



Ames Procedural Requirements

APR 8715.1

Effective Date: May 16, 2023

Expiration Date: May 16, 2026

COMPLIANCE IS MANDATORY

Subject: Fall Protection Program

Responsible Office: Code QH / Occupational Safety, Health, and Medical Service Division

CHANGE LOG

Status [Baseline /Revision /Cancelled]	Document Revision	Date of Change	Description
Baseline	-	5/16/2023	New baseline but no changes to requirements in this chapter. Removed language throughout the chapter that is already stated in OSHA and ANSI Z359.2. Revised the language to better explain the existing Ames fall protection policy requirements. Included the regulatory and industry references throughout the chapter.

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PREFACE

P.1 PURPOSE

a. This chapter outlines Ames Research Center's (ARC's) fall protection requirements for any walking or working surface where an individual may be exposed to a fall to a lower level. These requirements apply to the work that fall under the Occupational Safety and Health Administration's (OSHA's) definition of General Industry work.

P.2 APPLICABILITY

- a. This directive is applicable to ARC and associated facilities, e.g., NASA Research Park.
- b. This directive does not apply to internal and external (contractor) Construction Industry work, whose fall protection requirements are in Ames Procedural Requirements (APR) 8715.1 Chapter 27, Construction Safety Management.
- c. This directive applies to contractors, grant recipients, or parties to agreements only to the extent specified or referenced in the appropriate contracts, grants, or agreements.
- d. 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" denotes descriptive material.
- e. In this directive, all document citations are assumed to be the latest version unless otherwise noted.

P.3 AUTHORITY

- a. Walking-Working Surfaces, 29 CFR pt. 1910, Subpart D
- b. NPR 1800.1, NASA Occupational Health Program Procedures
- c. NPR 8715.1, NASA Safety and Health Programs

P.4 APPLICABLE DOCUMENTS AND FORMS

- a. Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms, 29 CFR pt. 1910, Subpart F
- b. Scaffolds, 29 CFR pt. 1926, Subpart L
- c. APR 8715.1 Chapter 17, Lifting Devices and Equipment
- d. Form ARC 862, NASA Ames Research Center Ladder Inspection Sticker
- e. ANSI Z359.2 – 2017, Minimum Requirements for a Comprehensive Managed Fall Protection Program
- f. NASA Ames Fall Protection Work Plan Template¹

¹ NASA Ames Fall Protection Work Plan Template: <https://q.arc.nasa.gov/content/fall-protection>

P.5 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.

P.6 CANCELLATION

a. APR 8715.1 Chapter 40, Fall Protection Program, dated April 24, 2018.

Eugene Tu
Director

DISTRIBUTION STATEMENT:

Internal and external distribution. APR 8715.1 Ames Health and Safety Manual Chapters are made available via the procurement website to anyone bidding a job at Ames Research Center. The exceptions are Chapter 7 – Ames Radiation Safety Guide, Chapter 10 – Pressure Systems Safety, Chapter 12 – Explosives Safety, and Chapter 23 – Control of Narcotics and Other Controlled Drugs including Alcohol, which are not made public but can be viewed onsite.

CHAPTER 40 FALL PROTECTION PROGRAM

40.1 Responsibilities

40.1.1 Safety, Health, and Medical Services Division (Code QH) shall:

- a. Ensure a competent person has been assigned as the Center's Fall Protection Program Administrator, appointed in writing by the Center Director, and responsible for oversight of the ARC Fall Protection Program.
- b. Ensure the division support service contractor has a safety professional assigned as the Code QH Fall Protection Competent Person who provides overall support to the ARC Fall Protection Program.
- c. Conduct an annual review and audit of the ARC Fall Protection Program.
- d. Provide support to implement and maintain the ARC Fall Protection Program in accordance with NPR 8715.1 Chapter 9, ANSI Z359.2 – 2017, and 29 CFR 1910 Subpart D.
- e. Ensure a training program is established meeting NPR 8715.1 Chapter 9, ANSI Z359.2 – 2017, and 29 CFR 1910 Subpart D.
- f. Provide the adequate resources necessary to administer the ARC Fall Protection Program.

