

## NASA Ames Research Center Summary of Historic Properties

### Shenandoah Plaza Historic District



West Side View of NAS Sunnyvale Historic District,  
Locally referred to as the Shenandoah Plaza Historic District

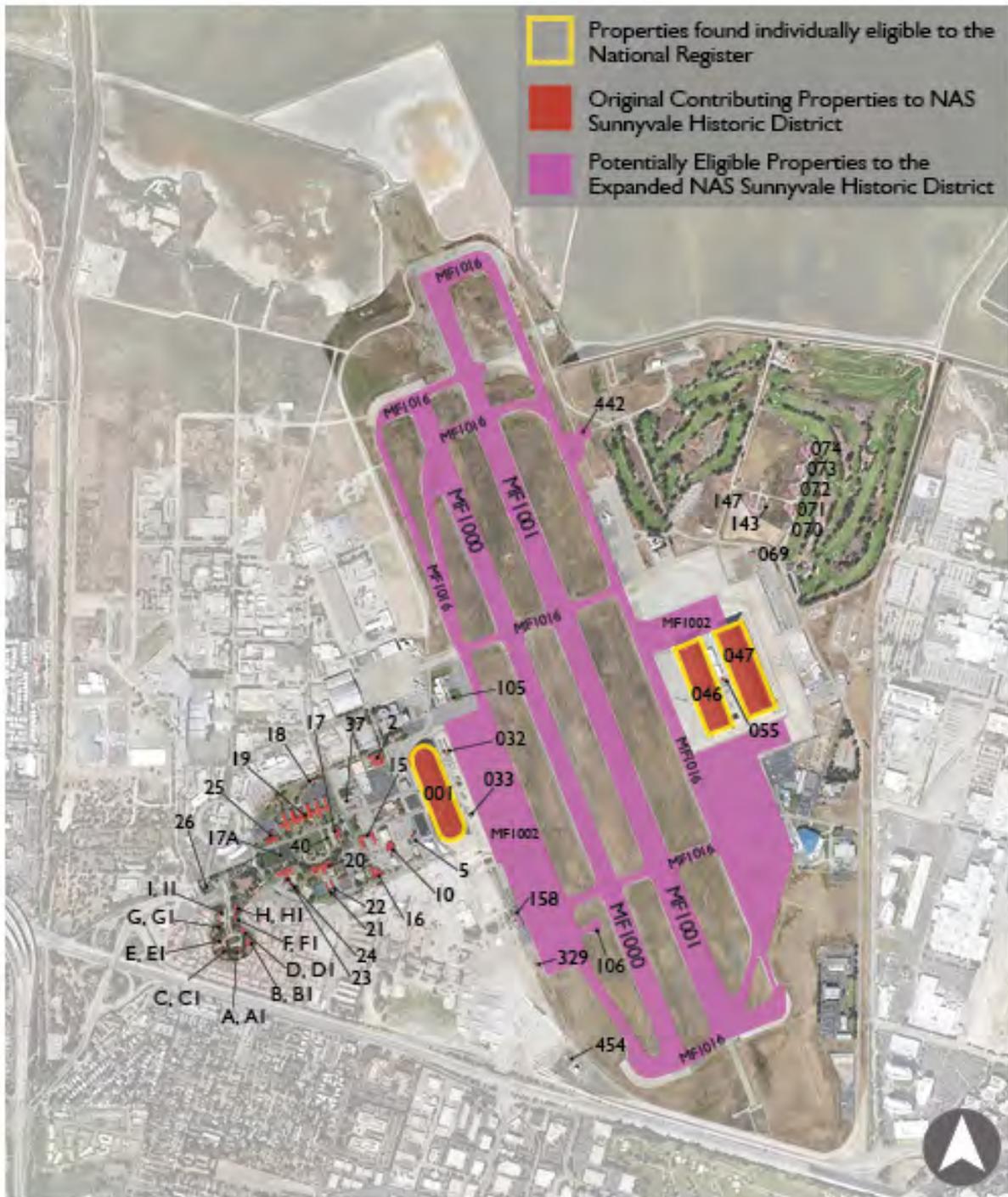


Naval Air Station (NAS) Sunnyvale, later renamed Moffett Field, was created in 1933 with the construction of Hangar One as docking station for the USS *Macon*, the largest aircraft in the world at the time.



