

# **Department of Building & Fire Prevention**

4701 W. Russell Road • Las Vegas, NV 89118 (702) 455-3000 • Fax (702) 221-0630

Jerome A. Stueve, P.E., Director

Samuel D. Palmer, P.E., Assistant Director • Jim Gerren, P.E. Assistant Director • Girard W. Page, Fire Marshal

### **CLARK COUNTY BOARD OF FIRE CODE APPEALS**

### MINUTES of August 16, 2021

9:00 a.m. - Presentation Room

MEMBERS PRESENT: Corey Wallace, Fire Sprinkler Contractor

Allyn Vaughn, Fire Protection Engineer Roy Mares, Fire Safety Specialist

Bill Laub, Layman

Katherine Springstead, Exhibit & Trade Industry Representative

STAFF PRESENT: Jerry Stueve, Director/Building & Fire Code Official

James Gerren, Assistant Directory Lisa Logsdon, District Attorney's Office Theresa Atimalala, Executive Assistant

MEMBERS ABSENT: Patrick Burke, Fire Alarm Contractor

Tim M. Mulrooney, Civil Engineer

Diane Cravotta, Specialist In Hazardous Materials

John Steinbeck, Fire Chief, Clark County Fire Department

APPELLANTS PRESENT: Lee Marx, American Fire Systems

### A. Call to Order

The meeting was called to order at approximately 9:02 a.m. by Chair Corey Wallace.

- 1. Introductions were made around the table.
- 2. It was determined by Chair Corey Wallace that a quorum was present.
- B. Public Comment

There were no public comments.

C. Meeting Minutes – January 10, 2020

A motion was made by Allyn Vaughn, seconded by Bill Laub, approving the minutes of January 10, 2020, as written, and passed unanimously.

D. Appeal by American Fire & Electric of the code interpretation FP-CI-52, as it relates to 2016 NFPA 13R, Sections 5.4.1. and residential garages not being able to maintain 40 degrees.

Lee Marx, Ace Fire Systems, presented his appeal stating there is no documentation that backs up Jerry Stueve's interpretation that residential garages are generally not expected to maintain temperatures above 40 degrees. Other jurisdictions accept the normal course of freeze protection in both 13D and 13R garages as reliable spaces to maintain 40 degrees or keep sprinkler pipes from freezing. The areas in Clark County that have the ability to maintain 40 degrees should be coded to accept normal insulating practices as freeze protection in those areas. Mr. Marx claims in the past he has submitted group home facility drawings to Clark County and was required to provide freeze protection, however Nevada State Fire Marshall approved the same plans without any additional freeze protection required. 13D and 13R sprinkler systems are identical. Mr. Marx has a list of previous permit numbers and locations where their submittal of 13R systems were approved without any additional freeze protection requirements other than industry standard. A precedence has been set. Mr. Marx's problem with the interpretation is providing freeze protection in areas that have already been established by precedent as not being an issue in areas established that can maintain and keep sprinkler pipes from freezing.

Jerry Stueve, Fire Code Official explained that the interpretation issued was based on the question asked, whether or not the code section applied to all garages in unincorporated Clark County. Clark County has various Geographic areas. There were no specifics on the construction of the garage, whether or not it was standalone or attached. Based on the information that was asked, the interpretation is that we cannot reliably state that any garage built in Clark County can maintain a temperature above 40 degrees.

After discussion, the Board clarified that the appellant's formal appeal request does not match what the appellant has presented to the Board. The powers of the board are limited to address only the appeal, no other topics.

Allyn Vaughn makes a motion to reject the appeal based on the request for interpretation and the interpretation given. Bill Laub seconds the motion; all were in favor.

Allyn Vaughn makes a comment to the appellant, that if the appeal or question is revised to be more specific, specific project, etc. he may get a different interpretation.

- E. Comments from Staff
  There were no comments.
- F. Public Comment
  There were no comments.
- G. Adjournment

A motion to adjourn was made by Chair Corey Wallace and seconded by Bill Laub.

