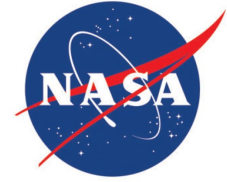


National Aeronautics and Space Administration

Ames Research Center
Moffett Field, CA 94035-1000



September 26, 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-226 Wind Tunnel Demolition Project –
Finding of 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-226 Wind Tunnel Demolition 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 the project constitutes an undertaking under Section 106. The project will demolish the exterior wind tunnel structure of the former 6- by 6-Foot Supersonic Wind Tunnel, which is individually eligible for listing in the National Register of Historic Places (NRHP), is a contributing resource to the NRHP-listed NASA Ames Wind Tunnel Historic District (Wind Tunnel HD), and also contributes to an identified NRHP-eligible historic district, the National Advisory Committee for Aeronautics Ames Aeronautical Laboratory Historic District (NACA Ames HD). Partial demolition of the historic property meets the criteria of adverse effect (36 Code of Federal Regulations [CFR] §800.5[a][1]); therefore, NASA ARC has made a finding of Adverse Effect for this undertaking. Pursuant 36 CFR §800.6, NASA ARC is consulting the SHPO and other consulting parties for the resolution of the adverse effects. The following information provides more detail in support of these findings for your review; Attachment A contains figures, Attachment B contains photographs, and Attachment C contains updated Department of Parks and Recreation (DPR) forms.

Description of the Undertaking

Building N-226, the former 6- by 6-Foot Supersonic Wind Tunnel, was constructed in 1945-48 and decommissioned in 1988 (Attachment B, Photograph 1). The facility's second-floor high bay

containing the wind tunnel test section and control room was converted into an educational center for elementary school students with minimal alterations in 1991 (Photograph 2). The educational center was subsequently closed and has since remained vacant. Since it was decommissioned in 1988, leaking oil has been observed several times from the non-operational wind tunnel motor, piping from under the south end of the compressor section, cooling tubes from a transformer, and from other wind tunnel equipment that is not easily accessible or identifiable. The ground around these leaking components appears to be oily and wet. Inside the building, gaskets and seals on non-operational equipment are failing, leaking spent oil on the floor, and causing an environmental hazard (BB&E 2021). Preliminary physical sampling and analytical assessments have also been conducted to assist in characterizing the chemical composition of the leaks in question. The growing concerns and impacts of the longstanding environmental hazard and recently issued regulatory violations have prompted remedial action. The scope of necessary physical removal of contaminated materials and soil remediation cannot be fully assessed until the structure is removed and further survey and testing can be conducted.

The project will demolish the exterior wind tunnel structure attached to Building N-226 (Photographs 3-5). The exterior wind tunnel metal structure has deteriorated over time from disuse and deferred maintenance (Photograph 6). The main building will remain; the south wing offices and other portions of the building have been rehabilitated and will remain in continued use. The project will sever the wind tunnel shafts that project from the main building at three locations on the north, west, and south sides (Photographs 7-16). The resultant openings in exterior walls of the main building will be appropriately sealed with compatible materials to maintain their profiles, e.g., a smooth concrete coating or metal plate within the profile of the openings. No interior changes are included in this project.

The area along the western portion of the lot was previously occupied by associated pressure spheres, cooling towers, and a water storage tank, which were demolished circa 2009 (Photographs 17 and 18, for comparison). The project will clear the area beneath the exterior wind tunnel structure to grade, similar to the existing condition of the western portion of the lot; soil disturbance to remove aboveground elements will be limited as much as possible. The ground with holes will be filled up with and compacted of approved soils to its surface level, and then will be lay out (or topped) with assorted gravels. Future soil remediation will be assessed after the removal of the structure and addressed in a separate undertaking.

Area of Potential Effects

The APE (Attachment A, Figure 3) was defined to address potential effects on historic properties. Construction activities for this project primarily consist of demolition of the exterior wind tunnel metal structure and the closure of openings in the concrete walls of the remaining Building N-226. The APE is focused on Building N-226 but is also located within the overlapping boundaries of the Wind Tunnel HD and the NACA Ames HD. It accounts for potential effects on the entire districts but does not include the districts' boundaries due to the project's scale. The project does not propose any permanent aboveground features, so potential indirect effects on other built environment resources are not anticipated. Limited ground disturbance will occur in previously disturbed or fill areas, and potential impacts to archaeological resources are not anticipated. The staging area for the demolition project has yet to be identified but will be limited to paved areas adjacent to the building. Therefore, the APE is

defined as the limits of Building N-226 with a 50-foot buffer to address construction activities in the immediate surrounds.

Affected Historic Properties

Building N-226, the former 6- by 6-Foot Supersonic Wind Tunnel, is individually eligible for listing in the NRHP under Criteria A and C, is a contributing resource to the NRHP-listed Wind Tunnel HD (National Register Information System #100000470), and contributes to a previously identified NRHP-eligible historic district, the NACA Ames HD. For a detailed description and the NRHP evaluation, see Attachment C, DPR forms.

