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S. Mark Showers  
Deputy Chief/Fire Marshal  
Life Safety Division

**PERMIT APPLICATION  
AERIAL FIREWORKS DISPLAY**

INSTRUCTIONS FOR APPLICANT

- **THOROUGHLY READ THIS APPLICATION AND FILL OUT COMPLETELY, USING BLACK OR BLUE INK.**
- **PLEASE PRINT RESPONSES.**
- **SUBMIT THIS APPLICATION, WITH ALL ATTACHMENTS, TO THE FIRE MARSHAL'S OFFICE AT LEAST 15 DAYS PRIOR TO EVENT.**
- **ALL SHOOTER CERTIFICATIONS MUST BE INCLUDED TO PROCESS.**

1. Aerial Display Company: \_\_\_\_\_

2. Company Phone #: \_\_\_\_\_

3. Company Emergency #: \_\_\_\_\_

4. Fireworks Supplier Name, Address, & Phone Number: \_\_\_\_\_  
\_\_\_\_\_

5. FID (Federal Identification Number): \_\_\_\_\_

6. Applicant Name(s): \_\_\_\_\_

7. Driver's License Number, State, Expiration Date: \_\_\_\_\_

8. Sponsor Information:

• Organization: \_\_\_\_\_

• Representative's Name: \_\_\_\_\_

• Business & Emergency Phone #s: \_\_\_\_\_

9. Event Location:

• List complex, facility or site, complete address or nearest street intersection and community.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

• Display Date & Time: \_\_\_\_\_ Rain Date & Time \_\_\_\_\_

**NOTE: Duration of display may not exceed 30 minutes and must be completed by 11 p.m.**

• Operator & Product arrival date & time: \_\_\_\_\_

10. Operator, Assistants and Pyrotechnic Specifications:

- Name and Age of the Operator (person in charge of firing the display): \_\_\_\_\_

- VA Certifications, Qualifications or Credentials (include copies of certificates, etc.):  
\_\_\_\_\_  
\_\_\_\_\_

- The pyrotechnic experience of the operator is evidenced by he/she having fired (check one in each column):

- |  |   |
|--|---|
| <u>Number of shows fired:</u>          | <u>During a period covering:</u>        |
| <input type="checkbox"/> 1 – 5 shows   | <input type="checkbox"/> 1 – 6 months   |
| <input type="checkbox"/> 6 – 10 shows  | <input type="checkbox"/> 7 – 12 months  |
| <input type="checkbox"/> 11 – 20 shows | <input type="checkbox"/> 13 – 24 months |
| <input type="checkbox"/> Over 20 shows | <input type="checkbox"/> Over 24 months |

- With the latest firing having occurred at:

Name of Facility:	Date of Firing:
Address:	Sponsor:
Telephone # of Sponsor:	Additional Info:

- Name and birthdates of all shooters who will be present (attach additional pages as needed):

NAME (print)	VA FIREWORKS CERT #	DOB

- List the size (in inches) and number of shells to be fired. Provide additional indication for multi-break shells and/or salutes (reports). Attach additional pages as needed:

#	SIZE	SHELL TYPE

- The display will be fired (check appropriate box):  
 Manually [ ]                      Electrically [ ]                      Combined [ ]
- Will mortars be re-loaded during the display?            YES [ ]            NO [ ]
- Mortars to be used will be constructed of (check all that apply):  
 Steel [ ]    Paper [ ]    High Density Polyethylene [ ]    Other (specify): \_\_\_\_\_

11. \*\*\*Emergency Procedures\*\*\*

**A written emergency plan must be submitted** as part of the permit review process. This plan shall include the following:

- Procedures to be followed for mis-fires. No mis-fires shall be re-fired without the approval of the Fire Marshal.
- Procedures to be followed in the event of a catastrophic failure of a firework device or component or other accident related to event activity. This must include emergency notification to fireworks personnel, event staff, and emergency personnel.
- Procedures for retrieval, security, disposal, and/or transport of fireworks that are damaged or otherwise rendered unstable by the Fire Marshal for re-firing. If this requires the services of a third party, this shall include the contact information and proof that said firm is a certified hazardous disposal firm, licensed to conduct business in Virginia. Said firm shall be immediately accessible for notification purposes by the applicant and shall be on site within a twenty-four (24) hour period once notified by the applicant. If no name and contact information of such a company is provided, it will be assumed that the applicant acknowledges that it will be responsible for paying all costs that may be incurred by the Fire Marshal's Office in abating and cleaning up the hazard.