- Hangar One was nominated by the Navy Chief of Naval Operations as a U.S. Navy Historic Site, 01/03/1966.
- The NAS Sunnyvale Historic District nominated by US Navy is listed in the National Register of Historic Places, 02/24/1994.
- The Historic District was conveyed to NASA on 07/01/1994 as part of a federal military Base Realignment and Closure action.

Consultation between NASA and the California Office of Historic Preservation 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 November 26, 2013 considered resources associated with the airfield for contributing status under an expanded period of significance, 1930-1961. In addition, the HPSR focused on the airfield's association with America's reconnaissance and surveillance of the Pacific Coast with lighter-than-air craft before and during World War II, and with jet and propeller aircraft during the Cold War.

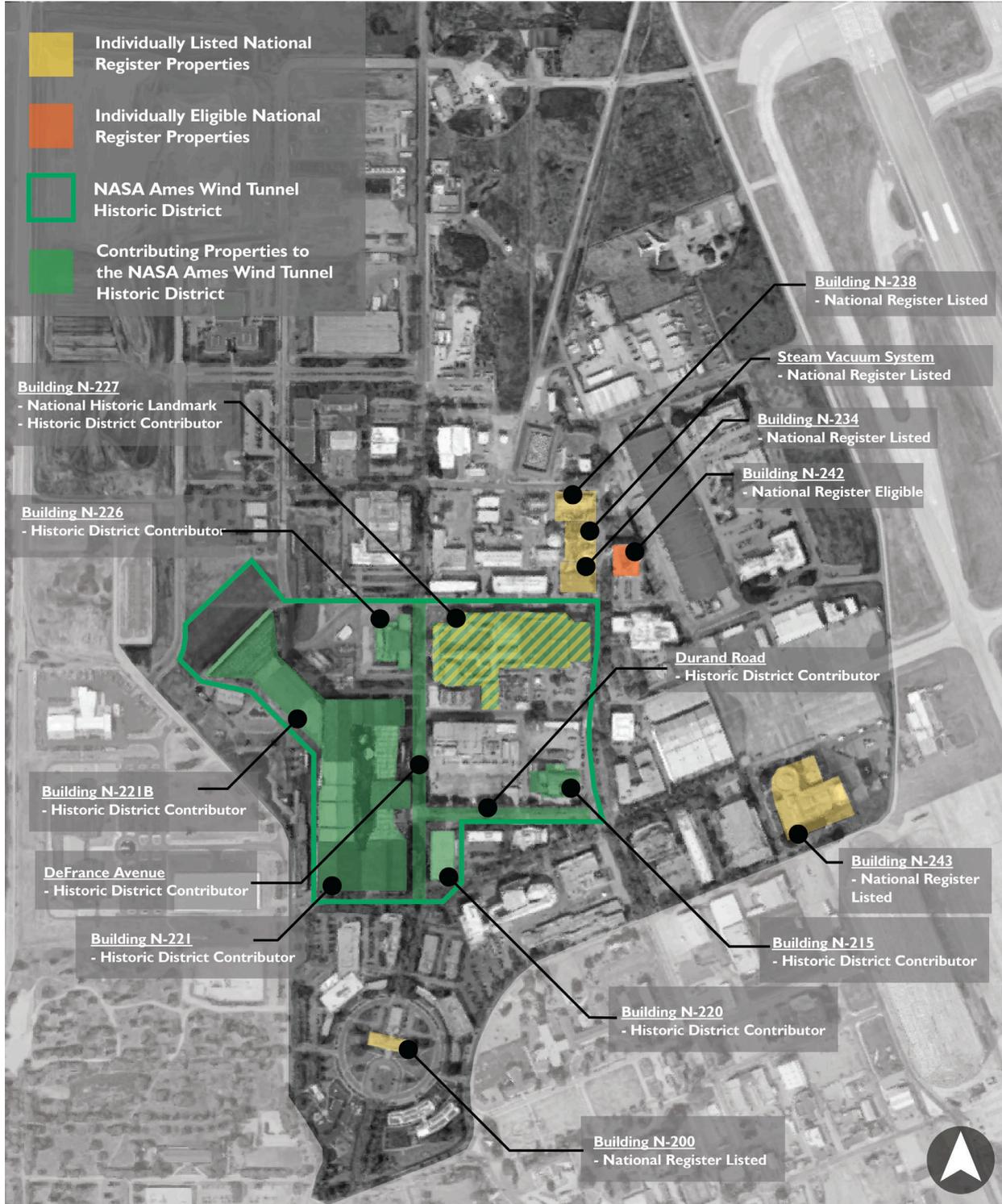


NAS Sunnyvale Historic District

## Contributing Properties in the Shenandoah Plaza Historic District

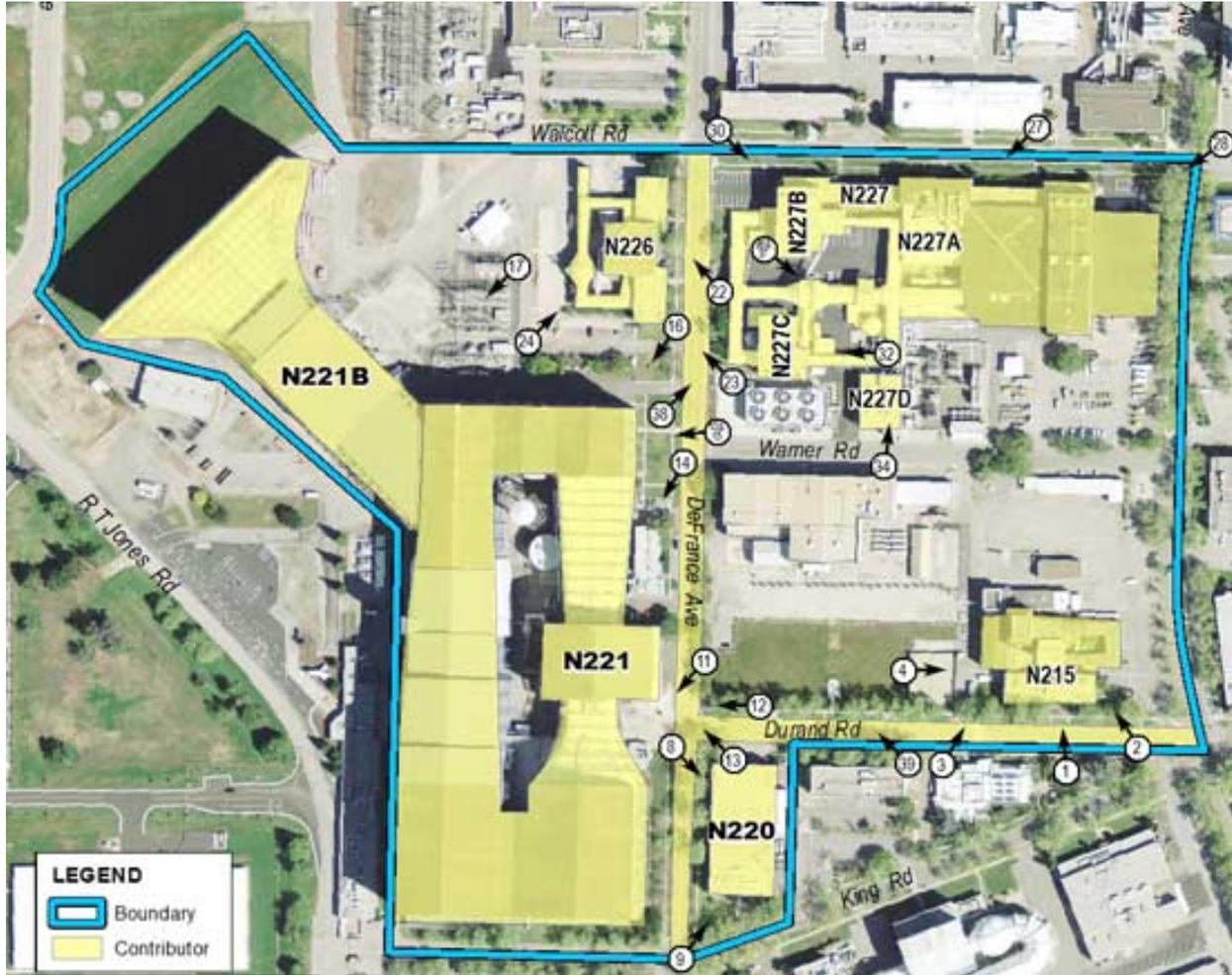
Building Number	Resource Name (Historic Use)
1	Hangar 1
2	Gymnasium (Balloon Hangar)
5	Water Tower and Storage Tank
10	Boiler Plant Facility and Facility Maintenance Shop (Heat Plant)
15	Security Station (Fire Station, Laundry)
16	Public Works (Locomotive Crane Shed)
17	Administration and Telephone Exchange (Admirals Building)
