

All New Appendix F

APPENDIX F

REGULATIONS GOVERNING STONE AND LEDGE REMOVAL THROUGH HAMMERING OR BLASTING

SECTION I PURPOSE

The Regulation of Stone and Ledge Removal through the use of Hammering or Blasting. The purpose of these regulations is to ensure that processes used to remove stone and ledge do not negatively impact the health, safety or welfare of the public.

SECTION II HAMMERING AND BLASTING RESTRICTIONS

Hammering and blasting are two options for removing stone and ledge for land improvements and development. Both hammering and blasting may have significant, adverse impacts on neighboring properties. Adverse impacts on the neighborhood may include, but not be limited to, structural damage to buildings and other structures, loud and constant noise, and fugitive dust.

Hammering is defined as breaking up and reducing in size stone and ledge through repeated mechanical impacts. Hand held equipment (jackhammers) is considered hammering for the purpose of these regulations.

Blasting is defined as “excavation by means of explosives.” (*from RSA 374:48, VIII*).

Hammering is the preferred method, when appropriate and practical for the removal and alteration of stone and ledge, subject to the following conditions:

- 1) Hammering is limited to no more than twenty (20) days total, contiguous or not, as part of an approved subdivision, site plan or permitted project.
- 2) Any hammering on any given day will count as one (1) day of hammering toward the twenty (20) day limit.
- 3) Hammering is limited to the period of 8:00 AM to 4:30 PM Monday through Friday
- 4) Hammering is not permitted on Saturdays, Sundays or Federal or Town observed holidays.

Blasting shall be permitted in the following cases:

1. When directed by the Town Planning Board as part of any applications approved by the Planning Board.
2. When hammering will exceed the twenty-day total limit for an approved subdivision, site plan or permitted project.
3. When directed by the Blast Administrator when Planning Board approval is not required. See Appendix G of the Town of North Hampton NH Excavations Regulations.

As part of any subdivision or site plan application or permitted project, the Applicant shall submit a list of the hammering equipment to be utilized, and an estimate of the number of days and total hours of hammering anticipated to complete the hammering portion of the project.

It is the responsibility of the Applicant or their agent to keep and maintain a record of all hammering operations including specific dates and hours for each date.

If an Applicant determines, that its hammering operations will exceed the allowable twenty (20) day limit, the Applicant shall apply to the Building Inspector for one (1) extension not to exceed ten (10) days. The Building Inspector may grant the extension request unless he/she determines that the requested extension is unnecessary; is due to the Applicant's failure to adhere to the approved plan; or exceeds ten (10) days. Should the Building Inspector deny the Applicant's extension request, Applicant may appeal the Building Inspector's denial to the Planning Board. The Planning Board may approve the extension; approve the extension with conditions; or require the Applicant to utilize another excavation method.

Current Appendix F changed to Appendix G

APPENDIX G

Town of North Hampton, New Hampshire

REGULATIONS GOVERNING BLASTING AND/OR EXPLOSIVE DEMOLITION

SECTION I PURPOSE

Regulation of Blasting and Explosive Handling, Storage, Use and/or Demolition:

Explosives are sometimes used in property improvements, construction, demolition and other manner within North Hampton. The use of explosives can have negative impacts in three primary ways.

- 1) Damage to existing structures. Specifically older structures.
- 2) Contamination of groundwater resulting from a release of unexploded or post explosion regulated or unregulated substances.
- 3) Bedrock subsurface structure change and agitation of the subsurface causing a decrease in well output and/or an increase in the turbidity in water.

In acknowledgement that the Town of North Hampton has a large number of structures, some of historic significance, that are 100 years old or more, that there are large public water supply aquifers within the Town of North Hampton and a significant percentage of residents rely on private wells for their water supply, it is in the best interest of preservation of older town structures, and of the health, safety, and general welfare of the residents of the Town of North Hampton, to enact the following regulations governing blasting, for any purpose within the Town of North Hampton.

These regulations are intended as a supplement to the standards in New Hampshire Code of Administrative Rules, Saf-C Section 1600, et seq.

SECTION II AUTHORITY

Under the authority vested in the Board of Selectmen and in accordance with the provisions of the New Hampshire Code of Administrative Rules, Saf-C Section 1600, et seq., inclusive, as amended, and every other authority thereto enabling, the Board of Selectmen adopts the following regulations governing Blasting, for any purpose within the Town of North Hampton, New Hampshire.

SECTION III DEFINITIONS

A) Town – Town of North Hampton, New Hampshire.

B) Board – Select Board of the Town of North Hampton.