40.1.2 ARC's Fall Protection Program Administrator shall:

- a. Implement and manage ARC's Fall Protection Program meeting the requirements covered in NPR 8715.1 Chapter 9, ANSI Z359.2 – 2017, and 29 CFR 1910 Subpart D.
- b. Review and provide input to the annual ARC Fall Protection Program report.
- c. Maintain knowledge of current fall protection regulations, standards, equipment, and systems applicable to ARC.
- d. Provide guidance and direction to personnel on matters pertaining to the ARC Fall Protection Program.
- e. Review and concur on site-specific fall protection plans, fall protection work plans, fall protection procedures, organizational fall protection plans, etc., which are received by Code QH.
- f. Participate in accident/incident investigations involving a fall to a lower level.
- g. Review and provide direction as needed to ensure NASA and ARC Fall Protection requirements are included in contracts when contractor employees may be exposed to fall hazards.
- h. Meet the training requirements for a Competent Person as identified in ANSI Z359.2 – 2017 and NPR 8715.1.

40.1.3 ARC's Fall Protection Qualified Person(s) shall:

- a. Follow ANSI Z359.2 – 2017 Duties and Responsibilities section 4.3 as supplemented by this chapter.
- b. See section 40.2 for training requirements.

40.1.4 ARC's Fall Protection Competent Person(s) shall:

- a. Follow ANSI Z359.2 – 2017 Duties and Responsibilities section 4.4 as supplemented by this chapter.
- b. Manage their own organization's Fall Protection Program.

- c. Develop, update, and maintain their organization's written specific Fall Protection Program which also includes the rescue procedures.
- d. Ensure a NASA Ames fall protection work plan, as identified within this chapter, is completed, reviewed, and signed-off prior to the start of work.
- e. Ensure NASA Ames fall protection work plan procedures, including limitations and rescue procedures, are communicated to all Fall Protection Authorized Persons prior to the start of work.
- f. Ensure any other additional safety requirements to perform the work, such as a Job Hazard Analysis or Personal Protective Equipment, is implemented as required.
- g. See section 40.2 for training requirements.

40.1.5 ARC's Fall Protection Authorized Person(s) shall:

- a. Follow ANSI Z359.2 – 2017 Duties and Responsibilities section 4.5 as supplemented by this chapter.
- b. Ensure a NASA Ames fall protection work plan as identified within this chapter is completed prior to start of work and followed.
- c. See section 40.2 for training requirements.

40.1.6 Supervisors shall:

- a. Maintain knowledge of and enforce the requirements outlined within this chapter.
- b. Allocate time and resources to ensure applicable personnel are trained and provided with the most current and necessary fall protection training, equipment, and systems prior to the start of work from heights.
- c. Ensure fall protection systems are designed by a currently-trained Fall Protection Qualified Person prior to installation.
- d. Ensure at least one currently-trained and documented Fall Protection Competent Person has been assigned in each organization to manage the organization's fall protection program. This assignment is required where organizations have employees trained as authorized persons performing OSHA General Industry work that requires fall protection.

40.1.7 Facilities and Real Property Management Division (Code JC) shall follow the requirements in this chapter, especially when designing new fall protection systems or performing maintenance work where there are existing fall hazards.

40.1.8 The Office of Procurement's ARC Acquisition Division (Code JA) shall ensure NASA and ARC fall protection requirements are included in contracts where contractor employees may be exposed to a fall hazard as identified by the requiring organization to the Contracting Officer.

40.2 Training Requirements

40.2.1 Employees shall be trained to the appropriate level of training in accordance with 29 CFR pt. 1910 and ANSI Z359.2 – 2017:

- a. If assigned to perform work where they may be exposed to a fall hazard or use a type of fall protection (see section 40.2.3).
- b. If assigned to design fall protection systems (see section 40.2.4).
- c. If assigned to manage and maintain an organization's fall protection program (see section 40.2.5).

40.2.2 Employees shall attend the appropriate NASA training course, or an equivalent specific content training course provided by an outside training organization. Contact Code QH for Guidance.

40.2.3 Employees who are assigned to perform work where they may be exposed to a fall or use a type of fall protection shall be trained as an Authorized Person, at minimum meeting the requirements covered in ANSI Z359.2 - 2017. This training can be taken through Code QH.

40.2.4 Employees who are assigned to design fall protection systems shall be trained as a Qualified Person, at minimum meeting the requirements covered in ANSI Z359.2 – 2017. Guidance for training is provided by ARC’s Fall Protection Program Administrator.