18	Unmanned Aerial Vehicle Research Building (Aerological Center)
19	Industry Partners Building (Bachelor Enlisted Quarters)
20	Bachelor Officer Quarters
21	Detached Garages (Bachelor Officers Garage)
22	Detached Garages (Bachelor Officers Garage)
23	Carnegie Mellon University (Dispensary)
24	Carnegie Mellon University Storage Facility (Ambulance Garage)
25	Administration Building and Auditorium (Bowling Alley, Theater)
26	Visitor Registration and Employee Badges (Gate House)
32	North Floodlight Tower
33	South Floodlight Tower
37	Scale House
40	Flagpole, Grounds and Flagpole
46	Aircraft Maintenance Hangar 2
47	Aircraft Maintenance Hangar 3
55	Boiler House for Hangars 2 and 3 (Heat Plant)
69	Inert Ammunition Storage
70	Fuse and Detonator Magazine
71	High Explosive Magazine
72	High Explosive Magazine
73	High Explosive Magazine
74	High Explosive Magazine
105	Airfield Lighting Vault
106	Aircraft Compass Calibration Pad, Compass Rose
143	High Explosive Magazine
147	High Explosive Magazine
158	Flight Operations Building and Tower
329	Ultra High Frequency/Very High Frequency Receiver Building
442	Ordinance Handling Pad
454	Ultra High Frequency/Very High Frequency Transmission Building
017A	Shenandoah Plaza Monuments, Anchor
MF 1016	West Parallel Aircraft Taxiway
MF 1016	East Parallel Aircraft Taxiway
MF 1016	Connecting Taxiways
MF 1000	Runway 32L/14R
MF 1001	Instrument Runway 32R/14L
MF 1002	Aircraft Parking Apron