C) Blast Administrator – Person(s) appointed (or hired) by the Select Board to administer and enforce the Blasting Regulation.

D) Blast Supervisor – Person(s) licensed by the State of New Hampshire for blasting purposes and who is responsible for the planning, managing and oversight of all blasting and any activities related to blasting on the site where blasting will occur. The Blast Supervisor is responsible for obtaining any and all

required blasting permits. The Blast Supervisor is responsible for meeting the requirements of this and any other applicable Town, State and Federal ordinances.

E) Applicant or Blast Permit Applicant – The Blast Supervisor applies for the Blasting Permit and is responsible for meeting any and all requirements of the permitting process.

F) Explosives – Those materials that are either chemically or otherwise energetically unstable, or used to produce instantaneous violent waves of diminishing energy resulting in the fracturing of material usually accompanied by the production of heat and large changes in pressure (and typically also a flash and/or loud noise) upon initiation including but not limited to: dynamite, any explosive compound of which nitroglycerin forms a part, fulminate in bulk or dry condition, blasting caps, detonating fuses, black powder, and ammonium nitrate/fuel oil (ANFO).

G) Peak Particle Velocity (PPV) – A measurement of maximum ground vibration, in any of the three mutually perpendicular components of particle velocity.

H) Seismic Measuring Equipment – Equipment utilized to measure ground effects of blasting and or explosive detonation which may include but is not limited to: creep meters, seismographs, seismometers, strain meters, or magnetometers.

I) Blasting Log – A detailed written record of the type, amount, depth of explosives and other blasting details submitted to the Town of North Hampton. The NHDOT Section 203 Blasting Log or equivalent should be submitted in metric or English.

J) Structure – A “structure” as used herein shall be anything which is built or constructed on a property (i.e. property improvements) including but not limited to activity for which a building permit or site permit is required such as foundations, driveways, roadbeds, parking lots, swimming pools, wells, waste disposal systems and utility installations. In any instance in which this definition conflicts with any other definition of “structure” in North Hampton ordinances or regulations, this definition shall apply.

K) Habitable Structure – A “habitable structure” as used herein shall be a structure which persons occupying or may occupy, including residential dwellings, commercial and industrial buildings, garages, sheds, barns, and storage buildings. In any instance in which this definition conflicts with any other definition of “structure” in North Hampton ordinances or regulations, this definition shall apply.

SECTION IV BLASTING PERMITS APPLICABILITY AND RESTRICTIONS

A) No person shall use explosive materials within the Town of North Hampton without first obtaining the proper permit which authorizes them to use such materials.

B) Blasting shall be permitted only when no other process is appropriate and practical to accomplish the desired task as determined by the Planning Board or, when Planning Board approval is not required, by the Blast Administrator, consistent with the intent and requirements of these regulations.

C) Licensed personnel only shall engage in blasting or detonation of explosive materials within the Town of North Hampton and only after first obtaining a permit to conduct such operations from the Blast Administrator of the Town and meeting any and all other applicable federal, state and local regulations, rules and requirements.

D) Applicants for blasting permits must submit a completed application form containing all the information specified and required within this Regulation.

E) Applications for blasting permits for projects which are located within Aquifer Protection Districts must submit documentation to the Blast Administrator that:

Demonstrates that blasting is the sole appropriate and practical option available in order to accomplish the desired task.

1. Provide a report from a licensed hydrologist stating that the proposed blasting operation will not negatively impact a known aquifer.
2. Document that all reasonable precautions, as determined at the sole discretion of the Blast Administrator, shall be taken to ensure that the proposed blasting will not adversely affect the aquifer.
3. At the sole discretion of the Select Board the documentation may be reviewed by experts selected at the sole discretion of the Select Board for the purpose to determine the validity of the documentation. All such reviews will be at the expense of the applicant.

F) This chapter shall not apply to:

1. Explosive materials while in the course of transportation via railroad, water, highway or air when explosive materials are moving under the jurisdiction of and in conformity with regulations adopted by any federal or state department or agency.
2. The laboratories of schools and similar institutions when confined to the purpose of instruction or research or to explosive materials in the forms prescribed by the official United States Pharmacopoeia or the National Formulary and used in medicines and medicinal agents.
3. Pyrotechnics commonly known as "fireworks," including signaling devices such as flares and fuses
4. Small arms ammunition and components thereof, which are subject to the Gun Control Act of 1968 (Title 18, Chapter 44, of the United States Code) and regulations promulgated there under.
5. Gasoline, fertilizers and propellants used in propellant-activated power devices or tools.

G) No permit shall be assigned or transferred except with the express advance written consent of the Blast Administrator.

