

# OFFICE OF THE FIRE MARSHAL



Northern Arizona University  
Fire Marshal



Office of The  
State Fire Marshal

## NORTHERN ARIZONA UNIVERSITY FIRE CODE

Revised 9/2019

### Incorporation by Reference of the International Fire Code

Unless otherwise provided by law, any person residing, doing business, or who is physically present within the Northern Arizona University Campus shall comply with the provisions of the International Fire Code (**2018 Edition**) including all provisions of the Appendices, which is published by the International Code Council incorporated by reference as the NAU Fire Code. The incorporated material does not include any later amendments or editions. Copies of the International Fire Code are available from the International Code Council <http://www.iccsafe.org>

### NAU Code Amendments:

#### 1. Chapter 9 Fire Protection Systems - **903.2 Where Required.**

- An approved automatic sprinkler system shall be installed in all new Group A, B, E, F and M occupancies that exceed 5,000 square feet.
- An approved automatic sprinkler system shall be installed in all new Group H and R occupancies.

#### 2. Chapter 9 Fire Protection Systems – **907.2 Where required.**

- New fire alarm system initiation in Group A, B, E, F, H and M occupancies with an occupant load of 300 or more shall initiate a signal using an emergency voice/alarm communication system.
- New fire alarm systems initiation in Group R occupancies shall initiate a signal using an emergency voice/alarm communication system.

## **General requirements:**

The Northern Arizona Fire Code requires the submittal of plans for new construction, remodeling, alterations, and additions to State Buildings. Construction of all occupancy types located on the Northern Arizona University property must be reviewed for compliance with the State Fire Code by the Northern Arizona University Fire Marshal.

New installations, remodel and renovations of all fire life safety systems; fire alarms systems (to include system repair/replacement of the FACP/CPU), automatic suppression system, Alternate fire suppressions systems, hydrants, fire mains and underground supply pipe shall comply with the Northern Arizona University Fire Code and all applicable standards.

## **FIRE CODE COMPLIANCE REVIEW**

All projects that meet the requirements set out in A.R.S. §§ 41-2163 must be submitted to the Northern Arizona University Fire Marshal for review. The submitted plans will be checked for compliance with the adopted state fire code. All structures and projects must meet the specifications for; fire flow, fire department access, occupant egress, emergency lighting, and fire protection systems. Structures and projects subject to this review include, but are not limited to:

- Construction of new buildings or structures.
- Additions to existing structures.
- Modifications or alterations to existing structures that impact any egress component.
- Addition of security measures or alteration of any security gate.
- Installation, modification, renovation, replacement of a fire protection system.
- Building change of use.
- Occupancy classification change.

## **STOP WORK ORDER**

Failure to have approved plans and/or not displaying a permit on site will cause a red tag, Stop Work order to be issued against the project. A Stop Work order will only be lifted after a Permit has been issued by the University Fire Marshal for the project and a re-inspection of the site is conducted by the University Fire Marshal. All applicable fees must be paid before an inspection to lift a Stop Work Order is scheduled.

Referenced Standard(s):

ICC – International Wildland-Urban Interface Code	2018 Edition
NFPA 10 Standard for Portable Fire Extinguishers	2018 Edition
NFPA 13 Standard for the Installation of Fire Sprinkler System	2016 Edition
NFPA 13R Sprinkler Systems in Residential Occupancies	2016 Edition
NFPA 14 Standard for the Installation of Stand Pipe Systems	2016 Edition
NFPA 17A Wet Chemical Extinguishing Systems	2017 Edition
NFPA 45 Standard on Fire Protection for Laboratories	2015 Edition
NFPA 72 National Fire Alarm and Signaling Code	2016 Edition
NFPA 2001 Clean Agent Fire Extinguishing System	2015 Edition
Northern Arizona University Fire Safety Manual	2018 Revision

Other Standards: IFC/Chapter 80 - Referenced Standards.

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## **PLAN REVIEW DRAWINGS**

The Northern Arizona Fire Code requires the submittal of plans for new construction, remodeling, alterations and additions to campus buildings and new installation, alterations, modifications, maintenance upgrades and replacement for all fire protection/detection systems. Construction of ALL occupancy types located on the NAU Campus must be reviewed for compliance with the NAU Fire Code by the University Fire Marshal.