# Ames Campus



Historic Properties Located on the NASA Ames Research Center Campus.

## Wind Tunnel Historic District



Contributing Properties Located in the Wind Tunnel Historic District

On January 11, 2017, the NASA Ames Wind Tunnel Historic District was listed in the National Register of Historic Places. The district consists of five contributing buildings: N215, N220, N221, N221B, N226, N227 (including N227A-D). The NASA Ames Wind Tunnel Historic District is significant for its associations with aeronautical and aerospace research, the development of aircraft and spacecraft, and the evolution of wind tunnel technology in the United States. The district contains one of the world's greatest collection of wind tunnels, and is a leading research facility for the aerospace industry.

## Contributing Properties in the Wind Tunnel Historic District



*7 by 10 Foot Wind Tunnel Number 1 and  
Army Aeromechanics Lab  
(Building N215, constructed in 1941) '*



*Technical Services Building  
(Building N220, constructed in 1940) '*



*National Full-Scale Aerodynamics Complex,  
40 by 80 Foot and 80 by 120 Foot Wind Tunnels  
(Buildings N221 and N221B, '  
constructed in 1944 and 1982, respectively) '*



*6 by 6 Foot Supersonic Wind Tunnel  
(Building N226, constructed in 1948) '*



*Unitary Plan Wind Tunnel Complex  
(Buildings N227, N227A-D, constructed in 1956) '*



On October 3, 1985, the Unitary Plan Wind Tunnel complex was nominated and accepted by the Department of Interior as a National Historic Landmark. In May 1996, the American Society of Mechanical Engineers dedicated the complex as an International Historic Mechanical Engineering Landmark. Integration of the basic design embodies three test sections for different speeds so that a single model can be tested over the entire speed range from Mach 0.40 to Mach 3.45. Covering 11 acres, construction of the site began in 1951 at a cost of \$32 million dollars. The Unitary Plan Wind Tunnel complex was found nationally significant under the *Man in Space National Historic Landmark Theme Study* (1984).