Clark County Board of Fire Code Appeals Meeting, August 16, 2021,	continued
Page 3 of 3	

Meeting adjourned at 9:46 a.m.

Respectfully submitted,

Jerome A. Stueve Director/Building & Fire Official

JAS: taa

### Attachment(s):

Clark County Board of Fire Code Appeals Code Interpretation: FP-CI-52, 2016 NFPA 13R, Section 5.4.1, effective 06/07/21 Email string between appellant Lee Marx and Jerry Stueve, 05/21/21, 05/24/21, 05/25/21, 06/07/21



## **Clark County Department of Building & Fire Prevention**

4701 West Russell Road • Las Vegas NV 89118 (702) 455-3000 • Fax (702) 455-5810

Division:	Fire Prevention	Code Interpretation:	FP-CI-52
Subject:	APPLICABILITY OF 2016 NFPA 13R, SECTION 5.4.1 AS IT RELATES TO RESIDENTIAL GARAGES	Effective Date:	06/07/21
Code:	2016 NFPA 13R, SECTION 5.4.1	Revised Date:	NEW

### A. SUBJECT:

Clark County Department of Building & Fire Prevention (CCDBFP) received a request for a formal code interpretation of the applicability of the provision of 2016 NFPA 13R, section 5.4.1 as it relates to the residential garages and whether these spaces can reliably maintain a temperature above 40°F to permit the installation of a wet pipe sprinkler system within the garage.

### **B. CODE REQUIREMENT:**

**2016 NFPA 13R, 5.4.1.** A wet pipe system shall be used where piping is installed in areas that can be maintained reliably above 40°F (4°C).

#### C. INTERPRETATION:

As it relates to the applicability of 2016 NFPA 13R, section 5.4.1, in unincorporated Clark County, Nevada, a residential garage is generally deemed to be a space that cannot reliably be expected to maintain a temperature above 40°F (4°C).

### D. RATIONALE:

Although specific garages may be capable of reliably maintaining a temperature above 40°F (4°C), due to the variability of the construction methods, materials and the elevation of the possible locations of the garages, the Fire Code Official cannot deem all garages in unincorporated Clark County that have been, or could be constructed in the future, to be able to reliably maintain a temperature above 40°F. The International Residential Code and the International Building Code (collectively referred to as "Codes") do not have any provisions that require residential garages to be insulated except for in the walls and ceilings that separate the garage from condition spaces. The Codes do not require of any passive or active heating/cooling systems to justify considering garages to be conditioned spaces. Additionally, the National Weather Service reports that every year since 1937 the official lowest minimum temperature in Las Vegas has been at or below 30°F.

There are, however, methods available to provide wet sprinkler protection in these garages. 2016 NFPA section 5.4.2 sets forth five separate methods for piping in areas that cannot be maintained reliably above 40°F (4°C), and section 5.4.4 allows for water filled piping to be installed in areas where the temperature is less than 40°F (4°C) when heat loss calculation performed by a professional engineer verify that the system will not freeze.

In addition, Alternate Means and Method Report describing how a specific installation meets the intent and not less stringent than the Codes and Standards may be possible. For instance, NFPA 13 Section 22.38.2 Item 2 indicates that fully insulated garages attached to single family residential structures do not require a source of heat to fulfill the requirement of maintained 40°F, and it is reasonable to assume that the same treatment is available for similarly situated garages protected by NFPA 13R sprinkler systems.

### Revision History:

POLICY#	TITLE	Effective Date	Revised	Reviewed

Approved by:

Jerome A. Stueve 1

Jerome A. Stueve, P.E., Director, Building Fire Code Official

From: Lee Marx

To: <u>Jerry Stueve</u>; <u>Danny Horvat</u>

Cc: Wayne Dailey

Subject: RE: Residental Garage Freeze Protection

Date: Tuesday, May 25, 2021 11:30:24 AM

Jerry,

The only code reference to freeze protection is NFPA 13R 5.4.1 and the issue is how this section is applied to residential garages and that they cannot be considered reliable of keeping pipes above 40 degrees? Again every jurisdiction in Las Vegas and the Nevada state Fire marshal allows 13R garages as a location that can be maintained reliably above 40 degrees. In NFPA 13D 9.1.1 it asks for wet pipe systems to be in areas that are above 40 degrees. The fact that every jurisdiction in Las Vegas including Clack County allows 13D garages as a location that can be maintained reliably above 40 degrees.