### **NOTE:**

Plan submittals to the University Fire Marshal must include a minimum of two (2) sets of plans with all required information.

**NO construction shall commence until project plans have been reviewed, approved, and a NAU Fire Marshal Permit issued.** Construction without a permit shall receive a Red Tag/immediate Stop Work Order. A Stop Work Order will not be lifted until a Permit is issued and the contractor pays a Re-inspection fee.

## **SUBMITTAL GUIDELINES**

**Note: Plans for fire protection sub-systems such as fire lines, fire sprinkler systems, and fire alarm systems will not be approved before approval of general site construction documents.**

A submittal **shall include as a minimum** the following:

1. Scaled civil drawings of site showing all buildings, including spacing, setbacks, fire department access lanes, site grades, height clearance, width, surface materials and construction, (including weight bearing), access turnarounds and hammerheads to include all dimensions and turn radii.
2. Building construction and classification, with allowable increases described.
  - Square footage of each floor and building.
  - Height of each building.
  - Fire hydrant locations, on and off site.
3. Complete floor plans showing; occupancy separations, fire doors, area separations, exiting requirements, corridor widths, direction and swing of doors, identification of dead end corridors, distances between exits, panic hardware and all other door hardware such as closures, fire stops, all rated construction, emergency lighting (type and location), occupant load in assembly areas, exit signs, wall coverings and surface finish flame spread characteristics, protected openings in exterior walls, and vertical opening enclosure. Identify areas intended for use, storage and handling of all hazardous materials. Provide complete detailed inventory for all hazardous materials for each space, area, floor and building.
4. Complete mechanical plans showing all fire and smoke dampers, and air handling units with capacity over 2,000 CFM which require duct detectors.

## NAU FIRE MARSHAL PERMIT PROCESS

Permits shall be in accordance with sections 105.1.1 through 105.7.25 of the International Fire Code

### Required Types of Permits:

1. **Operational Permit.** An operational permit allows the applicant to conduct an operation or business for which a permit is required to include but not limited to the following:

- Carnivals and Fairs
- Combustible dust-producing operations
- Compressed gases
- Hot work operations
- Exhibits and Trade Shows
- Hazardous materials
- Pyrotechnic special effects
- High pile storage
- LP – Gas Tanks
- Open burning
- Open flames and candles
- Places of assembly (large events)
- Temporary structures and tents

2. **Construction Permit.** A construction permit allows the applicant to install or modify systems and equipment for which a permit is required to include but not limited to the following:

- Automatic fire-extinguishing systems
- Battery systems
- Fire alarm/detection system
- Fire hydrants
- Fire pumps
- Solar photovoltaic systems
- Standpipe systems
- Smoke control/exhaust system

### PERMIT NUMBER

A permit number will be assigned on acceptance of the Permit Application. Notifications regarding plans will use the information provided on the Permit. The Permit Number must be used when picking up plans. If pre-paid return provisions have been made, notification will be made when plans have left the NAUFM. The Permit number must be used when calling for an inspection and on any other correspondence with the NAUFM.

### CONSTRUCTION DOCUMENTS

All construction documents, with the exception of LPG plans, shall be prepared by an Arizona Registered Design Professional. Construction documents must be submitted on at least a 24 x 36 page or larger with all pages being of the same size. All construction document drawings will be to scale with the scale indicated on the construction document drawings.

## **FIRE PROTECTION SYSTEMS**

### **PERMITS**

To receive a permit, all supporting documents must accompany plans at the time of application. Supporting documents include, but are not limited to, manufacturer's specifications for devices, equipment, products, etc. used under the permit(s) and copies of all required Arizona certifications and/or licenses.

Failure to provide all required information will result in rejection of plans for review.

All permits issued by the NAUFM must be displayed on the job site, in a location safe from weather, at all times until the Permit is closed. One set of original (wet) red stamped State approved plans must be kept on site and available for review at all times.

### **PERMIT ISSUANCE MANDATORY MEETING**

The approved permit applicant must attend the mandatory permit issuance meeting.

### **STOP WORK ORDER**

Failure to have approved plans and/or not displaying a permit on site will cause a red tag, Stop Work order to be issued against the project.