H) The permit expiration date shall be no later than the expiration date of the Blaster's insurance certificate.

I) The permit expiration date shall be no later than the expiration date of the Blaster's license.

J). Pre-blasting conferences may be scheduled by the Blast Administrator or Select Board prior to approval of permit application. Conference attendees shall be determined by the Blast administrator and may include but not be limited to representatives of the blaster, other town officials and/or citizens likely to be affected by blasting operations.

SECTION V APPLICATION FORM

A) A properly executed application form shall be submitted to and approved by the Blast Administrator for all blasting permits, prior to commencement of any blasting. The application form shall be developed by the Blast Administrator and approved by the Select Board.

B) Approval of the blasting permit will not relieve the Blast Supervisor of full and complete responsibility for any and all results of the blasting operations. The Blast Supervisor also has full responsibility for the accuracy and adequacy of the blasting plan when implemented in the field.

C) Applicants for blasting permits for projects which are located within 750 feet of a structure which is 100 years old or more must submit documentation to the Blast Administrator that:

1. Demonstrates that blasting is the sole appropriate and practical option available to accomplish the desired task.
2. That all reasonable precautions, as determined at the sole discretion of the Blast Administrator, shall be taken to ensure that the proposed blasting will not damage such structures.

D) The application form shall require the following information:

1. Name, address, and daytime phone number of the Applicant (Blast Supervisor).
2. A copy of license issued by the State Police to the Blast Supervisor along with proof of identification, under RSA 158:9-b.
3. Experience, qualifications, and daytime phone number of Blast Supervisor.
4. A copy of Blast Supervisor's Certificate of Competency issued by the commissioner of safety pursuant to RSA 158:9-h.
5. The tax map and lot numbers and physical location (street address) where blasting is to be conducted. The approximate date of detonation, volume of material being detonated and type and quantify of explosives being used.
6. A map or plan at a scale not greater than 1" = 200' depicting the approximate location of the proposed blasting/detonation, and all properties, structures, aquifers and known well locations within a 2,640 foot radius.
7. A list of the owners of all such properties identified, together with a notation as to whether such properties are improved by a structure, and the type of occupancy (i.e., residential, commercial, industrial).

8. A letter of permission from the property owner of the blasting site that, if appropriate, also authorizes the Blasting Supervisor to represent the property owner in all aspects of the permitting process.

9. Evidence of general liability and property damage insurance issued by a carrier authorized by the State of New Hampshire Insurance Commissioner to conduct business in New Hampshire. Such coverage shall be in amounts not less than three million dollars (\$3,000,000.) combined single limit per occurrence. All liability insurance companies supplying policies per this Ordinance shall have at least a Double A (AA) Moody Bond rating.

10. The Blast Supervisor shall submit the following information to the Blast Administrator at least two weeks prior to commencing drilling and/or blasting operations.

- a. Sequence and schedule of production blast rounds, including the general method of developing the excavation, lift heights, starting locations, estimated starting dates, estimated rates of progress, etc.
- b. Written evidence of the licensing, experience, and qualifications of the blaster who shall be directly responsible for the loading and firing of each shot.
- c. Name, experience, and qualifications of the person responsible for designing and directing the Applicant's blasting operation.
- d. Name, experience, and qualifications of the person to be used to conduct pre-blast condition surveys.
- e. Name, experience, and qualifications of the person to be used in monitoring blast vibration.

SECTION VI FEE

A) All permit applications shall be accompanied by the proper application fee as established by the Select Board in accordance with RSA 41:9.a.

SECTION VII PERMIT DURATION

A) Blasting permits shall be issued for a forty-five (45) day period. The permit shall expire at the end of the 45 days from issuance, unless otherwise revoked hereunder.

B) Successive or renewed permits are permitted, provided application information is updated and a new application fee is paid.

C) After a second renewal, submission of a written impact evaluation of the site and potentially affected properties may be required by the Blast Administrator.

D) A permanent record of all permits issued under this Regulation will be kept on file in the Town Administrative Offices.

SECTION VIII MINIMUM STANDARDS OF CONDUCT

A) Unless more stringent provisions are contained herein, the conduct of all blasting or explosive detonations shall be governed by the standards in New Hampshire Code of Administrative Rules, Saf-C Section 1600, and et seq.

B) No person may handle, load, or fire explosive materials unless such person or his supervisor is a licensed blaster and holds a certificate of competency in conformance with RSA 158:9-b and RSA 158:9-h.

SECTION IX LOCAL REQUIREMENTS REGARDING PROTECTION OF EXISTING STRUCTURES

In addition to any other requirements of State law, the following additional requirements shall apply to blasting activity within the town of North Hampton.