So not sure how this has to be addressed in an interpretation in respect to residential garages and NFPA 13R 5.4.1.

Lee

## Lee Marx

Project Manager

### AMERICAN FIRE & ELECTRIC

300 W. Utah #101 Las Vegas, Nevada 89102 Ph# 702-384-2848 Fax# 702-384-5513 License # 36762, 36942

**From:** Jerry Stueve [mailto:jerry.stueve@clarkcountynv.gov]

**Sent:** Tuesday, May 25, 2021 7:18 AM

To: Lee Marx; Danny Horvat

Cc: Wayne Dailey

Subject: RE: Residental Garage Freeze Protection

Lee,

Still awaiting confirmation is the interpretation is being requested related to NFPA 13R Section 5.4.1 or 5.4.2. I am not proceeding with researching the matter until I receive your confirmation of which section is in question.

Jerry

From: Jerry Stueve

**Sent:** Monday, May 24, 2021 9:13 AM

To: Lee Marx <lee@amfireman.com>; Danny Horvat <DHorvat@ClarkCountyNV.gov>

**Cc:** Wayne Dailey <WDailey@ClarkCountyNV.gov> **Subject:** RE: Residental Garage Freeze Protection

Lee,

I am not implying anything, just asking a clarifying question. 5.4.2 address how to obtain protection in a spaces that cannot reliably maintain 40-degrees. 5.4.1 is the provision that requires that protection is required in a spaces that cannot reliably maintain 40-degrees.

5.4.1 is the "when" protection is required. 5.4.2 is the "how" protection is to be obtained. Based on your original request, I suspect 5.4.1 is the correct section reference, though that is not what is stated.

Please confirm your request.

Please note an interpretation on 5.4.2 will **not** address whether or not a garage with a garage door requires protection for the fire sprinkler system.

Jerry

From: Lee Marx < lee@amfireman.com>
Sent: Monday, May 24, 2021 9:03 AM

**To:** Jerry Stueve < <u>ierry.stueve@clarkcountynv.gov</u>>; Danny Horvat < <u>DHorvat@ClarkCountyNV.gov</u>>

**Cc:** Wayne Dailey < <u>WDailey@ClarkCountyNV.gov</u>> **Subject:** RE: Residental Garage Freeze Protection

Jerry,

I'm not sure what you are implying. The problem is as explained in my original request. The 40 degree requirement in multifamily residential garages. I need to know how this code section applies to the multifamily garages. It is not applied to them in all the other Jurisdictions in the Las Vegas Valley.

Lee

# Lee Marx

Project Manager

## AMERICAN FIRE & ELECTRIC

300 W. Utah #101 Las Vegas, Nevada 89102 Ph# 702-384-2848 Fax# 702-384-5513 License # 36762, 36942

**From:** Jerry Stueve [mailto:jerry.stueve@clarkcountyny.gov]

**Sent:** Monday, May 24, 2021 7:55 AM

**To:** Lee Marx; Danny Horvat

Cc: Wayne Dailey

Subject: RE: Residental Garage Freeze Protection

Lee,

5.4.2 deals with what is required if temperatures cannot be maintained above 40-degrees, and then it lists a number of options? Are you sure you want on interpretation of the applicability of each option or do you really want an interpretation of 5.4.1? Just asking, because it takes a lot of research and time to issues a formal interpretation and I hate to issue it and it not address the real issue.

Jerry

From: Lee Marx < lee@amfireman.com>
Sent: Monday, May 24, 2021 7:47 AM

To: Jerry Stueve < jerry.stueve@clarkcountynv.gov >; Danny Horvat < DHorvat@ClarkCountyNV.gov >

**Cc:** Wayne Dailey < <u>WDailey@ClarkCountyNV.gov</u>> **Subject:** RE: Residental Garage Freeze Protection

Jerry,

I would like a formal interpretation of the 2016 edition of N.F.P.A. 13R section 5.4.2 and how it relates to residential garages that are equipped with garage doors.

