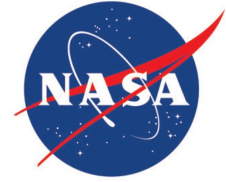


National Aeronautics and Space Administration

Ames Research Center
Moffett Field, CA 94035-1000



June 27, 2025

Ms. Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
Department of Parks & Recreation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Attn: Mr. Mark A. Beason

Subject: Section 106 Consultation for the Building N-211 New Composite Oven Process
Equipment Infrastructure Project – Finding of No Adverse Effect

Dear Ms. Polanco:

The National Aeronautics and Space Administration (NASA) Ames Research Center (ARC) requests consultation under Section 106 of the National Historic Preservation Act of 1966 (54 United States Code §306108), as amended, for the Building N-211 New Composite Oven Process Equipment Infrastructure Project (project or undertaking) at the ARC at Moffett Field, Santa Clara County, California (Attachment A, Figures 1 and 2). NASA ARC has determined that this project constitutes an undertaking under Section 106. This letter includes descriptions of the undertaking, the Area of Potential Effects (APE), the affected historic properties, and the finding of effect for your review. Please see enclosed Attachment A – Figures, Attachment B – Select Architectural Drawings, and Attachment C – Photographs for additional exhibits.

Description of the Undertaking

The project proposes to install new composite oven process equipment in Building N-211, which is a hangar/shop building located on King Road and the airfield apron on the Ames Campus. The project will require some building modification and additional equipment to be installed inside and outside the building.

Interior work will include installation of the oven system and support infrastructure, which will require anchoring to the floor (up to ¾" holes) (Attachment B, Remodel Plan). A free-standing enclosure and fencing will surround the oven equipment. Other equipment and furniture will include typical shop tools and large pallet racks for storage. An emergency eye wash and shower station, and ductwork and electrical box support structures will be installed adjacent to the oven enclosure. New piping and ductwork connected to the oven enclosure will continue outside the building through two existing window openings in the first story to new exterior exhaust stack

and compressed air equipment.

Exterior work will include installation of the exhaust stack with an exhaust fan and other equipment along the north wall of the building (Attachment B, Elevations). Two window sections will be modified to accommodate the 26" duct and other conduits. The exhaust ductwork will exit the window opening, extend east to the northeast, then dip down to the base of a vertical stack on a support structure with an exhaust blower mounted on a newly poured concrete service pad at the northeast corner of the building. The ductwork will be strapped to six brackets attached with anchor bolts to the concrete band above the windows. The new concrete pad will be approximately 3' by 5' and extend up to 9" below grade and will replace existing pavement. The vertical stack will extend up the solid face of the north side of the concrete pier and 10' above the top of the pier.



Area of Potential Effects

The APE (Attachment A, Figure 3) was defined to address both direct and indirect potential effects on historic properties, including areas that may be affected by both temporary and permanent construction activities. The APE overlaps the proposed National Advisory Committee for Aeronautics (NACA) Ames Historic District and accounts for potential indirect effects on the entire district but does not include the district boundary due to the project's relative scale to the district. Minimal below-grade activities for this project consist of removing existing pavement and grading to install a new concrete pad up to 9" below grade. The APE was defined as the limits of staging and construction for the undertaking.

Affected Historic Properties

The APE overlaps with the proposed National Advisory Committee for Aeronautics (NACA) Ames Historic District (Attachment A, Figure 2), which is currently under evaluation as part of a comprehensive architectural historic properties survey of the Ames Campus (anticipated completion in July 2025). For the purposes of this undertaking, the NACA Ames Historic District is assumed eligible for the NRHP under Criteria A and C with a period of significance from 1939 to 1958. The preliminary results of the survey have identified Building N-211 as a contributor to the district based on its associations with aeronautical research and its Streamline Moderne characteristics that contribute to the significance of the NACA Ames Historic District.

Building N-211 was constructed in 1945. The building has a rectangular plan and consists of three sections: the main hangar, the north hangar, and offices on the south side. The building has a concrete foundation and features Streamline Moderne-style concrete walls with horizontal bands, multipartite industrial-style wood sash awning windows, and no overhanging roofs. The main hangar features a barrel-vaulted roof above the hangar bay, massive concrete pylons at each corner of the hangar, with sliding sectional hangar doors on the east side (Photograph 1). The west side of the main hangar is lined with a narrow three-story-tall, standing-seam metal addition with a shed roof that was added in 1975 (Photograph 2). Along the south side of the building, the two-story office section of the building is 14 bays wide with two entrances and has a flat roof with no overhang (Photograph 3). The north hangar features a segmental arch roof with skylights and sliding sectional hangar doors facing the airfield on the east side (Photograph

4). The north side of the building is 14 bays wide with multiple entrances in the first story; several sheds, canopies, and equipment line the exterior (Photograph 5). The west side of the north hangar is five bays wide and contains several utility doors in the first story and windows in the second story with a series of clerestory vents above. Alterations to the building are most notably the enclosure of the west side of the main hangar facing away from the airfield and changes to entrances, primarily utility doors. Overall, Building N-211 retains integrity as a contributor to the proposed NACA Ames Historic District and is assumed eligible for the NRHP for the purposes of this undertaking.