The Wind Tunnel HD was listed in the NRHP in 2017. Its five contributors are the extant core group of wind tunnel facilities constructed by the NACA in the 1940s, including Building N-215, the 7- by 10-Foot Wind Tunnel No. 1; N-220, the Technical Services Building; N-221 and N-221B, the 40- by 80-Foot Full Scale Wind Tunnel and the 80- by 120-Foot Wind Tunnel that comprise the National Full-Scale Aerodynamics Complex; N-226, the 6- by 6-Foot Supersonic Wind Tunnel; and N-227A through D, the 9-Foot, 8-Foot, and 11-Foot Wind Tunnels that comprise the Unitary Plan Wind Tunnel. The district is listed under Criterion A in the areas of science, invention, and engineering at the national level of significance because this district contributed greatly to advancements in the aeronautical and space industries in the United States. The district also listed under Criterion C in the area of engineering, because the wind tunnels represent a significant work of engineering. The period of significance begins with the construction of Building N-220 in 1940 and ends in 2011, the year that the Space Shuttle Program ended. The tunnels and their supporting buildings performed critical roles in aeronautical research and design, and were among the most sophisticated scientific tools constructed and used by the U.S. government and commercial businesses. The research conducted within the wind tunnels was crucial to aircraft and spacecraft research and design. The NRHP nomination for the Wind Tunnel HD is accessible at this link:

https://historicproperties.arc.nasa.gov/downloads/summary/nrhp_windtunneldist_20161101.pdf.

The NACA Ames HD was previously identified as potentially eligible for the NRHP (OHP Ref. NASA_2021_09_01). The district has been evaluated in a current architectural historic properties survey of the Ames Campus (anticipated October 2025). It encompasses the extant core of the NACA Ames Aeronautical Laboratory (1939-1958). The NACA Ames HD is significant under Criterion A for its associations as an NACA aeronautical laboratory that made important contributions to aeronautics and aviation technology during World War II and the Cold War. Its aeronautics research and development (R&D) programs integrated high-speed aerodynamics research, wind tunnel experimentation, and simulated and applied flight tests to quickly evolve theory to implementation, first for urgent military needs in wartime, and then for supersonic flight and missile technology leading to the Space Race. The district also contributed to the skilled science research origins of Silicon Valley, helping establish the region as a global center for technological innovation. The district is also significant under Criterion C as a distinguishable entity that represents the NACA's campus development for aeronautics R&D programs in the 1940s and 1950s. It embodies distinctive characteristics of 1940s-era campus planning with federal modernistic architecture, primarily in the Streamline Moderne style, and uniquely engineered, purpose-built highly technical and scientific facilities. The district is eligible for listing in the NRHP at the national level under Criteria A and C. The period of

significance spans the NACA's administration of Ames from 1939, when the NACA Ames Aeronautical Laboratory was established, to 1958, when it became part of NASA with a new focus on aerospace and space sciences.

Effects Assessment

The project will demolish the exterior wind tunnel structure of the former 6- by 6-Foot Supersonic Wind Tunnel. Partial demolition of this scale constitutes an adverse effect on the historic property. Removal of the wind tunnel will compromise its individual eligibility for listing in the NRHP and its contribution to the Wind Tunnel HD, for which it is significant as a wind tunnel research facility under both NRHP Criteria A and C; preservation of the main building will allow Building N-226 to remain a contributing resource to the NACA Ames HD under Criterion C for its Streamline Moderne architectural design.

Finding of Effect

The project will alter the characteristics of the historic property that qualifies it for NRHP inclusion and will result in adverse effects. Based on the assessment conducted by qualified cultural resources professionals, NASA ARC has made a finding that the undertaking will result in Adverse Effects.

Consultation Efforts

NASA ARC is making this finding available to the public via the NASA ARC Historic Preservation Office website (<https://historicproperties.arc.nasa.gov/section106.html>).

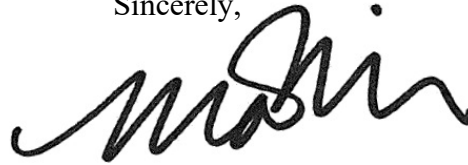
NASA ARC is contacting other potential consulting parties to participate in the resolution of adverse effect pursuant 36 CFR § 800.6(a). Consulting parties include:

- Dr. Jeff Wasel, Moffett Field Museum
- Amber Blizinski, City of Mountain View
- Pamela Baird, Mountain View Historical Association
- Christopher Manning, Santa Clara County Department of Planning and Development

NASA ARC requests the State Historic Preservation Officer's concurrence on NASA ARC's finding of Adverse Effect and additional consultation for this undertaking pursuant 36 CFR § 800.6. If adverse effects cannot be avoided, minimized, or mitigated, NASA ARC will request the development of a memorandum of agreement. Please provide a response within 30 days of receipt of this letter.

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

Sincerely,

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

Trina Meiser
Cultural Resources Manager

Enclosure
Attachment A – Figures
Attachment B – Photographs
Attachment C – DPR forms

cc:
ARC/Historic Preservation Office

The following content was redacted from this public posting:

Attachment A – Figures
Attachment B – Photographs
Attachment C – DPR forms