## Individual Properties Listed in the National Register of Historic Places

### *Ames Administration Building N200*



The Ames Administration Building N200 was listed in the National Register of Historic Places on January 11, 2017. The Administration Building is nationally significant in the area of science under Criterion A and B for its associations with historically significant events and the lives of persons significant in the past and a period of significance from 1943 to 1965. Completed in 1943, the building served as the administrative headquarters for the intensive research and development efforts undertaken at

the National Advisory Committee for Aeronautics' (NACA) Ames Aeronautical Laboratory facility and later the NASA Ames Research Center – key research facilities that made nationally significant contributions to the fields of aeronautics, aeronautical theory, aviation, and space exploration. Smith J. De France, a pioneer in aeronautics research and development, was responsible for both the initial development of the NACA facility and served as its first director from 1940 to 1965, leading the facility to a reputation as a nationally significant scientific research facility.

### *Arc Jet Complex, Building N238, N234 and SVS*



The Arc Jet Complex (Buildings N238, N238 and SVS) was listed in the National Register of Historic Places on January 11, 2017. The Arc Jet Complex is nationally significant for its contributions in the areas of science and engineering related to arc jet research and development that occurred at NASA Ames Research Center. Built between 1962 and 1964, the 3-unit complex (N-234, N-238, SVS) is exceptionally significant for its association with advancements in arc jet technology and research and development of Thermal Protection Systems (TPS) for NASA's spaceflight programs, including the exceptional role of the 60-megawatt IHF arc jet in developing and refining TPS for the Space Shuttle Program (SSP). The Arc Jet Complex was instrumental in the development of every NASA space transportation and planetary program including Mercury, Apollo, SSP, Viking, Pioneer-Venus, Galileo, Mars Pathfinder, Stardust, NASP, X-33, X-34, SHARP-B1 and B2, X-37, and Mars Exploration Rovers. The complex meets Criteria Consideration G based on the exceptional significance of the

facility's contributions to the nationally and internationally important space science programs, and meets the internal evaluation standards established by NASA for Resources Associated with the SSP.

### *Flight and Guidance Simulation Laboratory, Building N243*

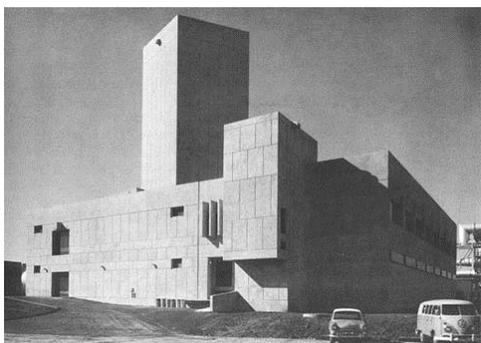


The Flight and Guidance Simulation Laboratory (N243) was listed in the National Register of Historic Places on January 11, 2017. It is nationally significant under Criteria A and C in the areas of Science, Invention, and Engineering. Covering over 108,000 square feet of space, the large Brutalist-style building (1967) housed some of Ames Research Center's most unique air and spacecraft research, testing, and training facilities, including the Vertical Motion Simulator (VMS-

1979), the world's largest and most sophisticated motion-based simulator. The intensive research and development work undertaken in the building made nationally significant contributions to the fields of aeronautics, aeronautical theory, aviation and space flight. The VMS in particular is exceptionally significant within the context of the SSP for its contribution to the development and operation of the Space Shuttle orbiter by providing research and essential astronaut training in an accurately simulated orbiter. The property meets NASA's guidelines for Evaluating Historic Resources Associated with the SSP.

