North Las Vegas Fire Prevention Plan Review

Fire Sprinkler Plan Submittal Checklist

City of North Las Vegas
Development Services Center
Fire Plan Review
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This checklist is provided for the convenience of our customers. Complete and accurate plan submittals help speed the plan review process. Please use the following information to assure that your application includes all of the information that is necessary for a complete review of your plans.

Part. 1 Applicant's Responsibility

Applicants are responsible for ensuring applications submitted are complete. Incomplete submittals will result in plans being ***rejected and/or delayed for approval, or returned*** to the applicant during the review process. Turnaround goals will not apply to incomplete submissions.

Part. 2 Prerequisites

Plan Readability. Plans shall be easily read; legible and have a readable typeface of which shall be **minimum 1/8 inch.** Vivid contrast or difference in brightness between the light & dark areas of the drawing is also required.

Detailed narrative describing the scope of work associated with the plans.

Part. 3 Applicable Codes

Plans shall meet the requirements of the adopted codes, ordinances and regulations.

- ☐ 2012 International Fire Code as amended by NLVFP
- ☐ Edition year of applicable NFPA Standards as Adopted
- ☐ Nevada State Fire Marshal Regulations
- ☐ Life Safety Report, if Applicable

Part. 4 General

Working plans shall be drawn to an indicated scale, on sheets of uniform size, with a plan of each floor and shall show those items from the following list that pertain to the design of the system.

- ☐ A completed Fire Protection Application Form
- ☐ 1. Name of owner or occupant/Address
- ☐ 2. Fire Protection Contractor/Address/Phone/Fax/Nevada State Fire Marshal registration#
- ☐ 3. Designer's printed name, certificate number & wet signature on each plan sheet, & on the cover of each calculation & specification submittal book
- ☐ 4. A minimum of three sets of drawings, ***two sets of specifications books*** (with product specifically identified) ***& one set of hydraulic calculations.***
- ☐ 5. Site plan details illustrate water supply pipe diameters, lengths & fittings to the building
- ☐ 6. Location and size of concealed spaces, closets, attics, and bathrooms/Any small enclosures in which no sprinklers are to be installed.

☐ 7. Location of partition & fire walls & elevation views (ceiling and roof heights)

☐ 8. Occupancy class, label & names of all areas or rooms

☐ 9. Sprinkler Head Legend completed (**make, type, model, k-factor, SIN and total**)

☐ 10. Temperature rating and location of high-temperature sprinklers

☐ 11. Total area protected by each system on each floor/Number of sprinklers on each riser per floor/Total # of sprinklers on each dry, preaction, combined or deluge system.

☐ 12. NLV General Notes for Sprinkler Systems:

☐ 13. Full height cross section, or schematic diagram, including structural member information is required for clarify and including ceiling construction and method of protection for nonmetallic piping.

Part. 5 Plan Contents

Plans must contain the following minimum content requirements. This list is not intended to be all inclusive of every detail required on a set of civil improvement plans. Rather, it is provided to give an overview of the basic plan contents needed for the review of plans.

Site Plans

Y-☐ **N-**☐ 11.1 Underground Fire Main Size: _____ Located & Dimensioned

Y-☐ **N-**☐ 11.2 Flow Test Paper Work Included **witnessed by NLVFD** (NFPA 13 §23.2.1)

Y-☐ **N-**☐ 11.3 North Direction Indicated (NFPA *13 §23.1.)*

Y-☐ **N-**☐ 11.4 Scale of all Drawings Graphically Indicated (NFPA *13 §23.1.3)*

Y-☐ **N-**☐ 11.5 Fire Department Connection (FDC) Location is Accessible (*13 §23.1.3)*

Y-☐ **N-**☐ 11.6 FDC Located on the Building Wall (NFPA1*3 §23.1.3)*

Y-☐ **N-**☐ 11.8 FDC Located toward the Fire Lane (NFPA*13 §23.1.3)*

Y-☐ **N-**☐ 11.9 Horn/Strobe Located above FDC (NFPA*13 §23.1.3)*

Y-☐ **N-**☐ 11.10 Post Indicator Valve Shown (No Closer to The Building Than 5 Feet) *(NFPA24 §6.3)*

☐ **Other** _____

_____

☐ **Comments for Section 11:** _____

_____

_____

Hazard Classification (Section 12)