A Stop Work order will only be lifted after a Permit has been issued by the NAU Fire Marshal for the project and a re-inspection of the site is conducted by the NAU Fire Marshal. The re-inspection fee must be paid before an inspection to lift a Stop Work Order is scheduled.

### **INSPECTION REQUEST**

Schedule all Inspections: 928-523-1873

Only the permit applicant may call to schedule inspections. Inspection requests from other parties will not be accepted.

### **INSPECTION OF INTERCONNECTED FIRE SYSTEMS**

Requests for final inspection of interconnected fire alarm, automatic sprinkler, and hood extinguishing system must be conducted under a single inspection. All permitted contractors must be present for the final inspection.

When any permitted contractors for interconnected fire systems are not present for a scheduled final inspection the scheduling permit holder will fail the inspection. A re-inspection fee will be required to be paid by the permit holder of the failed system before a re-inspection of the systems can be scheduled.

## **EXPIRATION OF PERMIT**

Permits issued by the NAUFM expire 180 calendar days from the date of issue. One (1) 180 calendar day extension of a Permit may be requested BEFORE the expiration date of a permit. After the expiration date of a Permit requests for extension or inspections will not be accepted. To continue construction the project must apply for a new Permit from the NAU Fire Marshal.

## **REQUIRED INDEPENDENT – THIRD PARTY INSPECTION AND CERTIFICATIONS**

Contractor shall provide independent/3<sup>rd</sup> party inspections and certifications for the following equipment, systems and devices:

1. All fire, fire/smoke dampers, fire doors, shutters and curtains – to include interconnection/activation with the building fire alarm control system.
2. Elevator interconnection with the building fire alarm control system (State Elevator Inspection Report).
3. Smoke control systems – full function testing, certification and commissioning.

## **Fire Protection Contractor/Inspection Requirements**

**This office shall review and inspect all of the life Safety systems required by code. This includes all underground fire line.**

- Any contractor performing system installations, repairs or modifications to a life safety system shall be properly licensed by the Registrar of Contractors.
- Any contractor performing system test, inspections, maintenance and repairs shall be properly licensed by the Registrar of Contractors.
- At time of inspection by the Fire Marshal's Office, the contractor shall have the original 'RED' stamped set of plans or drawings and a copy of the permit on site. This set of plans and permit must be presented to the inspecting deputy at the time of inspection.
- For inspections on Fire Alarm Systems, a certified card carrier who has a Codes & Standards Assessments (C.S.A) or certified NICET, Level II (Minimum) photo identification card is required to be on site for inspection.
- For Automatic Sprinkler System inspections the holder of a Fitters Card or a CSA card must be present at time of inspection.
- For fire alarm or fire sprinkler inspections the Qualifying Party for the ROC license holder may be present in lieu of the certification requirement.
- A person that can show proof (certification card) issued from the manufacture/ of the specific product being installed and inspected, will be acceptable in lieu of a CSA or NICET certification card. Any trained and qualified personnel employed by an organization listed by a national testing laboratory for the servicing of fire alarm systems will be acceptable.

**This form is used only as a guide. Final approval is contingent upon favorable field inspection.**

## **Fire Alarm and Detection Control System**

**NOTE: No construction shall commence until project plans have been reviewed, approved and a permit issued.** Construction without a permit shall receive a Red Tag/immediate Stop Work Order. A Stop Work Order will not be lifted until a Permit is issued and the contractor pays a Re-inspection fee.

**Note:** All submittals shall be stamped by an Arizona Design professional or NICET / CSA 3 or above.

**Where required** – new buildings and structures. An approved fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures. All existing fire alarm system replacement, renovations, alterations and FACP/CPU replacement and re-programming require a Fire Marshal permit (emergency FACP/CPU replacement and programming shall be performed by an approved factory trained and certified licensed contractor – contractor shall submit a permit application to the Fire Marshal's office within 72 hours of the emergency replacement – all FACP/CPU replacement and re-programming will require a Fire Marshal 100% system test/final).

Fire alarm and emergency communications system installation personnel shall be qualified or supervised by persons who are qualified in the installation, inspection and testing of the system. (This includes conduit installation, wiring and device trim).