## Lee Marx

**Project Manager** 

### AMERICAN FIRE & ELECTRIC

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From: Jerry Stueve [mailto:jerry.stueve@clarkcountyny.gov]

Sent: Monday, May 24, 2021 7:12 AM

**To:** Lee Marx; Danny Horvat

Cc: Wayne Dailey

Subject: RE: Residental Garage Freeze Protection

Lee,

I have read your request below and have reviewed NFPA 13R, and am unsure exactly what it is you are wanting an interpretation on. Can please provide restate exactly what it is you are want the interpretation address?

Thanks,

From: Lee Marx < lee@amfireman.com>
Sent: Friday, May 21, 2021 1:35 PM

To: Jerry Stueve < <u>jerry.stueve@clarkcountynv.gov</u>>; Danny Horvat < <u>DHorvat@ClarkCountyNV.gov</u>>

**Subject:** Residental Garage Freeze Protection

Jerry,

I would like a formal interpretation of the 2016 edition of N.F.P.A. 13R section 5.4.2 in relation to garages that are equipped with garage doors.

I would also like to state for the record that the 2016 edition of N.F.P.A.13D Section 9.1.2 has the same language and the accepted practice by Clark County Fire plans check is that if fire sprinkler pipes or heads are installed in garages they are not required to be freeze protected, again providing a reasonable understanding that garages are able to maintain 40 degrees.

As requested I have done research and I found the coldest recorded temperatures in Las Vegas. The Coldest recorded Temperature Ever in Las Vegas was on January 13, 1963, the mercury dipped down to just 8 degrees in Las Vegas, (or -13.33 Celsius).

You also asked to specifically look to 1990 and 1991. I found this, In 1990, a five-day cold spell, ending Christmas Eve, resulted in several morning temperatures in the teens, including an 11-degree reading on Dec. 23 -- the coldest December day ever in Las Vegas.

In January 2015 we were involved with a property on Boulder Highway in Henderson who turned the heat off to the building and had some sprinkler fittings freeze in the attic that were installed per code with the need of residual heat and insulation, this would also be evidence that had residential garages been prone to freezing they should have frozen also at this same time if there is a freeze issue.

As I have stated no other jurisdiction in the Las Vegas Valley nor the Nevada State Fire Marshal believe that a residential garage with a garage type door on it is unable to maintain 40 degrease and has not required garages to be freeze protected. This practice has shown that garages are reliable of keeping fire sprinkle pipes and heads above 40 degrees as acceptable means or an acceptable practice of garages not having a freeze protection issue. There has not been any reliable evidence that there has been any freezing of fire sprinkler pipes in garages over the last 30 years that would give any indication that there is a need for freeze protection. If the garages were without doors or open to air I would agree this would be a freeze situation and the referenced code would apply. Thanks for you willingness to give an interpretation on this matter.

Respectfully,

Lee Marx

I have provided low temperatures for Las Vegas and the dates recorded below.

Lowest Las Vegas temperatures in recent years

Min °F Date Min °C 31 February 05, 2020 -1 28 January 02, 2019 -2

```
February 24, 2018
31
                              -1
33
        December 22, 2017 +
                              1
27
       January 01, 2016
                               -3
29
        December 27, 2015 +
                              -2
30
        December 29, 2014
                              -1
23
        January 15, 2013 +
                              -5
30
        December 20, 2012
                              -1
26
        February 03, 2011 +
                               -3
30
        December 31, 2010 +
                              -1
```