☐ 12.1 Light Hazard: _____ (NFPA*13 §5.1)*

Description: _____

☐ 12.2 Ordinary Hazard: **1** **2** *(NFPA13 §5.1)*

Description: _____

☐ 12.3 Extra Hazard: **1** **2** *(NFPA 13 §5.1)*

Description: _____

☐ 12.4 General Storage to 12 ft. Height *(NFPA13 §5.1)*

Commodity Class: _____

☐ 12.5 General Storage Over 12 ft. Height *(NFPA 13 §12.1)*

Storage Height: _____

Y-☐ **N-**☐ 12.6 Rack Storage, Storage Height: _____

In Rack Heads

12.7 Interior Hose Station Information *(NFPA 13 §8.17.5):*

Y-☐ **N-**☐ Required

Y-☐ **N-**☐ Supply from Overhead

Y-☐ **N-**☐ Supply from Adjacent Overhead System

Y-☐ **N-**☐ Supply is Separate Piping System

☐ 12.8 Applicable NFPA Standard: ☐13 ☐13D ☐13R

☐ Other: _____

☐ 12.9 Type of System: ☐ Wet ☐ Dry ☐ Pre-Action

☐ Combined Dry/Pre-Action ☐ Antifreeze

☐ Deluge ☐ Foam ☐ Foam/Water

Capacity in gallons of each dry pipe system_____

☐ Other: _____

☐ 12.10 System Configuration: ☐ Tree ☐ Looped Mains ☐ Grid

☐ 12.11 Design Configuration: ☐ Pipe Schedule

☐ Hydraulic Calculations

☐ 12.12 System Area Limitations:

Light & Ordinary Hazard: _____
(NFPA 13§8.2): 52,000 sq. ft. Max

Warehouse: (General & Rack Storage over 12 ft.) _____
(NFPA 13 §8.2): 40,000 sq. ft. Max

Extra Hazard: (calculated) _____
(NFPA 13 §8.2): 40,000 sq. ft. Max

Extra Hazard: (non-calculated)_____
(NFPA 13 §8.2): 25,000 sq. ft. Max

Dry System Capacity: _____

Anti-Freeze System Capacity: _____

☐ 12.13 System Design Criteria: Density: _____

Remote Area Size: _____sq. ft.

☐ 12.14 Remote Area Length Determined By:

(NFPA 13 §23.4.4.1.1) *(1.2(√A))* _____

Other: _____

☐ 12.15 Dry System Remote Area Increased by 30%:
Minimum 1960 sq. ft (NFPA 13 §11.2.3.2.5) _____sq. ft.

☐ 12.16 Sloped Ceiling Exceeding 2" in 12", increased by 30%

(NFPA 13 §11.2.3.2.4) _____sq. ft.

Y-☐ **N-**☐ 12.17 Quick Response Area Reduction Calculation Shown on Drawing (if used) *(NFPA 13§11.2.3.2.3.1)*

Y-☐ **N-**☐ 12.18 Extra Hazard High Temperature Area Reduction: (25%) *(NFPA 13§11.2.3.2.6)*

☐ **Other**_____

_____

☐ **Comments for Section 12:** _____

_____

_____

Type of Construction (Section 13)

☐ 13.1 Type and Description of Obstructed Construction *(NFPA 13 § A.3.7.1):*

Beam & Girder: (Spacing 3' to 7'-6" on center)

Size: _____ Spacing: _____

Composite Wood Joist: (Spacing Less Than 3')

Size: _____ Spacing: _____

Panel Construction: (Beams Spaced More Than 7'-6" On Center, not over 300 sq. ft.)

Beam Sizes: Sizes: _____ _____ Spacing: _____

Wood Joist Construction

Size: _____ Spacing: _____

Concrete Twin "TT":

Size: _____ Spacing: _____

Other: _____

_____

☐ 13.2 Type and Description of Unobstructed Construction *(NFPA 13 §A.3.7.2)*:

Bar Joist: Size: Size: _____ Spacing: _____

Open Grid Ceilings: _____

Smooth Ceiling: _____

Standard Mill Construction: _____

Wood Truss Construction Size: _____ Spacing: _____

Other: _____

_____

☐ 13.3 Roof Construction:
Combustible: _____ Non-Combustible: _____

☐ 13.4 Ceiling Construction:
Combustible: _____ Non-Combustible: _____

☐ 13.5 Attic Space Used As an Air Plenum: _____

Steel Fire Proofed: _____

Y-☐ N-☐ 13.6 All Combustible Concealed Spaces Protected

Y-☐ N-☐ 13.7 Remote Area Increased for Combustible Concealed Spaces Not Protected
(NFPA 13 §11.2.3.1.4)