Qualified personnel shall include the following:

- (1) Personnel who are registered licensed or certified by the State of Arizona.
- (2) Personnel who are certified by a national recognized certification organization (NICET).
- (3) Personnel who are factory trained and certified for fire alarm system and/or emergency communication system installation of the specific type and brand of system.

Personnel performing system programming functions shall be certified by the manufacturer for panel type and model.

The submittal **shall include, as a minimum**, the following:

- Name and complete address of facility, contact phone number and e-mail.
- Name and address of installing contractor, class of license, and license number.
- A scaled site plan, if more than one building is to be alarmed.
- Scaled floor plans of the building, identifying the use of each room.
- Location and type of each alarm device.
- Location of all doors, windows, and supply & return registers.
- Location of fire alarm control panel and annunciators if used.
- Location of conduit or wire path.
- Wire schedule.
- Fire alarm device symbol list.
- Typical wiring diagrams for each device used on system.
- Riser diagram indicating how each device is connected to the loop.
- Equipment list indicating the quantities, manufacturer, and model number of each device on the system.
- Underwriters Laboratory, Factory Mutual, or other approved listing service cards for verification of cross listing of devices when not of the same manufacturer as the fire alarm control panel.
- Cut sheets for all equipment (1 copy).
- Battery calculations, battery size supplied and voltage drops for the system.
- Buildings with other than smooth ceilings at 8 feet parallel to the finished floor must provide plans that contain a cross section detail showing ceiling slope and/or locations and depth of beams.



## **Automatic Building Fire Suppression**

### **Automatic Sprinkler System Shop Drawing Submittal**

**NO construction shall commence until project plans have been reviewed, approved, and a permit issued.** Construction without a permit shall receive a Red Tag/Immediate Stop Work Order. A Stop Work Order will not be lifted until a permit is issued and the contractor pays all applicable fees.

**Note:** All submittals shall be stamped by an Arizona Design professional or NICET / CSA 3 or above and comply with NFPA 13 standards and the University Fire Code.

**Where required** – New buildings and structures. An approved automatic fire suppression system installed in accordance with the provisions of this code and NFPA 13, 13R shall be provided in new buildings and structures as required by the International Fire Code. New or renovated Business occupancies over 5000 Square feet or 3 stores in height require automatic sprinkler protection. All existing fire sprinkler system replacement, renovations, alterations and repairs require a Fire Marshal permit.

### **Submittal Guidelines**

**Note: Plans for fire protection sub-systems such as fire lines, fire sprinkler systems, and fire alarm systems will not be approved before approval of general site construction documents.**

The submittal **shall include, at a minimum,** the following:

- Name and address of the facility.
- Name and address of installing contractor, class of license, and license number, contact phone number and e-mail.
- Type of facility, product or commodity, and type and class of hazard. (Consistent with stamped construction plans.)
- Floor plan with all doors, windows, partitions, rated walls & mechanical equipment.
- Type of ceiling and roof construction.
- Total square footage protected by system.
- Indicate any additions or changes to an existing pipe schedule or calculated system.
- The system supply flow data including; date, time, location and name of person responsible for the test.
- The model type, number and operating temperature of all sprinkler heads.
- If applicable, describe system freeze protection.
- A scaled site plan indicating hydrants & fire department access. Indicate F.D.C. (Fire Department Connection) location, type and thread standard.
- The type of pipe used for overhead and underground system.
- Identification of all floors and concealed areas. Provide explanation of the exemption for any area without sprinklers.
- A plan indicating the full height cross sections including location of sprinkler heads.
- The distance between heads, branch lines and walls.
- A detailed and labeled riser diagram.
- The hanger locations, types, sway bracing and seismic zone protection provided.
- The location of inspectors test valve in system. (Interior drain shall handle full test flow or be directed to the outside of the building)
- The type and location of alarm bells and interconnection to fire alarm system.
- The description, type and size of all couplings and fittings.
- If required, all Fire pumps specifications.
- All required U.L. or F.M. approvals for system components.
- All required calculations if system is calculated.

