



CITY OF RIVERSIDE FIRE DEPARTMENT

FIRE PREVENTION DIVISION

INFORMATIONAL BULLETIN: 041

APPROVED BY: C. Kodat, Fire Marshal, 1/1/2023

FIREWORKS PUBLIC DISPLAY

PURPOSE

The use, possession, sale, discharge, disposal, storage, or use of all fireworks are prohibited within the City of Riverside (RMC 16.32.100), unless specifically authorized by permit from the Fire Department. Fireworks are strictly regulated by the City due to the inherent danger to persons and property involved with the use of fireworks, including those described as "safe and sane". The Fire Department may issue a permit for a public display of fireworks provided that all of the following conditions are met.

CODE REFERENCES

Title 19 of the California Code of Regulations (CCR), Chapter 6 is the primary code used as the authority with inspections and the corrective actions that are necessary. Other codes that are referenced are the California Fire Code, as adopted by the City of Riverside (City of Riverside Municipal Code – RMC 16.32.010). These codes are listed as "RMC 16.32", followed by the particular code section. Other commonly used code references include the California Building Code, the California Electrical Code, and the California Vehicle Code (CVC).

REQUIRED PERMITS

FIRE DEPARTMENT PERMIT FOR FIREWORKS PUBLIC DISPLAY – RMC 16.32.100, H&S 12640(e), Title 19 CRR, Section 982 - A valid permit must be obtained prior to bringing any fireworks into the City of Riverside. The permit must be kept on-site for review. A permit from the Fire Department will only be issued after the following has been verified:

- Permit application must be submitted a minimum of 30 working days prior to the proposed event.
- Permit fee has been paid to the City of Riverside by the applicant.
- The pyrotechnic operator has submitted an application to the Fire Department.
- The name and organization sponsoring the display.
- The names and license numbers of the persons actually in charge of the display.

- The date and time of day the display is to be held.
- The exact location planned for the display.
- A detailed site plan has been provided by the pyrotechnic operator.
- The pyrotechnic operator has provided Proof of Liability Insurance for the specific event.
- The pyrotechnic operator has provided a valid City of Riverside Business License.
- A detailed list of all of the fireworks to be used has been provided by the pyrotechnic operator.

SITE PLAN – The site plan must include the following details – Title 19 CCR, Section 982

- A detailed map of the area of the event, including the launch location, operator's location, spectator area(s), fall-out area(s), roads, trees, utility lines, access/egress routes for the event and Fire Department access.
- Location and type of event security, crowd, and traffic control.
- An aerial photograph of the area of the event, showing distances from the launch and fallout area to all nearby structures. Fallout area must be based on requirements set forth in NFPA 1123.

REQUIRED INSPECTIONS

FIRE DEPARTMENT PERMIT FOR FIREWORKS PUBLIC DISPLAY –RMC 16.32.100, H&S 12640(e), Title 19 CRR, Section 982- A valid permit must be on-site for review.

PYROTECHNIC OPERATOR AND ASSISTANTS -Title 19, CCR, Section 981(a) - Operator must have valid California State Fire Marshal Pyrotechnics Operator's License and a valid driver license in possession; name must match permit information. All assistants must provide valid photo identification. Record name and date of birth of operator and all assistants.

VERIFY SITE PLAN -Title 19 CCR, Section 982 plan must be followed -verify that the site is set up to match the approved site plan. Any deviations, modifications or other changes to the approved site plan must be approved prior to the start of the display.

SECURITY OF EVENT AREA -Title 19 CCR, Section 982, NFPA 1123

- Verify security of discharge area(s); must match approved site plan.
- Verify security of display area(s); must match approved site plan.
- Verify security of fallout area(s); must match approved site plan.
- Verify traffic and crowd control in place as per approved site plan.

TRANSPORTATION AND STORAGE

- **Transportation - types of devices** - Title 19 CCR, Section 990(a) - Only fireworks and pyrotechnic devices classified by and bearing the Seal of Registration of the State Fire Marshal shall be transported within California.

- **Transportation - packaging** -Title 19 CCR, Section 990(b) - All fireworks and pyrotechnic devices being transported in this state, whether classified or unclassified, shall be packaged and transported in accordance with the Code of Federal Regulations, Title 49, Part 173, Subpart C, or with Health and Safety Code Sections 12650-12654.
- **Transportation -vehicles** - Title 19 CCR, Section 990.1 - Every vehicle transporting fireworks or pyrotechnic devices shall comply with sections 27903, 31610 and 31616 of the California Vehicle Code.
- **Storage Location and Access** -Title 19 CCR, Section 989.1 - Storage sites must have access roads suitable for use by fire apparatus and be posted with an approved warning sign. The sign shall be weather-resistant with a reflective surface and lettering at least 2 inches high.
- **Storage Security** -Title 19 CCR, Section 989 a) - Container(s) used to store fireworks must be locked and secured.