Y-☐ N-☐ 13.8 Draft Curtains

Y-☐ N-☐ Smoke/Heat Vents

Y-☐ N-☐ 13.9 Skylights/Glass Roofs

Y-☐ N-☐ Ceiling Elevation Defined

Y-☐ N-☐ 13.10 Ceiling Pockets
Total Volume _____

Y-☐ N-☐ 13.11 Hanger Details Provided
(NFPA 13 §23.1.3)

Y-☐ N-☐ Trapeze Hangers

Y-☐ N-☐ 13.12 Method of Attachment for Hangers Acceptable
(NFPA 13 Chapter 9)

Y-☐ N-☐ 13.13 Earthquake Bracing Details Provided
(NFPA 13 § 23.1.3)

Y-☐ N-☐ Calculations Provided
(NFPA 13 §23.1.3)

Y-☐ N-☐ 13.14 Method of Attachment for Earthquake Bracing Acceptable
(NFPA 13 Figure 9.3.5.9)

Y-☐ N-☐ 13.15 Restraint of Branch Lines
(NFPA 13 Figure 9.3.6)

☐ **Other** _____

_____

☐ **Comments for Section 13:** _____

_____

_____

Sprinkler Head Spacing And Information (Section 14)

Y-☐ **N-**☐ 14.1 Material Submittals Included with The Plans

Y-☐ **N-**☐ Complete:

Actual Head Spacing On Drawing:

Light Hazard: _____ sq. ft. per head

Ordinary Hazard: _____ sq. ft. per head

Extra Hazard Pipe Schedule: _____ sq. ft. per head

Extra Hazard Calculated: _____ sq. ft. per head

High Piled Storage with Density

Below .25: (Max. 130 sq. ft.): _____ sq. ft. per head
(NFPA 13 Table 8.6.2.2.1(d))

High Piled Storage with Density Over .25:
(Max. 100 sq. ft.) _____ sq. ft. per head
(NFPA 13 Table 8.6.2.2.1(d))

ESFR Sprinkler Heads: (Max. 100 sq. ft.): _____ sq. ft. per head
(NFPA 13 Table 8.12.2.2.1)

Large Drop Sprinkler Head: _____ sq. ft. per head

Extended Coverage Upright
or Pendent Head: _____ sq. ft. per head

Sidewall Sprinkler Head: _____ sq. ft. per head

Extended Sidewall Sprinkler Head: _____ sq. ft. per head

Extended Sidewall Sprinkler Head
Distance Calculated to Throw _____ ft.

Y-☐ **N-**☐ Small Room Rule Properly Applied
(NFPA 13 §A.8.6.3.2.4(a,b,c,& d)):

☐ 14.3 Deflector Distance Below Roof or Ceiling: (Refer to listing or Manufacturer's Data Sheets Extended Coverage and Special Sprinklers, i.e. Large Drop, ESFR.)

Unobstructed Construction:

Spray Heads 1" to 12" (An Exception May Apply) *(NFPA 13 §8.6.4.1.1)* _____

Sidewall Heads 4" to 6" (An Exception May Apply) _____

Obstructed Construction:

Spray Heads 1" to 6" Under Structural Member: *(NFPA 13 §8.6.4.1.2)* _____
(Max. Of 22" Below Ceiling / Roof Deck.)

14.4 SPECIAL CONSIDERATIONS:

Y-☐ N-☐ Min. 18" Clearance from Deflector to Top of Storage (Standard Head)

Y-☐ N-☐ Min. Clearance from Deflector to Top of Storage (Special Head Listing)

Y-☐ N-☐ Temperature Ratings Identified (NFPA 13 §22.1.3)

Y-☐ N-☐ Heater Zones

Y-☐ N-☐ Attic Area's (212º F)*(NFPA 13 Table 6.2.5.1)*

Y-☐ N-☐ Skylights (Plastic/Glass - 212º F) *(NFPA 13 Table 6.2.5.1)*

Y-☐ N-☐ Single Level of Sprinklers in Rack (½" 165º F)

Y-☐ N-☐ Multiple Level of Sprinklers in Rack (½" 165º F) w/ Deflector Shield)

☐ **Other** _____

_____

☐ **Comments for Section 14:** _____

_____

Riser and Valve Arrangements (Section 15)