### *Individual Properties Eligible for the National Register of Historic Places on the Ames Campus*

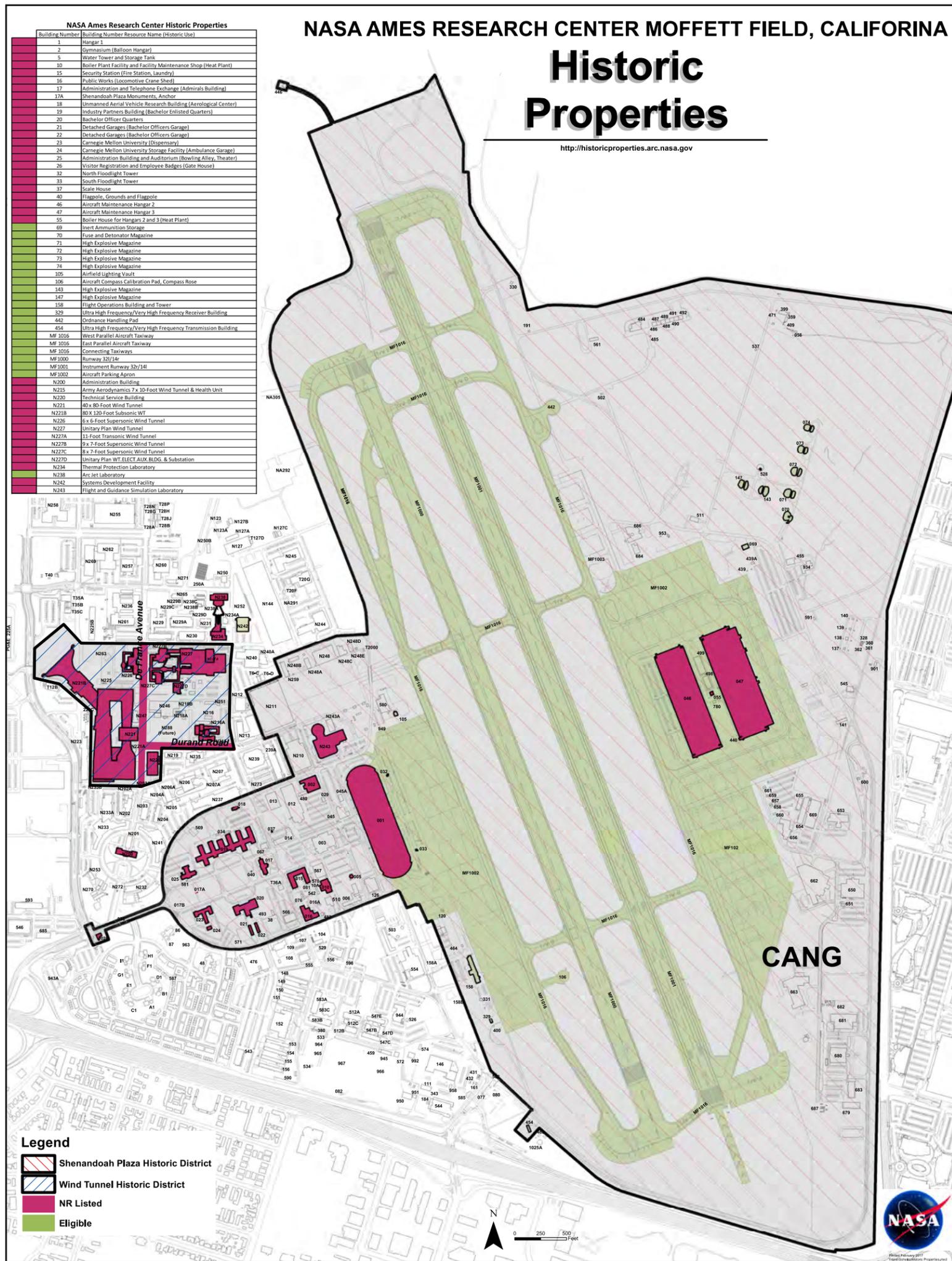
#### *Systems Development Facility, Building N242*



The Systems Development Facility is eligible for the National Register as a highly specialized missile and spacecraft testing facility, and for its contributions to important scientific research related to space exploration. The property qualifies under Criterion A (historically significant events) and Criterion C (distinctive characteristics of a building or facility type). The new facility featured a 100-foot-tall tower with a massive pentagonal test chamber. The test

chamber was equipped with moderate vacuum, infrared heating, vibration with variable-frequency shakers, and noise as produced by a rocket motor to simulate lift-off forces.

# Map and List of Historic Properties



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MF 1016	Connecting Taxiways
MF1000	Runway 32L/14R
MF1001	Instrument Runway 32R/14L
MF1002	Aircraft Parking Apron
N200	Administration Building
N215	Army Aerodynamics 7 x 10-Foot Wind Tunnel and Health Unit
N220	Technical Services Building
N221	40 x 80-Foot Wind Tunnel
N221B	80 X 120-Foot Subsonic Wind Tunnel
N226	6 x 6-Foot Supersonic Wind Tunnel
N227	Unitary Plan Wind Tunnel
N227A	11-Foot Transonic Wind Tunnel
N227B	9 x 7-Foot Supersonic Wind Tunnel
N227C	8 x 7-Foot Supersonic Wind Tunnel
N227D	Unitary Plan Wind Tunnel Electric Auxiliary Building and Substation
N234	Thermal Protection Laboratory
N238	Arc Jet Laboratory
N242	Systems Development Facility
N243	Flight and Guidance Simulation Laboratory