A) General: All blasting operations, including the storage and handling of explosives and blasting agents, shall be performed in accordance with the applicable provisions of this Regulation and all other pertinent Federal, State, and local regulations. Whenever explosives are used, they shall be of such character and in such amounts as are permitted by the State and local laws and ordinances, and all respective agencies having jurisdiction over them.

B) Pre-Blast Condition Survey: Prior to conducting any blasting, the Applicant or their agent shall conduct a pre-blast condition survey of all existing structures and conditions on the site, adjacent to the site, and within 750 feet of structures 100 years or older and 500 feet for structures less than 100 years old. This survey shall extend to such structures or conditions as may be affected by the Applicant's operations. Pre-blast condition surveys shall be performed on all structures noted above, including but not limited to driveways, roadbeds, swimming pools, wells, mobile homes and any other applicable property improvements. The Applicant, as well as the owner of the property being surveyed, shall sign all such surveys once completed. If a property owner, for whatever reason, refuses to allow for the conducting of a pre-blast survey or to sign a pre-blast survey form, then the Applicant shall note this on the form. The Applicant shall notify any property owners qualifying for the Pre-Blast survey by certified mail. This notice will explain the need for such surveys. Notified property owners will have twenty-one (21) days to reply that they wish to participate in the pre blast survey or do not wish to participate.

1. The pre-blast structural inspection condition survey shall consist of a written description and documenting photographs of the interior and exterior condition of each of the structures examined. Descriptions shall locate any existing cracks, damage, or other defects, and shall include such information so as to make it possible to determine the effect, if any, of the blasting operations on the defect. Where significant cracks or damage exist, or for defects too complicated to describe in words, photographs shall be taken. A good quality videotape survey with appropriate audio description of locations, conditions, and defects can be used in lieu of a written form. This survey shall be kept for a minimum of three (3) years in the Town Administrative Offices. In addition, copies of the completed survey and videos shall be delivered to each property owner free of charge within fourteen (14) days. The property owner will have a fourteen (14) day period to comment and/or respond to the results of the survey. All property owner comments and responses will be to the Blast Administrator and retained in the Town Administrative Offices.

2. The person conducting the survey shall give written notice to the owner of the property concerned, as well as to any tenants of the property at least two (2) days prior to the survey. The notice shall state the dates on which surveys are to be made. Copies of all notices shall be provided to the Blast Administrator.

3. Upon completion of all blast work and earth/rock excavation, the Applicant shall conduct a post-blast survey of any properties, structures, and conditions for which complaints of damage have been received or damage claims have been filed within a sixty (60) day period from the last day of any

blasting. Written notice shall be given to all interested parties so that they may be present during the final examination. The final examination must be initiated with ten (10) days of the complaint or claim being filed. The final examination must be completed with thirty (30) days of the complaint or claim being filed. A written record of the post blast inspection will be distributed to all interested parties within fourteen (14) days of the post blast inspection. Where significant cracks or damage exist, or for defects too complicated to describe in words, photographs shall be taken. A good quality videotape survey with appropriate audio description of locations, conditions, and defects can be used in lieu of a written form. Records of the final examination shall be distributed the same as the original pre-blast condition survey.

4. All costs associated with pre and post condition surveys shall be borne by the Applicant.

C) Seismic Measuring Devices: Prior to conducting any blasting, the Applicant or his/her agent shall identify the two closest structures to the blasting site not owned by the owner of the blast site and request written permission from the Owner(s) thereof to install and monitor seismic measuring equipment. The Applicant shall attempt to obtain such permission via certified mail. If unsuccessful, the seismic measuring equipment shall be installed between the structure and the blast location as close as reasonable to the structure within the boundaries of properties on which the Applicant or his/her agent has permission to place such devices. An explanation of the reason for such location shall be made on the vibration monitoring report for such structure and the PPV shall be extrapolated to the structure using standard procedures. Prior to conducting any blasting, seismic measuring equipment shall be installed as described above. The Blast Administrator may require additional measuring devices when necessary to protect property. If an owner refuses to allow for or waives the placement of seismic measuring equipment, the Applicant shall note this on the vibration monitoring report.

1. All costs associated with the analysis and monitoring shall be borne by the Applicant.

D) Map of Operations: The Applicant shall provide a vicinity map and plan, locating the blast site, blast area, and the locations of all measuring devices required hereunder.

