



CLARK COUNTY FIRE DEPARTMENT  
Fire Prevention Bureau  
575 E. Flamingo Road, Las Vegas, NV 89119  
(702) 455-7316 FAX (702) 455-7347



**Permit Type: 105.8.f.5**  
**Revision Date: 10/08/10**  
**Supersedes Date: 04/11/08**

**TITLE: INDOOR PYROTECHNICS/SPECIAL EFFECTS DISPLAY**

**SCOPE:** The **temporary** storage, use and handling of pyrotechnic material and equipment intended for an indoor pyrotechnics display shall comply with this guideline, the 2000 Edition of NFPA 1126, and Article 78 of the Clark County Fire Code. This guideline shall not apply to any use of "proximate" effects in an outdoor setting. Temporary outdoor displays utilizing "proximate" effects shall comply with the 2000 Edition of NFPA 1123, Article 78 of the Clark County Fire Code and the Outdoor Pyrotechnics Display Guideline.

**PURPOSE:** To provide standardized Clark County Fire Department permit requirements relating to the use of pyrotechnic effects and equipment which provides for the reasonable and safe conduct of indoor pyrotechnics displays.

**DEFINITIONS:**

See the 2000 edition of Standard for the Use of Pyrotechnics before a Proximate Audience, NFPA1126 for definitions with respect to indoor pyrotechnics.

**PERMIT PROCEDURE INFORMATION:**

The submittals, as described herein, shall be submitted six weeks in advance of the date of the first display under each permit in order to avoid additional fees.

**SPECIFICATIONS AND REQUIREMENTS:**

The permit application will have three (3) sets of plans, drawn to a measurable scale and submitted for review with the minimum fee due. Reference the Clark County Fire Department Permit and Service Fee Schedule for details. Once approved, an inspection can be scheduled. To schedule an inspection, visit our website at [www.accessclarkcounty.com/fire](http://www.accessclarkcounty.com/fire).

The following information must be provided with all submittals:

- **Licensing:** A copy of a valid Nevada State Fire Marshal license for indoor pyrotechnics/special effects will be required for the company, and an operator certificate of registration will be required for the technician(s) firing the show(s). These documents will be required for **any** indoor display of pyrotechnics.
- **Insurance:** Provide a copy of a valid bond or Certificate of Insurance for the specified event. "Clark County, its agents, employees and volunteers" shall be named as additional insured and certificate holder. General liability limits, including contractual liability, in the minimum amount of \$1,000,000 shall be provided to conduct an indoor pyrotechnics display.
- **Additional Insurance:** Greater liability insurance amounts may be required in certain cases as required by the Chief.
- **Production Schedule:** Provide a detailed description to include the following, but not limited to:
  1. The name of the contact person for the property/facility, their telephone & fax number.
  2. The contact information for the technician, such as office telephone, cellular telephone and fax numbers, as well as a valid Nevada State Fire Marshal license for the technician.
  3. A list of effects, quantity, and a brief description of each effect, size/load in each effect, total number of each effect, maximum height of each effect, all firing locations and expected fallout/debris if applicable.
  4. Note if devices are pre-packaged from the manufacturer or mixed on site.
  5. The time and dates the pyrotechnic effects are to be unloaded and stored on site.
  6. A manufacturer's statement regarding whether the pyrotechnic device is intended for indoor or outdoor use.
  7. Flame certificates for all scenery, sets, displays, curtains, linens, carpets/stage coverings, paints, materials/costumes worn by performers, lighting, rigging materials and any other materials within the pyrotechnics display or fallout area.
  8. The time and date of initial set-up.
  9. The time and date of the scheduled site inspection.

10. The time and date of the demonstration.
  11. The time and date of the pyrotechnic display along with any rehearsal times and dates. If multiple display and/or rehearsals are needed, all dates and times will also need to be provided. Rehearsal lists, cue sheets and set lists must be provided with all submittals.
  12. A schedule of firing, (shot sheet/cue sheet), including but not limited to the shot time, device address/firing zone, quantity, product number, maximum distance, maximum height of device, construction and location of every device used in each pyrotechnics display.
  13. A route map and schedule for transporting pyrotechnic devices through each facility where the pyrotechnic display is being held. Also add the location, time and date of each of the facilities' entryways or exits that will be temporarily out of service while loading/unloading of product is to occur. Only an approved amount of exits and entryways will be allowed to be used during the loading/unloading of product. Additionally, should an alarm condition occur within the hotel property, the loading/unloading will be stopped and the patrons will be allowed to immediately use all exits within the facility.
- **Monitors:** Provide monitors that shall have an acceptable means of communication with the firing technician. The sole duty of the monitor is to enforce crowd control around the display area. Unauthorized persons will not be allowed to enter the display area until the area has been inspected and deemed safe by the technician. All monitors must report status of assigned areas to the lead technician. Clark County Fire Department reserves the right to determine the minimum number of monitors required for each display.
  - **MSDS:** Provide MSDS (Material Safety Data Sheets) for all devices being used in the pyrotechnics display such as electric matches, comets, mines, gerbs, airbursts and any other devices used. The MSDS will provide a manufacturers statement regarding whether the pyrotechnic device or material is intended for indoor or outdoor use and the total amount of composition associated with each effect.
  - **Constantly Staffed Fire Control Room:** Indicate location of a constantly staffed fire control room. The individual(s) stationed in the fire control room must be knowledgeable in all aspects of the fire protection, smoke control systems and fire alarm panels. The individuals disabling any fire alarm devices must possess a valid Nevada State Fire Marshal's license for fire alarms and must be approved by Clark County Fire Department. These items are subject to change as required by the on-site inspector(s).