Lowest temperature recorded at Las Vegas each year

Min °F Date Min °C 29 January 06, 2009 + -2 28 December 27, 2008 + -2 23 January 14, 2007 -5 30 November 30, 2006 -1 30 December 17, 2005 + -1 30 December 24, 2004 + -1 29 December 28, 2003 -2 23 January 31, 2002 -5 28 -2 December 25, 2001 29 -2 January 08, 2000 29 February 12, 1999 -2 20 December 22, 1998 -7 25 December 27, 1997 -4 26 February 27, 1996 -3 26 December 22, 1995 -3 27 December 09, 1994 + -3 25 November 26, 1993 -4 26 December 21, 1992 + -3 22 January 01, 1991 -6 11 December 23, 1990 -12 -9 16 February 07, 1989 19 December 27, 1988 -7 23 December 26, 1987 -5 25 February 10, 1986 -4 18 February 01, 1985 -8 21 January 18, 1984 -6 27 -3 January 02, 1983 + -7 19 February 06, 1982 -3 26 December 24, 1981 27 December 10, 1980 -3 17 January 29, 1979 -8

December 09, 1978

January 10, 1977

-6

-5

22

23

19	January 02, 1976	-7	
23	December 15, 1975	-5	
12	January 03, 1974	-11	
18	January 06, 1973 +	-8	
18	January 05, 1972	-8	
12	January 06, 1971	-11	
14	January 04, 1970 +	-10	
22	December 31, 1969	-6	
15	December 22, 1968	-9	
23	December 21, 1967	-5	
23	December 31, 1966 +	-5	
22	February 12, 1965	-6	
20	, , January 09, 1964	-7	
8	January 13, 1963	-13	
17	January 12, 1962 +	-8	
21	December 13, 1961 +	-6	
20	January 02, 1960	-7	
20	January 04, 1959	-7	
23	November 18, 1958	-5	
24	January 29, 1957	-4	
16	December 09, 1956	-9	
21	February 22, 1955 +	-6	
20	December 28, 1954	-7	
19	December 24, 1953	-7	
17	January 04, 1952	-8	
21	December 09, 1951	-6	
12	January 06, 1950 +	-11	
15	December 12, 1949	-9	
17	December 25, 1948	-8	
21	January 29, 1947 +	-6	
22	December 29, 1946	-6	
17	December 20, 1945	-8	
26	February 19, 1944 +	-3	
15	January 19, 1943	-9	
_	1942 –		
23	December 25, 1941	-5	
19	December 14, 1940	-7	
21	February 06, 1939	-6	
_	1938 –		
10	January 22, 1937	-12	
_	1936 –		
23	December 18, 1935 +	-5	
25	December 30, 1934 +	-4	
_	1933 –		
17	December 13, 1932	-8	
	,	_	



## Lee Marx

Project Manager

## **AMERICAN FIRE & ELECTRIC**

300 W. Utah #101 Las Vegas, Nevada 89102 Ph# 702-384-2848 Fax# 702-384-5513 License # 36762, 36942



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From: Lee Marx

To: <u>Jerry Stueve</u>; <u>Danny Horvat</u>

Cc: Wayne Dailey

**Subject:** RE: Residental Garage Freeze Protection **Date:** Monday, June 7, 2021 12:52:42 PM

Jerry,

I would like an appeal hearing on your formal Interpretation of FP-CI-52 as it relates to 2016 NFPA 13R, Section 5.4.1 as it relates to residential garages and them not able to maintain 40 degrees. There has been a precedence set throughout the valley where garages have maintained a temperature above the 40 Degrees and have had no freezing in the past.

No other jurisdiction in the Las Vegas Valley nor the Nevada State Fire Marshal believe that a residential garage with a garage type door on it, is unable to maintain 40 degrease and has not required garages to be freeze protected in the Las Vegas Valley. This practice has shown that garages are reliable of keeping fire sprinkle pipes and heads above 40 degrees as acceptable means or an acceptable practice of garages not having a freeze protection issue. There has not been any reliable evidence that there has been any freezing of fire sprinkler pipes in garages over the last 30 years that would give any indication that there is a need for freeze protection.

It is also a practice of Clark County Fire plans Check to allow NFPA 13D garages not to provide freeze protection for approval and thus this would be the direct opposite of what you have given as a reason for it not being reliable of maintain 40 degrees.