## **Fire Main Underground /Piping**

### **Underground Fire Lines/Mains/Hydrants Plan submittal Guidelines**

**NOTE: NO construction shall commence until project plans have been reviewed, approved and a State permit issued.** Construction without a permit shall receive a Red Tag/immediate Stop Work Order. A Stop Work Order will not be lifted until a Permit is issued and the contractor pays a Re-inspection fee

**NOTE: A temporary fire line must meet all system fire flow requirements. Temporary fire line approval is limited to a period not to exceed 90 days without extension.**

The submittal **shall include, at a minimum** the following:

- Name and complete address of facility.
- If applicable, the name and address of the water provider for the project.
- Name and address of installing contractor, Class of License, and license number.
- Scaled Civil Engineering drawings of site.
- Size and location of all water mains serving site.
- Type, size, and location of all systems valves.
- Size and location of all fire hydrants, and shut-off valves, on and off site.
- Type of all fire protection systems connected to water supply system.
- Location of Fire Department Connection, including connectors and type of threads.
- Location and type of each control valve between the private main and street supply.
- Type and location of any Post Indicator Valves on system, including distance from building.
- Type of pipe, (Ductile Iron, asbestos Cement, P.V.C. etc.), used in system.
- Depth of buried pipe.
- The location and type of corner reinforcement for each change of pipe direction. (Thrust block, Mega-lug etc.)
- Distance from fire lane to F.D.C. connection and closest hydrant.
- The calculation of fire flow required for site per IFC 2018 Appendix B.
- Provide type and specifications of Backflow prevention devices.
- Poly wrapped if applicable.
- Tracer wire.

## **Kitchen Hood Extinguishing System**

### **Plan Submittal Guidelines Automatic Extinguishing System**

**NOTE: NO construction shall commence until project plans have been reviewed, approved and a State permit issued.** Construction without a permit shall receive a Red Tag/immediate Stop Work Order. A Stop Work Order will not be lifted until a Permit is issued and the contractor pays a Re-inspection fee.

The submittal **shall include, as a minimum**, the following:

- Name and complete address of facility and contact phone number.
- Name and address of installing contractor, class of license, and license number.
- The system type, model number, type and volume of extinguishing agent.
- The hood dimensions and type of construction. The size of the plenum and the number, size and length of exhaust ducts. The type of filters or grease extractors.
- The type of rated enclosure exhaust ductwork passes through to roof.
- Number, type and dimensions of cooking appliances under hood.
- The distance from appliance to hood.
- A floor plan of the kitchen, showing dimensions to location of system bottles and required, type K, portable extinguisher.
- The location of manual pull stations on the floor plan, next to the Exit and mounting height above finished floor
- The fuel shut off location and type, electrical, mechanical, etc.
- Views of hood, appliances, and piping, including pipe dimensions and lengths.
- The nozzle to cooking surface distances.
- The number and location of all actuating mechanisms.
- Indication if exhaust air and makeup air to remain on or off after actuation.
- The manufacturer's information tables indicating system pipe and nozzle parameters or system cut sheets.

**This form is used only as a guide. Final approval is contingent upon a favorable field inspection.**

## Inspection Requirements for a Fire Alarm System Final

The referenced requirements are found in the NFPA 72 and 70 standards.

**Note: This Permit will be allowed one inspection.**

- Original NAU Fire Marshal approved and stamped plans and permit must be on site.
  - Appropriate certified installer on site. (Minimum NICET / CSA / Factory Trained Technician)
  - Fire alarm panel in normal mode with no troubles showing.
  - Reviewed installed batteries for compliance with approved plans.
  - Fire alarm system must be installed in accordance with approved plans.
  - One hundred percent pretest required before inspection. Inspector will verify results by testing ten percent of system devices. If one device fails the 10% test, the inspection may be failed.
  - Smoke detectors installed before construction is complete may be grounds for failure.
  - System must function on battery power.
  - F/A circuit breaker location noted on inside of panel and circuit breaker is locked.
  - Loss of A/C power for any system component must report to main panel as a trouble.
  - All NAC and SLC loops must report line troubles (short, breaks, ground fault) to main panel.
  - If Class (A) device functionality must be maintained both sides of break.
  - Class (B) NAC circuits must report loss of EOL device or resistor.
  - Class (B) NAC circuits EOL location noted on plans.
  - Class (B) SLC circuits must report loss of any device.
  - Addressable systems must report loss of devices.
  - All non-power limited wiring must be in compliance with NFPA 70.
  - All power limited circuits must be in compliance with NFPA 70 and 72.
  - Listed primary protection provided where required by NFPA 70
  - All detection devices installed in compliance with plans, listing, and established standards.
  - All notification devices installed in compliance with plans, listing, and established standards.
  - All fire protection systems must be monitored by fire alarm system.
  - Fire alarm system must detect open circuit on tamper or flow switches.
  - All fire safety functions performed by fire alarm system must function as designed. (Fire door release, AHU shutdown, stairwell fans, etc.)
  - All fire alarm monitoring must be in place and functional.
  - Received State Elevator Inspector final inspection report (all F/A Elevator functions).
  - Received third party Duct / Smoke detector certification and smoke/fire damper report. (If applicable).
  - Received NFPA 72 document from installer.
- **Note: The Fire Alarm installing contractor will need to coordinate final inspections with the fire sprinkler contractor.**