PERSONNEL SAFETY and TRAINING • Title 19 CCR, Section 991.2- the employer or permittee shall be responsible for instructing his or her personnel who handle fireworks, pyrotechnic compositions, or devices in any capacity, in the hazards and safety procedures relating to fireworks and pyrotechnic compositions or devices. A written plan of action must be included.

FIRE PROTECTION AND SAFETY EQUIPMENT

- **Fire extinguisher** - Title 19 CCR, Section 1004(a) - A serviceable pressurized water fire extinguisher available and accessible.
- **Tools** - Title 19 CCR, Section 1004(a) - Shovel and container available for retrieving duds.
- **Protective clothing** - Title 19 CCR, Section 1004(b) - Appropriate protective gear (i.e., hard hat, long sleeved shirt, etc.) available for persons manually discharging fireworks. Persons without protective clothing will not be allowed to remain in the firing site area during discharge of fireworks.
- **No smoking** - Title 19 CCR, Section 1006 - Smoking is prohibited in any area where fireworks are handled or stored. Posting of signs may be required

MORTAR INSPECTION

- **Setup** - Title 19 CCR, Section 982J Compare list of mortar racks listed on permit with actual equipment on site.
- **Mortar type** - Title 19 CCR, Section 999(a) (2), 999(c) (3) – Mortars are approved for use with type of shells to be fired.
- **Mortar condition** - Title 19 CCR Section 999(b) (4) - Mortars are inspected prior to use for defects, debris, etc.
- **Base plugs** - Title 19 CCR Section 999(c) (2), 992(d) - Base plugs must be securely attached to bottom of mortars.
- **Mortar length** - Title 19 CCR, Section 999(b) (3), 996(c) (1) - Mortars are proper length for size of shells to be fired.

RACK INSPECTION

- **Number of tubes** – Title 19 CCR, Section 1002(a)- Racks have no more than 10 tubes per unit.
- **Material used** – Title 19 CCR, Section 1002(a) – Base and ends of racks are nominal 2” thick lumber.
- **Spacing** – Title 19 CCR, Section 1002(a) – Racks have blocks (nominally 2”X4”) separating individual mortars.
- **Side braces** - Title 19 CCR, Section 1002(a) - Racks for mortars 3" or larger have side braces of 1"x6" nominal lumber or ½ “x4" plywood.
- **Diagonal braces** - Title 19 CCR, Section 1002(a) - All racks with more than 5 tubes have diagonal side braces.
- **Stability** -Title 19 CCR, Section 1001(f)- Racks are secured to prevent falling over.

TROUGH INSPECTION

- **Length limit** - Title 19 CCR, Section 1002(b) - No trough is more than 8 feet in length.
- **Material used** - Title 19 CCR, Section 1002(b) - Bottom surface of trough is provided with 3/4” plywood if not sufficiently stable to support firing of the mortar.
- **Fasteners used** - Title 19 CCR, Section 1002(b) - Troughs are constructed of minimum 3/4“plywood and secured with 3/8" through-bolts, rods or angle iron "U" brackets at each end and center.
- **Fill material** - Title 19 CCR, Section 1001(a) - Sand or soft dirt, free of rocks or debris, is on- hand to fill trough
- **Separation of mortars** - Title 19 CCR, Section 1001, 1001(e) - Minimum separation distance between mortars is provided.
- **Bury depth** - Title 19 CCR, Section 1001(a) - Trough is of adequate height to securely bury mortar 2/3 of their minimum legal length.

DRUM INSPECTION

- **Material used** - Title 19 CCR, Section 1002(c) - Drums must be constructed of steel, aluminum, or plastic.

TRENCHES, ETC. TO BURY MORTARS IN GROUND

- **Planking required** - Title 19 CCR, Section 1001(c) - Planking below mortars is provided for unstable or unlevelled surfaces.
- **Bury depth** - Title 19 CCR, Section 1001(a) - Trenches are of sufficient depth to securely bury mortars 2/3 of their minimum legal length.
- **Separation / Spacing** - Title 19 CCR, Section 1001(d)(1), 1001(e)(1) - Minimum separation distance between mortars is provided.
- **Fill material** - Title 19 CCR, Section 1001(a) - Sand or soft dirt, free of rocks or debris, is on- hand to fill trench.

AERIAL SHELL INSPECTION

- **Seal of Registration** - Title 19CCR, Section 987.1 - Shells properly labeled for use in California.
- **Damage** - Title 19CCR, Section 1003('a) (2) - Shells must be inspected for damaged lift charge bags, lead fuse tears, tears in the piping of the quick match leaders, and missing safety caps.
- **Safety caps** - Title 19CCR, Section 1003(a)(3) - Safety caps protecting the fuse shall not be removed until firing or electrical hookup.