Effects Assessment

The Criteria of Adverse Effect were applied to assess the undertaking's potential effects on the historic properties in the APE. Because the project is modifying Building N-211, analysis under the Secretary of the Interior's Standards for Rehabilitation was considered.

- 1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.*

The project proposes to use the north hangar for the new oven system, which would require minimal change to the character-defining features of Building N-211. The interior space of the north hangar will not be altered by the installation of the oven system and enclosure (Photograph 6). Two existing window openings will be modified to allow the exhaust ductwork and piping to penetrate the north wall. The original sash for these openings will be salvaged, retained, and preserved for use in future repair or replacement at Building N-211. Anchor bolts for the ductwork brackets will be drilled into the exterior concrete wall and for the oven system and enclosure into the concrete hangar floor, but these holes are anticipated to be minor. The project adheres to this Standard.

- 2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.*

The historic character of Building N-211 shall be retained (Photograph 7). The installation of the interior oven system and enclosure and the exterior ductwork and compressed air equipment will not alter the character-defining features or spaces of Building N-211. The project adheres to this Standard.

- 3. Each property shall 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 architectural elements from other buildings, shall not be undertaken.*

The project does not propose any elements that could be considered conjectural. The project adheres to this Standard.

- 4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.*

Building N-211 has had few alterations since its construction in 1945. Any alterations have not

acquired historic significance since that time. The project adheres to this Standard.

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

The project will alter two window openings and the concrete band along the north wall (Photograph 8). The north wall is composed of the same concrete and is 14 bays wide with two stories of multipartite windows. The small percentage of historic materials affected is minimal, and the window sash removed will be salvaged and preserved for potential reuse. The project adheres to this Standard.

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

The project does not propose the replacement of deteriorated historic features. The project adheres to this Standard.

7. *Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.*

The project does not propose any chemical or physical treatments. The project adheres to this Standard.

8. *Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.*

The project involves minimal ground disturbance limited to an area disturbed by previous grading and covered with pavement. The project area is also located in an area of low archaeological sensitivity; therefore, no potential effects on archaeological resources are anticipated.

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

The new addition of the interior oven system and enclosure and the exterior ductwork and air compressor equipment will have minimal direct effect on the historic materials of Building N-211. The new oven system and related equipment and infrastructure will be discernible from historic materials as an addition. The north wall is a secondary building façade that already contains extensive mechanical equipment related to the shop functions inside the north hangar. Although the vertical stack will have a visual impact on the north wall due to its configuration

and height, it is generally compatible with the mechanical equipment that already characterizes the façade. Only a small portion of the stack will be visible above the roofline from the east side facing the airfield, and none of the stack will be visible from the south side and King Road. Furthermore, the exterior ductwork and air compressor equipment is in a somewhat discreet location at the periphery of the NACA Ames Historic District and would not be seen from any other district contributors or affect their setting. The project adheres to this Standard.

10. New additions and adjacent or related new construction shall 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 new addition of the interior oven system and enclosure and the exterior ductwork and air compressor equipment will have minimal direct effect on the essential form of Building N-211 and would be easily reversible with in-kind patching of anchor bolt holes in the exterior concrete wall and the interior concrete hangar floor. In addition, the salvaged window sash may be returned to their original place if not already reused within other window openings of Building N-211 or new replacement windows may be made to match the existing based on the original windows. The project adheres to this Standard.

Finding of Effect

The project will not alter any of the characteristics of Building N-211, a contributor to the proposed NACA Ames Historic District, that qualify it for NRHP inclusion and will not result in adverse effects. Based on this assessment, NASA ARC has made a finding that the undertaking will result in No Adverse Effect.

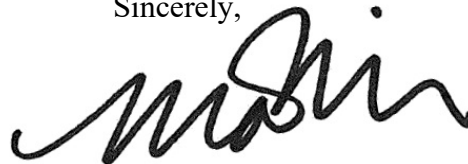
Consultation Efforts

NASA ARC has not identified additional consulting parties for this Section 106 review but is making these findings available to the public via the NASA ARC Historic Preservation Office website (<https://historicproperties.arc.nasa.gov/section106.html>).

NASA ARC requests the State Historic Preservation Officer's concurrence on NASA's finding of No Adverse Effect for this undertaking pursuant to 36 CFR 800.5(b). Please provide a response within 30 days of receipt of this letter, as specified in 36 CFR 800.5(c).

Please feel free to contact me at maria.k.meiser@nasa.gov or (650) 390-5450.

Sincerely,

A handwritten signature in black ink, appearing to read 'Trina Meiser', with a stylized, cursive script.