**This form is used only as a guide. Final approval is contingent upon favorable field inspection.**

## **Inspection Requirements for a fire Sprinkler System 200# Rough-in**

**The Below requirements are in accordance with NFPA 13 standards.**

**Note: a fire sprinkler permit only allows for two inspections; one rough in and one final.**

- NAU Fire Marshal approved plans and permit must be on site.
- Appropriate certified installer on site. (Minimum NICET 2 / CSA 2/ Fitters Card)
- System has been pressurized to 200# or 50# above working pressure whichever is greater.
- For the addition of 20 heads or greater, the addition must be isolated if possible and hydrostatically tested.
- The system must have been at test pressure for two hours before the start of inspection.
- Dry Pipe and Double Interlock System(s) Air Test, in addition to the standard hydrostatic test, an air pressure leakage test at 40 psi shall be conducted for 24 hours. Any leakage that results in a loss of pressure in excess of 1½ psi for the 24 hours shall be corrected.
- Third party witness of the time that the hydrostatic pressure was started must be on site during inspection.
- Pressure of the system is maintained without any leaks during inspection.
- Hard lids and drop ceilings do not obstruct inspection.
- Proper listed hanging methods were used, and hangers or restraints are installed correctly.
- Proper pipe diameter per plans.
- Pipe used matches submitted plans.
- Fittings are of approved type.
- Drains as required per NFPA 13 installed.
- Overhead sprinkler coverage in accordance with applicable NFPA standard.
- Sprinkler heads match approved plans as per temperature rating and K factor.
- Sprinkler head deflectors parallel to roof.
- Note: NFPA form “Contractor's Material and Test Certificate for Aboveground Piping” will need to be received from installing contractor at final inspection.

**Note: The fire sprinkler installing contractor will need to coordinate with the fire alarm contractor when calling for final.**

**This form is used only as a guide. Final approval is contingent upon favorable field inspection.**

## **Inspection Requirements for a Fire Sprinkler System Final**

**The requirements are in accordance with NFPA standards.**

**Note: a fire sprinkler permit only allows for two inspections; one rough in and one final.**

- NAU Fire Marshal approved plans and permit must be on site.
- Appropriate certified installer on site. (Minimum NICET 2 / CSA 2/ Fitters Card)
- Proper four-way sway bracing attached to main riser.
- Bottom of riser is finished properly.
- Spare Head box securely mounted with minimum required quantity of heads, wrench for each type of spare head, and an original NFPA 25.
- FDC has correct threads or connections and is properly capped.
- All sprinkler heads provide coverage in accordance with NFPA standards and their listing.
- Sprinkler heads are installed with regards to obstructions, pockets, beams and soffits.
- Extended coverage sprinklers installed in accordance with approved design characteristics.
- Fire sprinkler heads response type and temperature are installed in accordance with code.
- Provided appropriate signage for sprinkler control valves, Main drain, and Inspectors test valve.
- Rooms containing control valves are marked accordingly.
- Hydraulic Design Information Sign securely attached at main riser, the sign shall include the following information:
  - Location of the design area or areas
  - Discharge densities over the design area or areas
  - Required flow and residual pressure demand at the base of the riser
  - Occupancy classification or commodity classification and maximum permitted storage height and configuration
  - Hose stream demand included in addition to the sprinkler demand
- Main drain test will be performed to acquire static and residual available pressures.
- Calculation plate required flow and pressure agree with the results of the main drain test.
- Inspectors test valve alarm activation must be within 30 and 90 seconds.
- Outside sprinkler bell operated during flow test.
- Tamper switch must report to main fire alarm panel.
- Perform an open circuit on tamper and flow switch.
- Fire alarm panel must report to offsite monitoring station.
- If no tamper monitoring is required by code, valves must be secured and locked.
- Received Material Certification and testing for aboveground piping.