12. Additional Attachments:

The following items are to be provided as attachments to this application:

- Proof of a corporate surety bond or a public liability insurance policy in an amount acceptable to the sponsor noted on page 1, but not less than \$2,000,000.00. This policy MUST state coverage will be honored for aerial fireworks displays and any personnel that may be involved.
- A diagram of the grounds or area where the display will be held. The diagram is not required to be to scale however it must show:
  1. The fallout radius (with an indicated distance in feet) for the largest shell to be used in the display.
  2. The points at which the shells and/or cakes are to be positioned and fired.
  3. The lines behind which the audience will be restricted to (with an indication of distance in feet).
  4. Location of significant buildings, highways, overhead obstructions, including utilities (with an indication of distance in feet).
  5. The indicated direction of North.

13. Conditions and Acknowledgements:

The following requirements are to be adhered to in accordance with the Frederick County Fire Marshal's Office. Please initial each item, indicating that the applicant acknowledges these requirements and agrees to comply with said requirements. If the item does not apply to the circumstance, please mark N/A in place of initialing.

- Each shell is marked to indicate its size (e.g., "3-in. shell"), type (e.g., "2-break with report"), and provides the name of the manufacturer, importer, or distributor. \_\_\_\_\_

- Each shell has a conspicuous warning label stating the shell is a dangerous explosive and is of a contrasting color to its background. \_\_\_\_\_
- Each type of aerial salute is conspicuously marked with the word "Salute." \_\_\_\_\_
- If reloads are used during the display, the ready box will be capable of protecting the contents from burning debris with a self-closing cover or by an equivalent means or method. \_\_\_\_\_
- During the performance of the display, the ready box will be located at least 25 feet upwind from the mortar placement. \_\_\_\_\_
- The reloading of shells will be confined to shells with a 6-inch or less diameter. \_\_\_\_\_
- **The display site has a radius of not less than 100 feet per inch of diameter of the largest shell to be fired (there are no exceptions to this rule). An additional 50 feet "buffer" is requested, if practical, to compensate for wind.** \_\_\_\_\_
- The display site radius from health care and detention/correctional facilities, or to the bulk storage area of materials that have a flammability, explosive, or toxic hazard, will not be less than 140 feet per inch of diameter of the largest shell to be fired. \_\_\_\_\_
- No spectators or spectator parking will be located within the display site. \_\_\_\_\_
- Any ground display pieces used will be located a minimum distance of 75 feet from spectator viewing and parking areas. \_\_\_\_\_
- After consulting with the sponsor, provisions have been made for adequate fire protection for the display site and the local fire company has been made fully aware of the anticipated fireworks display. It is requested that a 20 B: C fire extinguisher **AND** a 2.5 gallon water extinguisher is on hand at the display site. \_\_\_\_\_
- The display site is free of fire hazards, to include boxes, wrapping, dry grass or mulch piles, or other combustibles that could contribute to an accidental ignition of fireworks. \_\_\_\_\_
- The sponsor is providing a sufficient number of monitors, with distinctive identification (e.g. badges, colored vest, etc.) whose sole duty is enforcement of crowd control around the display area. The sponsor will determine the required number of monitors with the concurrence of the Fire Marshal (or his designee) and the operator. Where practical, temporary barriers can be incorporated to aid in crowd control. \_\_\_\_\_
- When firing shells electrically, the firing system is designed to ensure against accidental firing by providing at least a two-step interlock process that requires the operator to intentionally enable or arm the firing system, and deliberately apply fire power. \_\_\_\_\_
- The power source used for firing pyrotechnic devices is restricted to batteries or isolated power supplies used for firing purposes only. \_\_\_\_\_
- Any shell larger than 6-inches in diameter will be pre-loaded into the mortar(s) and fired electrically. \_\_\_\_\_
- Except for securely fastened mortar racks, mortars will be buried to a depth of at least 66.6% of their length.
- When mortars are to be reloaded during a display, mortars of various sizes will not be intermixed. Mortars of the same size will be placed in groups according to size and groups will be separated from one another. \_\_\_\_\_
- Mortars will be of sufficient length, strength, and durability to fire the aerial shells safely and to safe heights. \_\_\_\_\_