40.2.5 Employees who are assigned to manage and maintain an organization’s Fall Protection Program shall be trained as a Competent Person, at minimum meeting the requirements covered in ANSI Z359.2 – 2017. Guidance for training is provided by ARC’s Fall Protection Program Administrator.

40.2.6 All Fall Protection training is required every 2 years.

40.3 Fall Hazard Survey

40.3.1 Organizations shall follow the fall hazard survey requirements covered in ANSI Z359.2 – 2017.

40.3.2 Competent or Qualified Persons shall conduct a fall hazard survey where an employee may be exposed to a fall hazard and complete a survey report in accordance with ANSI Z359.2 – 2017.

40.4 Fall Protection Work Plan

40.4.1 The NASA Ames Fall Protection Work Plan, or equivalent, shall be completed by the Competent Person with the Authorized Person(s) assistance prior to start of work on any task where a fall hazard of four (4) feet or greater above the walking-working surface exists including, but not limited to, work:

- a. Near unprotected sides and edges
- b. Near hoist areas
- c. Near floor holes
- d. Near dock boards
- e. Near runways and similar walkways
- f. Over dangerous equipment
- g. Near pits
- h. On fixed ladders over 24 feet
- i. On stairways
- j. On scaffolds
- k. On low sloped roofs
- l. On walking-working surfaces not otherwise addressed
- m. On an aerial lift

40.4.2 The completed work plans shall be retained for a minimum of 1 year and be made available during the following year’s Voluntary Protection Program (VPP) Self-Assessment and Competent Person inspection.

Note: The NASA Ames Fall Protection Work Plan template can be found on the Code Q Safety and Mission Assurance Directorate - Fall Protection webpage. See <https://q.arc.nasa.gov/content/fall-protection>.

40.5 Fall Protection Equipment Requirements

40.5.1 Fall protection equipment and systems used shall:

- a. Follow the requirements in the applicable ANSI Z359 Fall Protection Code standard and OSHA 29 CFR 1910 Subpart D.
- b. Be used, stored, cleaned, and inspected in accordance with manufacturer's instructions prior to use by the authorized person and at least annually by a Competent Person, as supplemented by this chapter.
- c. Be removed from service if involved in a fall.
- d. Be removed from service and returned to the manufacturer if found to be defective.

40.6 Aerial Lifts

40.6.1 Employees operating aerial lifts at ARC shall:

- a. Follow OSHA 29 CFR 1910 Subpart D and Subpart F, APR 8715.1 Chapter 17, and manufacturer requirements. The most stringent requirements govern when inconsistencies arise.
- b. Use a full body harness with a lanyard or Self Retracting Lifeline (SRL) connected to a manufacturer approved anchor point in the basket or platform while working.

40.7 Ladders

40.7.1 Employees utilizing ladders at ARC shall:

- a. Follow OSHA 29 CFR §1910.23 and specific manufacturer requirements.
- b. Select a ladder long enough to provide vertical access to the work area.
- c. Be alert and cautious to slippery surfaces. Although a ladder may be equipped with a nonslip base, it is not a substitute for safety in placing, lashing, or holding a ladder on oily, metal, concrete, or other slippery surfaces.
- d. Inspect ladders prior to use.
- e. For A-frame and extension ladders, ensure they are inspected annually and document the inspection using the Form ARC 862 (NASA Ames Research Center Ladder Inspection Sticker) attached to the ladder. Contact Code QH safety representatives for current stickers.
- f. Ensure damaged ladders are tagged out and removed from service.

40.8 Scaffolding

40.8.1 Scaffolds used on Center shall follow 29 CFR 1926 Subpart L.

APPENDIX A. DEFINITIONS

See 29 CFR 1910 § 1910.21, Scope and Definitions, and ANSI Z359.0, Definitions and Nomenclature Used for Fall Protection and Fall Arrest.

APPENDIX B. ACRONYMS

ANSI	American National Standards Institute
APR	Ames Procedural Requirements
ARC	Ames Research Center
CFR	Code of Federal Regulations
NASA	National Aeronautics and Space Administration
NPR	NASA Procedural Requirements
OSHA	Occupational Safety and Health Administration