Y-☐ N-☐ 15.1 Single Wet Riser *(NFPA 13 Figure A8.16.1.1)*

Y-☐ N-☐ 15.2 Single Dry Riser *(NFPA 13 Figure 8.16.1.1)*

Y-☐ N-☐ 15.3 Single Pre-Action Riser *(NFPA 13 Figure 8.16.1.1)*

Y-☐ N-☐ 15.4 Single Deluge Riser *(NFPA 13 Figure 8.16.1.1)*

Y-☐ N-☐ 15.5 Dry/Pre-Action/Deluge Valve Trim Shown On the Drawings *(NFPA 13 §23.1.3)*

Y-☐ N-☐ 15.6 Auxiliary System Off the Main System *(NFPA 13 §7.1.3)*

Y-☐ N-☐ 15.7 Floor Control Assemlies 13§8.16.1.5 (Multiple Story Building)

Y-☐ N-☐ 15.8 Multiple System Riser Valve Arrangement *(NFPA 13 Figure A8.16.1.1)*

Y-☐ N-☐ 15.9 Required Relief Valve on Wet Systems *(NFPA 13 §7.1.2)*

Y-☐ N-☐ 15.10 Water Pressure Gauges are Provided Above & Below the Main Check Valve *(NFPA 13 §7.1.1)*

Y-☐ N-☐ 15.11 Is the Inspectors Test Located In/Around the Remote Area

Y-☐ N-☐ 15.12 Auxiliary Drains Are Indicated on Secondary Mains of Gridded System *(NFPA 13 §8.16.2.5)*

Y-☐ N-☐ 15.13 Are Auxiliary Drains and Discharge for Trapped Sections of Piping Shown *(NFPA 13 §8.16.2.5)*

Y-☐ N-☐ 15.14 Are Drum-Drip's Drains Shown for Dry System Auxiliary Drains

Y-☐ N-☐ 15.15 Are All Control Valves Supervised *(NFPA 13 §8.16.1.1.2)*

☐ **Other**_____

_____

☐ **Comments for Section 15:** _____

_____

_____

Hydraulic Calculations (Section 16)

Y-☐ N-☐ 16.1 Area/Density Method

Y-☐ N-☐ Room Design Method

Y-☐ N-☐ 16.2 Cover Sheet Completely Filled Out *(NFPA 13 §23.1.3)*

Y-☐ N-☐ 16.3 Water Flow Used Matches Accepted Paperwork

Y-☐ N-☐ 16.4 Water Flow Test is Current (Year Old Maximum)

Y-☐ N-☐ 16.5 10 PSI Safety Factor *(Southern Nevada Amendments (SNA) 23.4.1.7)*

Y-☐ N-☐ 16.6 Occupancy Classification Match Drawings

Y-☐ N-☐ 16.7 Hose Allowance Added

Y-☐ N-☐ Proper Location

Y-☐ N-☐ 16.8 Sprinkler Head Matches Sprinkler Head Legend on Drawings

Y-☐ N-☐ 16.9 Equivalent "K" Factors Calculations *(NFPA 13 § 23.1.3)*

Y-☐ N-☐ 16.10 Required Designed Minimum Flow from Remote Sprinkler

Y-☐ N-☐ 16.11 Required Designed Minimum Pressure from Remote Sprinkler

Y-☐ N-☐ 16.12 Node Points Flowing Match Remote Area *(NFPA 13 §23.1.3)*

Y-☐ N-☐ 16.13 Correct "C" Factor Used *(NFPA 13 §23.1.3)*

Y-☐ N-☐ 16.14 Elevation Changes Match Drawings *(NFPA 13 §23.1.3)*

Y-☐ N-☐ 16.15 Pipe ID'S Match Plans/Manufactures Cut Sheets

Y-☐ N-☐ 16.16 Fitting Count Match Drawing *(NFPA 13 §23.1.3)*

Y-☐ N-☐ 16.17 Pipe Lengths Match Drawings *(NFPA 13 §23.1.3)*

Y-☐ N-☐ 16.18 Fixed Pressure Loss Device *(NFPA 13 §23.1.3)*

Y-☐ N-☐ 16.19 Maximum Velocity Shall Not Exceed 32 fps *(SNA, 23.4.1.6)*

Y-☐ N-☐ 16.20 Grid System "Peaked" *(NFPA 13 §23.4.4.4)*

Y-☐ N-☐ 16.21 Grid Flow Chart Provided *(NFPA 13 §23.3.5.6)*

Y-☐ N-☐ 16.22 Fixed Flows Added at the Proper Location (*NFPA 13 §11.1.6*

☐ **Other**_____

☐ **COMMENTS FOR SECTION 16:** _____

Part. 6

Other Information