Trina Meiser
Cultural Resources Manager

Enclosures

Attachment A – Figures

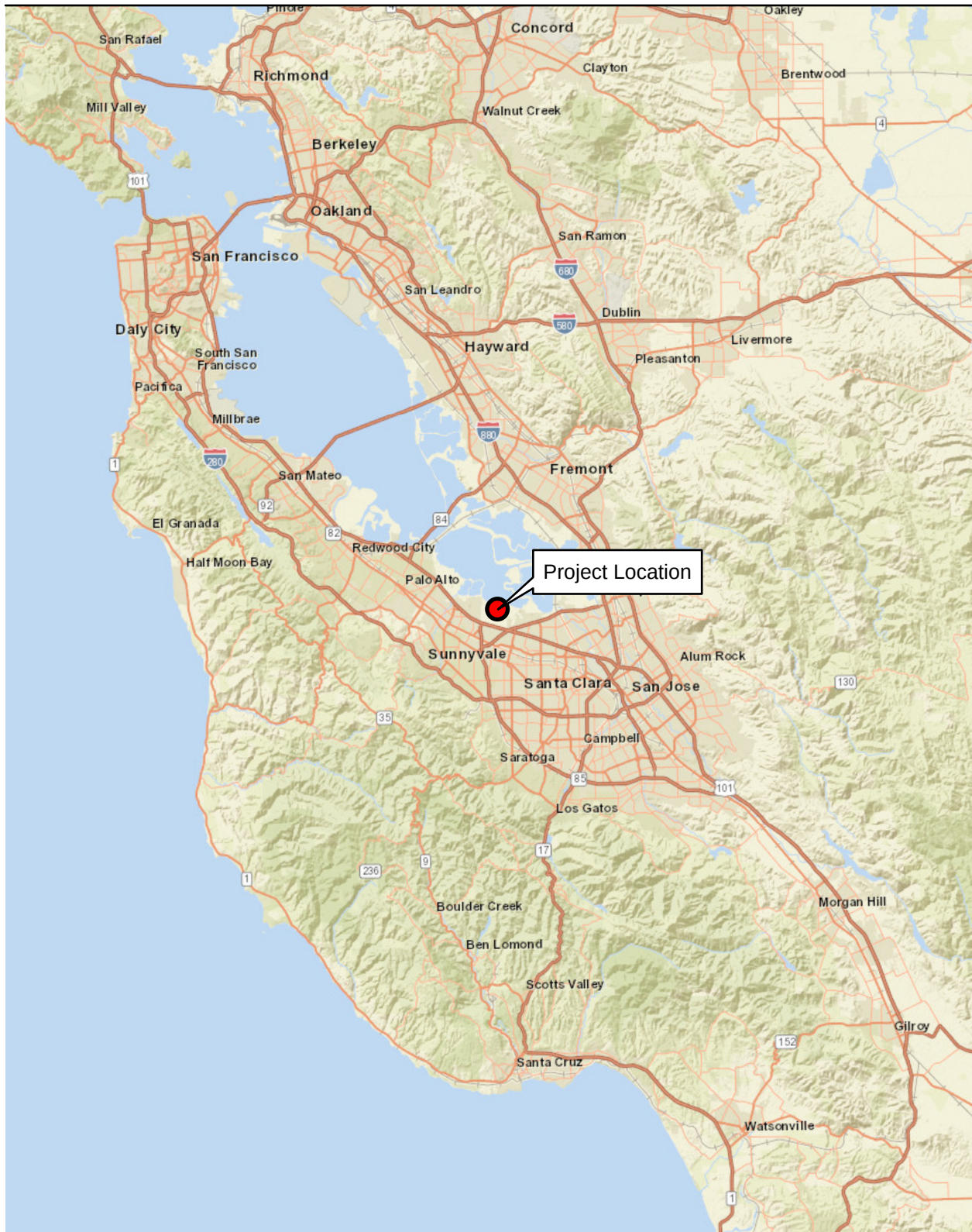
Attachment B – Select Project Drawings

Attachment C – Photographs

cc:

ARC/Historic Preservation Office

Attachment A – Figures



Source: ESRI, AECOM, NASA

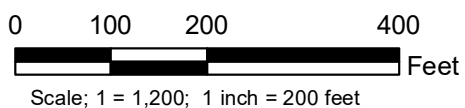


0 5 10 20 Miles



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

Figure 1
Project Location



Building N-211 New Composite Oven Process Equipment Project

The following content was redacted from this public posting:

Attachment B – Select Project Drawings

Attachment C – Photographs



Photograph 1. East side of Building N-211 at the airfield, view facing west



Photograph 2. West side of main hangar alteration, view facing east



Photograph 3. South side of Building N-211 (offices), view facing north



Photograph 4. East side of north hangar, view facing southwest

The following content was redacted from this public posting:

Photographs 5-9