



**CHARLOTTE FIRE DEPARTMENT
FIRE MARSHAL'S OFFICE
500 DALTON AVE
CHARLOTTE, NC 28206**



Fire Marshal's Office Blasting Requirements

Blasting operations within the City of Charlotte shall be conducted by *approved*, competent operators familiar with the required safety precautions and the hazards involved. Blasting operations shall be done in accordance with the North Carolina Fire Code and NFPA 495. Any blasting operations performed within Mecklenburg County but beyond the jurisdiction of the Charlotte Fire Department must be coordinated with the Mecklenburg County Fire Marshal's Office.

Permitting

An operational permit must be obtained from the Charlotte Fire Department Fire Marshal's Office prior to blasting operations. The following information is required before the issuance of a permit for blasting operations:

1. An original corporate surety bond in the minimum sum of \$1,000,000.00 or an original public liability insurance policy for the same amount. The bond or policy shall be in force for the duration of the blasting operations.
2. A site plan, 8 ½" x 11" minimum size (submitted to FMHazmat@charlottenc.gov), drawn to scale, indicating:
 - a. Blasting area(s).
 - b. Any structures and their distances from the blasting site.
 - c. Nearby railway or roads.
 - d. Any barricades, whether man made or natural.
 - e. Location and distances from any utilities.
3. A description of storage arrangements of explosives, amount of storage and method of detonation.
4. A description of the blaster including their name, age, experience, business address and phone number.



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5. A completed permit application (submitted to FMHazardmat@charlottenc.gov) as well as payment in the form of a check or money order made out to “The City of Charlotte” or a Visa or MasterCard payment called into the Fire Marshal’s Office.
6. Before blasting is performed, the fire inspector shall be contacted for an initial site inspection for each separate location.
7. The Charlotte Fire Department strongly recommends pre-blast surveys be conducted of nearby structures. The blaster is responsible for following applicable federal and/or state guidelines for minimizing ground vibrations and structural damage. Blasting records shall be maintained for each blast and shall be made available to the fire inspector at his/her request.
8. All documentation required in this section must be submitted to FMHazardmat@charlottenc.gov .

The fire inspector will deliver the permit electronically once final approval is given to conduct blasting operations.

Conditions of the Permit

1. A blasting permit shall remain valid for the duration of the job or for one (1) year, whichever comes first or until the certificate of insurance expires.
2. Once the permit has been issued, a copy shall be kept at the blasting site and made available to the fire inspector for his/her review in either electronic format or paper copy.
3. The permit shall not be assigned or transferred.
4. The permit shall not be issued to a person under 21 years of age.



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5. A holder of a permit to blast shall keep a daily record of all explosive materials received and fired or otherwise disposed of by the permit holder. Such records shall be retained for five (5) years and shall be made available to the issuing authority upon request.

Conditions for Blasting Operations

1. Forty-eight (48) hour notice shall be given to the fire inspector for site inspection of the initial blasting activity.
2. The Communications Division of the Charlotte Fire Department must be notified at 704-336-2441 prior to blasting.
3. All federal, state and local laws and regulations applicable to obtaining, owning, transporting, storing, handling and using explosive materials shall be followed.
4. Explosive materials shall be protected from unauthorized possession and shall not be abandoned.
5. Explosive materials shall be used only by experienced persons who are familiar with the hazards involved and who hold all required permits.
6. No explosive materials shall be located or stored where they may be exposed to flame, excessive heat, sparks or impact.
7. No smoking shall be permitted within 50 ft of any location where explosives are being handled or used. No person within 50 ft of any location where explosives are being handled or used shall carry any matches, open light or other fire or flame, except for approved devices for lighting safety fuses.
8. No blasting operations shall be conducted in a manner contrary to the instructions of the manufacturer of the explosive materials being used.



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9. All explosive materials not in the process of manufacture, being transported or being used shall be kept in storage magazines. Storage magazines shall comply with federal explosives storage requirements.
10. Where blasting is done in a congested area or in close proximity to a structure, railway or highway, or any other installation, precautions shall be taken to minimize earth vibrations and air blast effects. Blasting mats or other protective means shall be used to prevent fragments from being thrown.
11. Persons authorized to prepare explosive charges or to conduct blasting operations shall use every reasonable precaution, including but not limited to warning signals, flags, barricades, mats or other equally effective means to ensure the safety of the general public and workers.
12. At all blasting operations, the ground vibrations on any axis shall not exceed the limitations specified in Figure 11.2.1 of the 2013 edition of NFPA 495 at the location of any building or structure.
13. When blasting is not monitored with a blasting seismograph, the operation shall comply with the scaled distance factors at the nearest building or structure as shown in Table 11.2.2 of the 2013 edition of NFPA 495.
14. Seismograph readings must be provided to the fire inspector once available.
15. Blasting operations shall only be conducted during daylight hours except when authorized at other times by the fire inspector.
16. Where blasting is being conducted in the vicinity of utility lines or rights-of-way, the blaster shall notify the appropriate representatives of the utilities not less than 24 hours in advance of blasting, specifying the location and intended time of such blasting. Verbal notices shall be confirmed with written notice.



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17. Precautions shall be taken to prevent accidental discharge of electric detonators from currents induced by radar and radio transmitters, lightning, adjacent power lines, dust and snow storms, or other sources of extraneous electricity. Such precautions are listed in Section 10.1.19 – 10.1.19.2 of the 2013 edition of NFPA 495.
18. After loading for a blast is completed and before firing, excess explosive materials shall be removed from the area and returned to the proper storage facilities.
19. The blaster shall supervise the connecting of the blastholes and the connection of the loadline to the power source or initiation point. Connections shall be made progressively from the blasthole back to the initiation point. Blasting lead lines shall remain shunted (shorted) and shall not be connected to the blasting machine or other source of current until the blast is to be fired.
20. Cap and fuse shall not be used to initiate blasts in congested areas, or on or adjacent to highways open to traffic.
21. An adequate warning signal approved by the fire inspector must be given prior to the blast being fired.
22. After the blast, the following procedures shall be observed.
 - a. No person shall return to the blast area until allowed to do so by the blaster in charge.
 - b. The blaster shall allow sufficient time for smoke and fumes to dissipate and for dust to settle before returning to or approaching the blast area.
 - c. The blaster shall inspect the entire blast site for misfires before allowing other personnel to return to the blast area.
23. Where a misfire is suspected, all initiating circuits shall be traced, and a search made for unexploded charges. Where a misfire is found, the blaster shall provide proper safeguards for excluding all personnel from the blast area. Misfires shall be reported to



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the blasting supervisor immediately. Misfires shall be handled under the direction of the person in charge of the blasting operation in accordance with NFPA 495.

24. Conditions for blasting must meet all requirements of the NC Fire Code and NFPA 495.

Should emergencies or unforeseen circumstances requiring immediate attention arise, please call 9-1-1 or Fire Communications at 704-336-2441. Other concerns may be directed to the Fire Marshal's Office by emailing FMHazmat@ci.charlotte.nc.us.