Respectfully, Lee Marx

### Lee Marx

**Project Manager** 

### AMERICAN FIRE & ELECTRIC

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**From:** Jerry Stueve [mailto:jerry.stueve@clarkcountynv.gov]

**Sent:** Monday, June 07, 2021 11:43 AM

**To:** Lee Marx; Danny Horvat

Cc: Wayne Dailey

Subject: RE: Residental Garage Freeze Protection

Lee,

Here is the Code interpretation you requested.

Jerry

From: Lee Marx < lee@amfireman.com> Sent: Monday, May 24, 2021 9:03 AM

To: Jerry Stueve <jerry.stueve@clarkcountynv.gov>; Danny Horvat <DHorvat@ClarkCountyNV.gov>

**Cc:** Wayne Dailey < WDailey@ClarkCountyNV.gov> **Subject:** RE: Residental Garage Freeze Protection

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**Cc:** Wavne Dailev

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Lee Marx

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Lowest Las Vegas temperatures in recent years

Min °F	Date Min °C	
31	February 05, 2020	-1
28	January 02, 2019	-2
31	February 24, 2018	-1
33	December 22, 2017 +	1
27	January 01, 2016	-3
29	December 27, 2015 +	-2
30	December 29, 2014	-1
23	January 15, 2013 +	-5
30	December 20, 2012	-1
26	February 03, 2011 +	-3
30	December 31, 2010 +	-1

Lowest temperature recorded at Las Vegas each year

```
Min °F Date
              Min °C
29
       January 06, 2009 +
                              -2
28
       December 27, 2008 +
                              -2
       January 14, 2007
23
30
       November 30, 2006
                              -1
30
       December 17, 2005 +
                              -1
       December 24, 2004 +
30
```

29	December 28, 2003	-2
23	January 31, 2002	-5
28	December 25, 2001	-2
29	January 08, 2000	-2
29	February 12, 1999	-2
20	December 22, 1998	-7
25	December 27, 1997	-4
26	February 27, 1996	-3
26	December 22, 1995	-3
27	December 09, 1994 +	-3
25	November 26, 1993	-4
26	December 21, 1992 +	-3
22	January 01, 1991	-6
11	December 23, 1990	-12
16	February 07, 1989	-9
19	December 27, 1988	-7
23	December 26, 1987	-5
25	February 10, 1986	-4
18	February 01, 1985	-8
21	January 18, 1984	-6
27	January 02, 1983 +	-3
19	February 06, 1982	-7
26	December 24, 1981	-3
27	December 10, 1980	-3
17	January 29, 1979	-8
22	December 09, 1978	-6
23	January 10, 1977	-5
19	January 02, 1976	-7
23	December 15, 1975	-5
12	January 03, 1974	-11
18	January 06, 1973 +	-8
18	January 05, 1972	-8
12	January 06, 1971	-11
14	January 04, 1970 +	-10
22	December 31, 1969	-6
15	December 22, 1968	-9
23	December 21, 1967	-5
23	December 31, 1966 +	-5
22	February 12, 1965	-6
20	January 09, 1964	-7
8	January 13, 1963	-13
17	January 12, 1962 +	-8
21	December 13, 1961 +	-6
20	January 02, 1960	-7
20	January 04, 1959	-7

23	November 18, 1958	-5
24	January 29, 1957	-4
16	December 09, 1956	-9
21	February 22, 1955 +	-6
20	December 28, 1954	-7
19	December 24, 1953	-7
17	January 04, 1952	-8
21	December 09, 1951	-6
12	January 06, 1950 +	-11
15	December 12, 1949	-9
17	December 25, 1948	-8
21	January 29, 1947 +	-6
22	December 29, 1946	-6
17	December 20, 1945	-8
26	February 19, 1944 +	-3
15	January 19, 1943	-9
_	1942 –	
23	December 25, 1941	-5
19	December 14, 1940	-7
21	February 06, 1939	-6
_	1938 –	
10	January 22, 1937	-12
_	1936 –	
23	December 18, 1935 +	-5
25	December 30, 1934 +	-4
_	1933 –	
17	December 13, 1932	-8
22	December 13, 1931	- <mark>6</mark>

# Lee Marx

Project Manager

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