**Note: The fire sprinkler installing contractor will need to coordinate with the fire alarm contractor when calling for final.**

**This form is used only as a guide. Final approval is contingent upon favorable field inspection.**

## **Inspection Requirements for a Commercial Hood Suppression System Final**

The Below requirements are from NFPA 17A and 96 standards.

**Note: This Permit will be allowed one field inspection only.**

- NAU Fire Marshal approved plans and permit on site.
- Appropriate certified installer on site.
- Discharge nozzles positioned over cooking equipment/in plenum/duct per plans and listing, all blow off caps or covers in place.
- 16in separation or 8in splash shield between griddle and fryers.NFPA96
- All protected equipment shall be operational for test.
- Hood make up air shall shut down. NFPA96
- Upon hood activation all sources of fuel and power that serve appliances under the hood shall shut down. NFPA17
- Shut down devices shall require manual resetting prior to fuel and power being restored. NFPA17
- Activation of the hood suppression system shall activate fire alarm system if present. NFPA17
- Upon hood activation the exhaust shall continue to operate. NFPA96
- Activation of the hood suppression system shall be tested with fusible link and pull station.
- A class "K" fire extinguisher shall be located less than 30ft from Commercial hoods. NFPA96

**Note: The installing contractor will need to call for final inspection.**

## **Inspection Requirements for a Fire Line 200# with Flush**

The Below requirements are pulled from NFPA 24 standards.

**Note: This Permit will be allowed one field inspection only.**

- NAU Fire Marshal approved plans and permit on site.
- Appropriate certified installer on site.
- System has been pressurized to 200# for two hours before inspection starts with no loss of pressure.
- The third party witness of the 200# startup time on must be on site during inspection.
- Pressure on the system must be maintained during inspection.
- All installed pipe must be verified as to type and size.
- All joints must be exposed to verify lack of leakage.
- Buried fire line may be center loaded for safety.
- Thrust blocks and or restraint systems must be exposed for verification of installation conforming to NFPA 24.
- Proper pipe diameter per plans, and (if required) poly wrapped.
- Locator tape and tracer wires must be installed.
- Proper bedding and shading of buried fire protection line will be verified.
- Depth of cover must conform to NFPA 24.
- Components installed as a system for underground fire line must be listed for that purpose.
- Received Material Certification and testing for belowground piping from installing contractor.
- Fire line must be flushed at required velocities in accordance with NFPA 24 until free of debris before any connection to installed fire protection systems.

**Note: The installing contractor will need to call for inspection.**

**This form is used only as a guide. Final approval is contingent upon favorable field inspection.**



## **Inspection Requirements for a General Construction Final.**

**The referenced requirements are contained in the 2018 IFC fire codes.**

- NAU Fire Marshal approved plans and permit on site.
- Appropriate General contractor on site.
- Received independent third party test, inspection and certification of completion of all through-penetration, membrane penetration fire stop systems.
- Received independent third party test, inspection and certification of all duct smoke detectors for proper installation and velocity at the probes. The inspection also includes inspecting each fire damper and smoke damper to verify that it is installed in accordance with its UL submitted installation guidelines.
- Received independent third party test, inspection and certification of all sprayed fire-resistant materials.
- Fire Lanes are accessible and marked appropriately.
- Fire lanes meet the requirements of the 2018 IFC 503.2.1.
- Building addresses correctly sized and readable Facing Street per 2018 IFC 505.1.
- All required fire protection systems are installed and approved.
- All fire protection water supplies installed and approved.
- Fire hydrants installed and located for fire department response.
- All emergency exits available for use.
- All exit signs illuminated and tested on backup power.
- Emergency lighting tested on primary and backup power.
- Required panic hardware installed and tested.
- All special systems installed have final approval.
- Fire department lock box (if required) by local jurisdiction.

**General contractor to call for final when ready.**