- **Demonstration:** A demonstration must be witnessed by a Clark County Fire Department representative prior to the issuance of any permit. All devices may be required to be shown at the demo. Consideration will be given to the location of any combustibles and persons in the proximity of pyrotechnic effects. The acceptance of each pyrotechnic device/effect will be at the discretion of the Clark County Fire Department representative in charge of the show.
- **Proscenium Opening:** In showrooms or other related rooms, pyrotechnic effects will generally not be permitted in front of a proscenium opening. Any pyrotechnics permitted in other indoor areas will be evaluated with the consideration of no proscenium separation.
- **Propane or Natural Gas Effects:** Any permanently installed propane or natural gas effects used in a long running show are required to be inspected by the mechanical division of the Clark County Building Department. Storage of any extra flammable gas cylinders must be stored outside the building in an approved and secured area and must be a minimum of 30 feet from the building with “No Smoking” signs posted. Any temporary propane or natural gas effects must be inspected and tested by the Clark County Fire Department representative in charge of the show during the pre-show demonstration.
- **Long Running Shows:** Any long running shows will require an inspector to be present during all rehearsals and any type of research and development associated with pyrotechnic effects. Pyrotechnic displays are not permitted to be conducted unless a permit has been issued and a Clark County Fire Department representative is in attendance. Any pyrotechnic displays that occur without the issuance of a permit and that occurs without a Clark County Fire Department representative being in attendance, will result in disciplinary actions against the pyrotechnics company and said company’s operator.
- **Storage:**
  1. Storage must be in a locked approved container or magazine and be located in a secured area or room. Storage/work areas must be posted “NO Smoking”. No combustible storage, open flame or smoking within 25 feet of storage/work areas is permitted.
    - a) If 1.3 G (formerly Class “B”) explosives are used, storage shall be in permanent magazines, Type-2 mobile and portable indoor/outdoor magazines or Type-3 magazines for attended storage.
    - b) If 1.4 G pyrotechnics are used, storage shall be stored in Type-1, -2 or -4 permanent, portable or mobile indoor/outdoor magazines, in accordance with the Clark County Fire Code, Article 78 and NFPA 1126. ATF regulations are referenced in NFPA 1126.

- i. Note location compounds are mixed/assembled (work area). May not be conducted at or near magazine location. Location must be noted on plot map.
  - ii. Note provisions for disposal of any duds.
- **Site Plan:** A detailed site plan must be provided and drawn to a measurable scale of the entire property where the pyrotechnics display is being held. The site plan will also provide the following:
    1. Indicate the location of stages, platforms, trusses, backdrops, signs, lighting, ceilings, curtains, spectators, firing boards, each separate zone and device location, performers in reference to pyrotechnic effects, and the location of the pyrotechnic operators firing position. The heights of stages or platforms being used as firing positions must be provided. The heights of all trusses, backdrops, signs, lighting, ceilings or other associated types of items shall be measured from floor level or from stage/platform level if applicable and must also be included in each submittal to determine the maximum allowable height of each device. **The maximum allowable height of each device shall be no more than 3/4 the distance to the nearest overhead obstruction, (40 feet height of nearest obstruction equals 30 foot maximum height of effect).**
    2. Provide each device firing position along with approved dimensions/distances to spectators drawn to a measurable scale as required and any other associated separation distances. Separation distances shall be measured horizontally from pyrotechnic display pieces to spectators.
    3. Provide the description of the surface upon which the pyrotechnic display will be located including, but not limited to, the stability of the surface and elevation.
    4. Provide fire extinguishers that shall be posted in the entire discharge area. The fire extinguishers shall be compatible to the pyrotechnic product being used, i.e.: two 2A10BC rated dry chemical and one 2.5 gallon water type. Clark County Fire Department reserves the right to determine the minimum number of fire extinguishers required for each display.
  - **Discharge Site:** A detailed layout must be provided showing the location of all pyrotechnic devices including mortar racks, but not limited to mortar trough, shooter and spotters. This layout will also provide the following:
    1. Provide the type of ignition used to ignite pyrotechnics, such as manual ignition or electrical ignition.

