



Ames Policy Directive

APD 8822.2

Effective Date: November 16, 2021

Expiration Date: November 16, 2026

COMPLIANCE IS MANDATORY

Subject: Roof Access and Safety

Responsible Office: Code JCM / Plant Engineering Branch

CHANGE LOG

Status [Baseline /Revision /Cancelled]	Document Revision	Date of Change	Description
Baseline	0	5/9/2008	Initial
Revision	1	12/12/2016	Updated organization and references.
Revision	2	11/16/2021	Administrative corrections and minor edits for clarity.

1. POLICY

- a. This directive establishes policy for Ames Research Center (ARC) regarding roof access and safety. With the exception of NASA Research Park rooftop gardens, roof access is restricted to maintenance and engineering personnel and to research, security, and rescue personnel for approved activities.
- b. It is Ames Research Center policy that responsible organization(s) rectify or remove unapproved rooftop installations or approved rooftop installations that are not kept in a clean and safe condition or that compromise the condition of the roofing membrane within 30 days of being notified by Plant Engineering Branch. Installations that can cause immediate damage to the existing roofing membrane are removed or repaired by Plant Engineering at the expense of the responsible organization(s).
- c. Roofs pose several safety risks:
 - (1) Not all are safeguarded against fall and trip hazards.
 - (2) They are not included in the safety planning as occupied areas for facility testing.
 - (3) They have unknown height clearances that could result in personnel injury.
 - (4) Chemical and radioactive fume hoods exhaust to certain roof areas. If unfamiliar with roof ventilation configurations, unauthorized personnel risk exposure to these airborne hazards.
 - (5) Roof membranes made from PVC (polyvinylchloride) are extremely slippery when wet, icy, or snow covered conditions exist.

2. APPLICABILITY

- a. This APD is applicable to any personnel accessing the rooftops at ARC and associated facilities (e.g., NASA Research Park).
- b. This APD applies to civil servants at ARC and to contractors, grant recipients, and parties to agreements to the extent specified or referenced in the contracts, grants, or agreements.
- c. In this directive, all mandatory actions (i.e., requirements) are denoted by statements containing the term "shall." The terms "may" or "can" denote discretionary privilege or permission, "should" denotes a good practice and is recommended, but not required, "will" denotes an expected outcome, and "are/is" denote descriptive material.
- d. In this directive, all document citations are assumed to be the latest version unless otherwise noted.

3. AUTHORITY

- a. OSHA 1910.28 "Walking-Working" Surfaces
- b. OSHA 1926.501 Subpart M "Fall Protection"

4. APPLICABLE DOCUMENTS AND FORMS

- a. APR 8715.1 Chapter 40, Fall Protection Program
- b. ARC 791, Roof Access Request

5. RESPONSIBILITY

- a. **Organizational Directors** are responsible for ensuring that Division and Branch Chiefs enforce this APD.
- b. **Division and Branch Chiefs** are responsible for:
 - (1) Removal of any unauthorized items from applicable locations.
 - (2) The cost for any damage caused by their employees or contractor staff on roofs and collateral equipment on them.
- c. **Plant Engineering Branch (Code JCM)** is responsible for
 - (1) Informing the responsible organization of unapproved rooftop installations or of approved rooftop installations that are not kept in a clean and safe condition or that compromise the condition of the roofing membrane.
 - (2) Removing or repairing installations that can cause immediate damage to the existing roofing membrane at the expense of the responsible organization(s).
- d. **Facility Services Managers (FSMs)** of each building are responsible for ensuring personnel in their building adhere to this APD.
- e. **Building Keyholders** are responsible for their key and to not use it for unauthorized access to spaces.
- f. **Personnel** are responsible for:
 - (1) Obtaining approval from the Plant Engineering Branch (Code JCM) prior to any equipment installation, configuration changes, creating roof penetrations (such as fastening systems, coring, or material sampling (e.g., for asbestos)) or any other rooftop activities by submitting Form ARC 791.
 - (2) Obtaining a construction permit from the Facilities Engineering Branch (Code JCE) for any new work, experiments, laboratories, or installations of additional new rooftop equipment.

Note: If the equipment installation or configuration changes are in the vicinity of radioactive fumes hood exhausts, approval must be obtained from the NASA Ames Radiation Safety Officer (Code QH).

- (3) Adhering to fall protection requirements provided in APR 8715.1, Chapter 40 when accessing rooftops and associated elevated locations (such as awnings, eyebrows, and canopies).
- (4) Using caution if granted permission to access roofs and confining rooftop activities to designated walkways whenever possible because the perimeter of roofs can be dangerous.
- (5) Not walking on, damaging, breaking, or disturbing blisters in the membrane, as it can create a breach in the roofing material integrity causing leaks, interior damage, and structural instability.
- (6) Not conducting unauthorized activities (e.g., sightseeing, sunbathing, socializing, storage, non-emergency egress, etc.) or using unauthorized equipment (e.g., chairs, tables, antennas, support structures, cables, ashtrays, barbecues, boxes, cans, bottles, planters, gas cylinders, air conditioning units, refrigerators, laboratories, conservatories, storage sheds, etc.), as these can compromise existing rooftop equipment as well as the existing roofing systems. In addition, roof systems can be adversely affected by

introduction of various incompatible products and materials with the roofing system (e.g., asphalt and tar products, oil and grease by products, chemical spills, fuels, cleaning solutions, sharp objects, etc.).

6. DELEGATION OF AUTHORITY

None.

7. MEASUREMENT/VERIFICATION

a. Verification of conformance to requirements in this directive are measured through Center and Responsible Organizational management reviews, self-assessments, and subsequent analysis and reports of conformance to requirements, as well as periodic internal audits.

8. CANCELLATION

a. APD 8822.2, Roof Access and Safety, dated December 12, 2016.

Eugene Tu
Director

DISTRIBUTION:

Internal and external distribution.