

NFPA 1932

Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground Ladders

2004 Edition



NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471
An International Codes and Standards Organization

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Use, Maintenance, and Service Testing
of In-Service Fire Department Ground Ladders
2004 Edition

This edition of NFPA 1932, *Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground Ladders*, was prepared by the Technical Committee on Fire Department Ground Ladders, and acted on by NFPA at its May Association Technical Meeting held May 23–26, 2004, in Salt Lake City, UT. It was issued by the Standards Council on July 16, 2004, with an effective date of August 5, 2004, and supersedes all previous editions.

This edition of NFPA 1932 was approved as an American National Standard on August 5, 2004.

Origin and Development of NFPA 1932

In 1958, new material was added to NFPA 193, *Standard Procedures for Aerial Ladder Testing*, to cover the care, maintenance, and testing of fire department ground ladders. Subsequent editions were published in 1959 and 1972.

In 1975, NFPA 193 was separated into two documents, NFPA 1931, *Standard on Fire Department Ground Ladders*, and NFPA 1904, *Recommended Practice for the Maintenance, Care, Testing and Use of Fire Department Aerial Ladders and Elevating Platforms*.

The 1979 edition of NFPA 1931 incorporated extensive revisions, including editorial and style changes.

In 1984, the text of NFPA 1931 was again divided into two documents. NFPA 1931 contained the requirements for the design and design verification testing for new ground ladders, and NFPA 1932 contained the requirements for the use, maintenance, and service testing of fire department ground ladders. The strength requirements for new ground ladders were increased in NFPA 1931 and the loads used for in-service testing of ground ladders were increased based on research that indicated that ground ladders needed to handle greater loads. An exception allowed the authority having jurisdiction to use a reduced test weight for the horizontal bending test for extension ladders built prior to 1984 with a restriction on the use of those ladders while phasing in the more stringent testing requirement.

The 1989 edition added requirements for routine maintenance as well as additional cautions regarding accidental heating of ladders. The horizontal bending test for folding ladders was added. The horizontal bending test for extension ladders was modified to reflect changes determined acceptable from field experience with the use of the test method.

The 1994 edition removed the exception that allowed the authority having jurisdiction to use a reduced test weight for the horizontal bending test for extension ladders built prior to 1984. The standard was revised to keep it up to date, including adding requirements for retrofitting heat sensor labels after appropriate testing.

The 1999 edition incorporated minor editorial revisions and rearranged the document to better organize the material.

With this edition, the title has changed to *Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground Ladders* to better reflect that this is a standard that pertains to the ladder after it has been put in service. The document has been reorganized according to the current NFPA *Manual of Style*, and ambiguous wording has been clarified. An alternate method for loading a ladder during the horizontal bending test is now permitted. The maximum temperature that ladders can be subjected to under non-fire conditions has been reduced to 212°F (100°C). The optional hardness test has been deleted. The conditions for removal of ground ladders from service because of failing inspections or testing have been clarified.

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This list represents the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of the document.

NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

Committee Scope: This Committee shall have primary responsibility for documents on the design, inspection, testing, and use of ground ladders for the fire service.

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A reference in brackets [] following a section or paragraph indicates material that has been extracted from another NFPA document. As an aid to the user, the complete title and edition of the source documents for mandatory extracts are given in Chapter 2 and those for nonmandatory extracts are given in Annex B. Editorial changes to extracted material consist of revising references to an appropriate division in this document or the inclusion of the document number with the division number when the reference is to the original document. Requests for interpretations or revisions of extracted text shall be sent to the technical committee responsible for the source document.

Information on referenced publications can be found in Chapter 2 and Annex B.

Chapter 1 Administration

1.1* Scope. This standard specifies requirements for the use, maintenance, inspection, and service testing of fire department ground ladders.

1.2* Purpose.

1.2.1 The purpose of this standard is to provide requirements for the use, maintenance, and service testing of fire department ground ladders that will result in reasonable safety for fire fighters and victims during the use of those ground ladders.

1.2.2 This standard also provides users of fire department ground ladders with a means to determine if in-service fire department ground ladders are fit for continued service.

1.3* Application. This standard applies to all ground ladders, regardless of year of manufacture, used by fire departments for rescue, fire-fighting operations, and training.

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 NFPA Publication. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 1931, *Standard for Manufacturer's Design of Fire Department Ground Ladders*, 2004 edition.

2.3 Other Publications. (Reserved)

Chapter 3 Definitions

3.1 General. The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not included, common usage of the terms shall apply.

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

3.2.2* Authority Having Jurisdiction (AHJ). An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

3.2.3 Shall. Indicates a mandatory requirement.

3.2.4 Should. Indicates a recommendation or that which is advised but not required.

3.2.5 Standard. A document, the main text of which contains only mandatory provisions using the word "shall" to indicate requirements and which is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions shall be located in an appendix or annex, footnote, or fine-print note and are not to be considered a part of the requirements of a standard.

3.3 General Definitions.

3.3.1 Angle of Inclination. The angle incorporated between the beams and a level plane. [1931:3.3]

3.3.2 Base (Bed) Section. The lowest or widest section of an extension ladder. [1931:3.3]

3.3.3 Beam (Side Rail). The main structural side of the ground ladder. [1931:3.3]

3.3.4 Bedded Position. The position in which the fly section(s) of an extension ladder is fully retracted with the pawls engaged. [1931:3.3]

3.3.5* Butt. The end of the beam that is placed on the ground, or other lower support surface, when ground ladders are in the raised position. [1931:3.3]

3.3.6* Butt Spurs (Feet). That component of ground ladder support that is in contact with the lower support surface to reduce slippage. [1931:3.3]

3.3.7 Collapsible Ladder. See 3.3.15, Folding Ladder.

3.3.8 Combination Ladder. A ground ladder that is capable of being used as both a stepladder and as a single or extension ladder. [1931:3.3]

3.3.9 Designated Length. The length marked on the ladder. [1931:3.3]

3.3.10 Dogs. See 3.3.22, Pawls.

3.3.11 Duty Rating. The maximum load the ladder is designed to support when it is in use and properly positioned. [1931:3.3]