GROUND DEVICE INSPECTIONS

- **Seal of Registration** - Title 19CCR, Section 987 - Devices properly labeled for use In California.
- **Secured and braced** - Title 19CCR, Section 1003(1) - Set pieces, wheels and mechanical devices shall be braced, guyed, and securely attached or set as required to prevent displacement.
- **Roman Candles** - Title 19CCR, Section 1003(2) – Low level Roman Candles, multiple batteries and projectiles shall be securely set to prevent accidental displacement.

DISCHARGE FALLOUT ARE INSPECTION – Title 19CCR, Section 982

- Location is as per approved permit.
- Minimum required fallout area is provided based on 70' per inch of shell size (1123.5.1.3.1).
- Arrangements provided to secure fallout area when shell loading begins.

ELECTRICALLY FIRED DISPLAY INSPECTION

- **Power Source** - Title 19CCR, Section 992.1 - Power source is restricted to batteries or individually isolated generators.
- **Safety caps** - Title 19CCR, Section 1003(3) – Safety caps protecting the fuse shall not be removed until firing or electrical hookup.
- **Firing System Safeguards** - Title 19CCR, Section 992.2 - Firing system must be protected against accidental firing.
- **Circuit Tests** - Title 19CCR, Section 992.3 - Method for circuit testing is available
- **Sight Firing** - Title 19CCR, Section 992.4 - Firing panel is located within continuously unobstructed full view of operator.

MANUALLY FIRED DISPLAY INSPECTION

- **Mortar Size Limit** - Title 19CCR, Section 999(a)(1) - Manual firing of mortars 8” or larger in diameter is prohibited - must be electrically fired.
- **Damage** - Title 19CCR, Section 1003(2) - Shells must be inspected for damaged lift charge
- **Safety caps** - Title 19CCR, Section 1003(a)(3) - Safety caps protecting the fuse shall not be removed until firing or electrical hookup.

RELOADED MORTARS DISPLAY INSPECTION

- **HOPE Mortars** - Title 19CCR, Section 999(d) - HOPE Mortars cannot be reloaded within one hour after use.

- **Ready box location** - Title 19 CCR, Section 1003(15) (2) - Ready boxes are located more than 25 feet upwind of the closest mortar.
- **Ready box compartments** - Title 19 CCR, Section 1002(b) (3) - Ready boxes are divided into separate compartments for each shell size.
- **Ready box protective cover** - Title 19 CCR, Section 1003(b) (5) - Ready boxes are covered with a flame-resistive canvas cover.

OPERATION OF DISPLAY

- **Age of personnel** - Title 19 CCR, Section 997(3) - No one under the age of 18 is allowed in the firing, fallout, and fireworks storage areas. Posting of signs may be required.
- **Spectator safety** - Title 19 CCR, Section 997(2) - Mortars must be aimed over fallout area and away from areas occupied by spectators. During discharging of shells, operator observes activities to ensure wind and trajectory are adequate and makes adjustment if necessary.
- **Firing system safeguards** - Title 19 CCR, Section 992.2, 1003(d)(1) - All devices are ONLY fired upon or signal of the licensed operator.
- **Misfires** - Title 19 CCR, Section - 1003(g)(1) - If a misfire occurs, mortar shall be identified, marked, and left undisturbed for a minimum of 5 minutes and then half filled with water.

POST DISPLAY ACTIVITIES

- **Discharge and fallout areas security check** - Title 19 CCR, Section 1003(d)(3) - NO ONE is permitted to enter display, discharge, or fall out areas until pyrotechnic operator has determined the area to be safe and secure.
- **Firing area check** - Title 19 CCR, Section 1003(f) (1) - Entire firing area is inspected by the licensed pyrotechnic operator and crew to locate any unexploded shells. Shells located are doused with water before handling.
- **Unfired shells and misfires** - Title 19 CCR, Section 1003(g)(1), 1003(h) - Unfired shells and misfires must be identified and the mortar left undisturbed for a minimum of 5 minutes, then filled halfway with water. Unfired shells and misfires must then be removed and returned directly to supplier or stored in manner approved on permit.

REPORTS

- **State Fire Marshal prior to event** - Title 19 CCR, Section 993.1 - Pyrotechnic operator must notify State Fire Marshal at least 72 hours prior to the event.
- **State Fire Marshal after event** - Title 19 CCR, Section 1005(a), 1005(b) - The licensed pyrotechnic operator provides verbal and written reports to State Fire Marshal for any incident involving injury or death to public or crew, or for any fire requiring emergency action or response resulting from the firing of the show; verbal reports are required within 24 hours, written reports required within 10 working days following the display.
- **Fire Department** - The pyrotechnic operator shall be responsible to provide copies of all written reports required by the State Fire Marshal to the City of Riverside Fire Department within 14 working days following the display.