2. Provide the location of the firing unit and type of firing unit to be used to ignite electrical matches, if using electrical ignition.
  3. Provide the location of storage and amounts of fuses and matches to be used to ignite pyrotechnic display.
  4. Provide the description of chain-fused devices, if used during the pyrotechnic display.
- **Separation distances:** The following are the required distances that shall be maintained from pyrotechnic display pieces and spectators and must be noted on the submittal:
    1. Most pyrotechnic devices are required to have a minimum separation distance of 15 feet from the effect to the spectators. These distances are at the discretion of the inspector in charge of the show and may be increased depending on the effect. All separation distances must be measured horizontally and devices shall not be directed towards the spectator viewing area.
    2. Binary concussion mortars & canon simulators are required to have a minimum separation distance of 25 feet. Depending on the size of the load and type of effect used, the inspector in charge of the show may increase this distance. Binary concussion mortars must be either located in an area that is not accessible by any individual other than those responsible for the pyrotechnics display or located within the confines of a heavily constructed box or cylinder and raised into the air to the height of the nearest overhead truss.
    3. Pyrotechnic effects shall not be permitted to be shot over the heads of spectators, over egress aisles or exit pathways. This restriction will apply to devices such as: airbursts, confetti breaks, confetti streamer canons, gerbs, comets, mines, line rockets, confetti canons, and any other similar types of effects that utilize a pyrotechnic charge. Devices that do not use a pyrotechnic charge such as CO<sub>2</sub> driven effects are permitted. When using mylar confetti, extra caution should be taken around electrical equipment due to its conductive properties.
  - **Security:** A 24-hour security detail shall be provided once the pyrotechnics are delivered on site. The security personnel shall be able to perform the following:
    1. Be physically capable to maintain a constant watch over the pyrotechnics storage facility and have constant communication with fire control room representatives to alert of any situations.

2. Replacement security personnel must be provided to continue the watch in the event of a shift change.
  3. Be advised of the duties to not allow any persons other than pyrotechnic personnel in the storage or display area.
  4. Be trained in the use of a portable fire extinguisher and capable of extinguishing a small incipient fire utilizing a portable fire extinguisher.
- **Cancellations:** Permit applicants and the applicant's agents and employees shall carry out the proposed activity in compliance with this guideline, NFPA 1126, 2006 edition and Chapter 33 of the Clark County Fire Code and other laws or regulations applicable thereto, whether specified or not, and in complete accordance with approved plans and specifications. The revocation of the permit and cancellation of the fireworks display shall occur when the following has been determined:
    1. The permit has been used by a person other than the person to whom the permit was issued.
    2. The permit has been used for a location other than that for which it was issued.
    3. Any of the conditions or limitations set forth in the permit has been violated.
    4. The permittee failed, refused or neglected to comply with orders or notices duly served in accordance with the provisions of this governing code within the time provided.
    5. A pyrotechnics display may be postponed or cancelled due to excess smoke within the confines of the room or any other unsafe condition.

## **PLANS CHECK STATUS INSTRUCTIONS:**

The status of the review can be checked by logging on to: [www.accessclarkcounty.com/fire](http://www.accessclarkcounty.com/fire).

## **INSPECTIONS THAT MAY BE REQUIRED AND SCHEDULING INSTRUCTIONS:**

If approved, an inspection will need to be scheduled. To schedule an inspection, also go to: [www.accessclarkcounty.com/fire](http://www.accessclarkcounty.com/fire).

The inspection will include an examination of the separation distances between the device and a test firing of one of each type of device using the firing devices covered under the permit.

The Clark County Fire Department's Fire Prevention Bureau (FPB) may perform testing, acceptance, and maintenance of fire & life safety systems as required by and within the scope and authority of the Clark County Fire Code.

This Guideline does not take the place of the Fire Code and does not take precedence over any Fire Code requirement or position taken by the Fire Chief. When a conflict exists between the requirements of this Guideline and the Fire Code or the opinion of the Fire Chief, the Fire Code or opinion of the Fire Chief prevails.

Technical Assistance may be required and when it is it will require a Technical Opinion and Report prepared by a State of Nevada licensed: qualified engineer, specialist, laboratory, or fire safety specialty organization acceptable to the Fire Chief and the owner. The Fire Chief is authorized to require design submittals to bear the Wet Stamp and Signature of a professional engineer.

Acceptance of Alternative Materials and Methods requires a Technical Opinion and Report prepared by a State of Nevada licensed: qualified engineer, specialist, laboratory, or fire safety specialty organization acceptable to the Fire Chief and the owner. The Fire Chief is authorized to require design submittals to bear the Wet Stamp and Signature of a professional engineer.