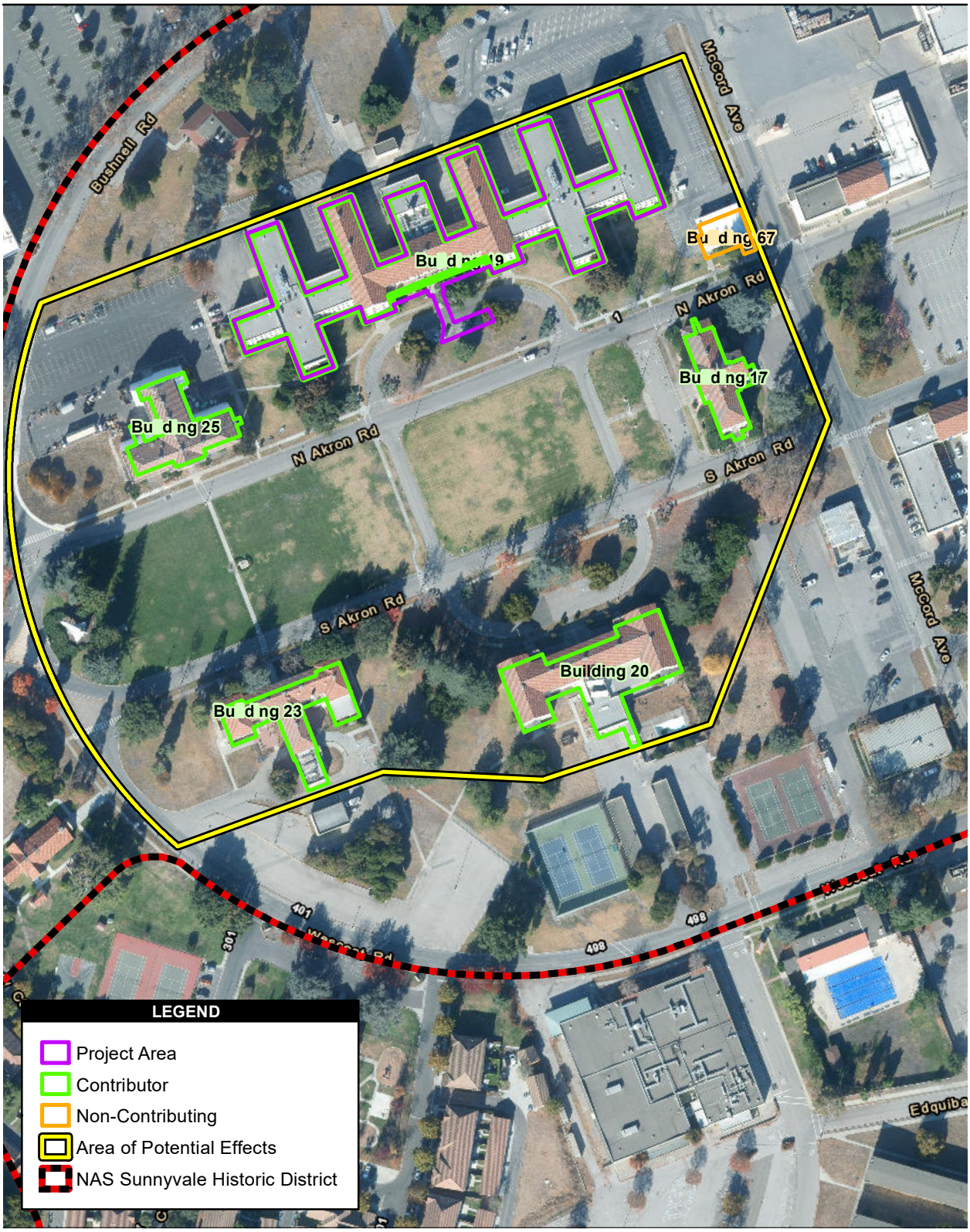

Source: ESRI, AECOM, NASA

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Scale: 1 = 2400; 1 inch = 200 feet

Figure 3
APE Map

Building 19 First Floor Renovation Project

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Attachment B

Project Drawing and Exhibit

The following content was redacted from this public posting:

The project drawing in Attachment B: Project Drawing and Exhibit


INFILL EXISTING WINDOW AT CONF. ROOM 1218 WITH REINFORCED CONCRETE, MATCHING THE THICKNESS OF THE EXISTING WALL.
GLAZING TO BE INSTALLED AT TRANSOM AFTER REMOVAL OF AC UNIT.