- All multi-shot cakes must have sandbags around them. These should cover at least half the height of the cakes. \_\_\_\_\_
- The tensile strength of steel pipe mortars will be at least 40,000 psi. Metal mortars with seams will be placed so that all seams face either left or right when viewing the line of mortars. The walls of steel mortars will be a minimum of thickness of:

Mortar ID (in.)	Spherical	Cylindrical Single Break	Cylindrical Multi-Break
3	0.04	0.11	0.21
4	0.05	0.12	0.23
5	0.06	0.13	0.25
6	0.07	0.14	0.27
8	0.09	0.16	0.31
10	0.11	0.18	0.35
12	0.13	0.20	0.39

- The cross-grain tensile strength of paper mortars will be at 2300 psi. The minimum thickness of paper mortars will be:

Mortar ID (in.)	Spherical	Cylindrical Single Break	Cylindrical Multi-Break
3	0.25	0.25	0.37
4	0.25	0.33	0.50
5	0.31	0.42	0.62
6	0.37	0.50	0.75
8	0.50	0.62	-
10	0.62	-	-
12	0.75	-	-

- The tensile strength of High Density Polyethylene<sup>1</sup> plastic mortars will be at least 3500 psi. The wall of plastic mortars will be a minimum thickness of:

Mortar ID (in.)	Spherical	Cylindrical Single Break	Cylindrical Multi-Break
3	0.15	0.20	<sup>3</sup>
4	0.20	0.26	<sup>3</sup>
5	0.25	<sup>3</sup>	<sup>3</sup>
6	0.30	<sup>3</sup>	<sup>3</sup>
8	<sup>2</sup>	<sup>3</sup>	<sup>3</sup>
10	<sup>2</sup>	<sup>3</sup>	<sup>3</sup>
12	<sup>2</sup>	<sup>3</sup>	<sup>3</sup>

<sup>1</sup> If any other plastic pipe is used, such as PVC, please provide proof or evidence the material meets or exceeds the 3500 psi threshold.

<sup>2</sup> Data not currently available

<sup>3</sup> Provide documentation for plastic manufacturer that provides evidence or proof the material meets or exceeds the 3500 psi threshold.

- The inside mortar length will be a minimum of:

Mortar ID (in.)	Single Break	Double Break	Up to 4-Break
3	15	18	21
4	20	23	27
5	24	28	32
6	28	32	37
8	34	40	46
10	40	46	54
12	46	52	62

#### 14. Final Review and Signatures

By my signature:

- I attest that the supplied information is accurate and correct.
- I acknowledge and agree to comply with all applicable requirements of the Frederick County Fire Marshal's Office, to include the Virginia Fire Prevention Code as enforced by the Fire Marshal, 2010-NFPA 1123, Fireworks Display regulations, and any other referenced NFPA standards governing the use, storage, display, and disposal of fireworks.
- I agree to comply with the provision of the submitted emergency plan. If this plan cannot be enacted, I acknowledge that I am responsible for compensating Frederick County for any and all costs (salaries, overtime, materials, supplies, professional services, etc.) related to scene security, emergency destruction operations, and hazardous materials clean up whenever the immediate removal, storage, transport and destruction of any and all damaged shells cannot be accomplished by a firm approved by the Fire Marshal.
- I also acknowledge that if a permit is issued based upon this application and the initial inspection, it:
  1. Shall be valid only at the location listed on the application, and for the specific date(s) and time(s) for which it is issued, and
  2. Does not convey approval to store explosives (display fireworks) beyond the temporary (less than 24-hour) on-site storage of the display fireworks on the date of the approved event.

**If approved for permit issuance, I understand that a copy of this application and all its attachments must be available on-site during the date(s) and time(s) noted on page 1. I also acknowledge and understand that by signing this application, I am aware of the regulations I must abide by within Frederick County. After the permit is issued, any violations may result in immediate permit suspension and/or revocation.**

Applicant Signature \_\_\_\_\_

Date \_\_\_\_\_

Fire Marshal Signature \_\_\_\_\_

Date \_\_\_\_\_