E) Additional Surveys/Seismic Devices: The Town, through its Blast Administrator or Select Board, reserves the right to require additional condition surveys and/or placement of seismic measuring equipment on properties other than specified here should the need arise due to other causes. Further, the Town reserves the right to require geological surveys of the area around the blasting location should conditions warrant such analysis. Such additional requirements may be prerequisites to obtaining any permit renewals.

1. All costs associated with additional analysis and monitoring shall be borne by the Applicant.

F) Timing of Blasting Operations: Blasting and/or detonation shall be conducted only between the hours of 10:00am and 3:00pm, and shall not be permitted on Saturdays, Sundays or Federal or Town observed holidays.

G) A sign detailing the date and time of the blasting and/or detonation shall be posted prominently on all public roadways abutting the property or the nearest public roadway five (5) business days prior to the blasting or detonation event.

H) Blast Vibration Control and Monitoring: The Applicant shall be required to comply with the blasting vibration limits established by the applicable State of New Hampshire rules and regulations. The Town through the Blast Administrator reserves the right to impose lower maximum vibration limits.

I) Vibration Monitoring Instrumentation: All vibration monitoring instrumentation proposed for use on the project by the Applicant shall comply with the following requirements.

1. Measure, display, record, analyze, and print three-component ground motion and measure, display, record and print air pressure with specification equal to or better than the following:

- a. Range: 0.01-10 in/s
- b. Resolution: seismic, 0.005 in/s acoustic, 1db
- c. Sample Rate: 1024 Samples/s
- d. Frequency Response: 0-250 Hz, flat within 3db
- e. Trigger Source: seismic and/or acoustic
- f. Trigger Level: seismic, programmable, 0.02-200 in/s acoustic
- g. Programmable, 100-129db, Linear weighting scale
- h. Record Time: 1-10 s plus 0.5 s pre-trigger
- i. Storage Capacity: 100 1-sec events at 1024 samples /s

2. Measure the three (3) mutually perpendicular components of particle velocity in directions vertical, radial, and perpendicular to the vibration source. Full wave forms must be recorded.

3. All seismographs used on the project shall display the date of the most recent calibration. Said calibration must have occurred within the last twelve (12) months and been performed to a standard traceable to the National Institute of Standards and Technology.

4. The Blast Administrator may at his/her sole discretion modify any of these requirements as necessary due to the specific nature of the project.

J) Report of Monitoring Results: Within forty-eight (48) hours of each blast, the Applicant, or their authorized representative, shall submit to the Blast Administrator in writing the following items:

1. Details of the round as shot to include the information shown on the sample blasting log (see, Section III (F)).

2. Results of the blast monitoring at each instrument location, including the following:

- a. Date and time of blast
- b. Location of blast
- c. Operator name and signature
- d. Distance of seismograph from blast in feet
- e. Listing of the maximum values of the three components of peak particle velocity, PPV (in/s), acceleration, PPA (g), displacement, PPD (in), time on the record at which the PPV occurs (ms), peak vector sum, PVS (in/s) and time on record at which the PVS occurs, peak sound pressure level, PSPL (psi) and time on record at which the PSPL occurs (ms), and the PSPL frequency (Hz)
- f. Seismograph manufacturer, model, serial number, calibration date
- g. Trigger settings
- h. Software manufacturer, name, version used for download and/or analysis
- i. Full waveform plots of three seismic components and acoustic component
- j. Plot displaying OSM and USBM RI8507 analysis
- k. If the seismic ground vibration or air overpressure, or both ground vibration and air overpressure caused by the Applicant's blasting operation equals or exceeds either the limits established by the State of New Hampshire or the maximum limits imposed by the Town, which ever being more restrictive, the operations shall cease and the permit may be revoked by the Blast Administrator.

3. The Blast Administrator may at his/her sole discretion modify any of these required monitoring results as necessary due to the specific nature of the project.

K) Notice and Warning Signals: Adequate warnings shall be given to all personnel in proximity to the blast site at least three minutes in advance of each blast. The Blast Supervisor shall use sirens or horns or both sirens and horns with sufficient intensity such that they can be heard of a minimum distance of 1320 feet.

1. The Applicant shall notify the North Hampton Police Department not less than one (1) hour before the scheduled time of blast or explosion with the address of the blasting site, the total pounds of explosives and the number of charged holes.

2. The Applicant shall publish a notice in a local paper no later than ten (10) business days prior to blasting operation noting the place, date of blasting operations, and estimated number of days of blasting.

3. The Applicant shall notify all property owners within the 1320 foot radius by certified US Mail, ten (10) days prior to blast, with the following information: the place, date and duration of the blasting operation. Blasting operations and activities lasting longer than forty-five (45) days requiring a permit renewal shall re-notify the properties owners by certified mail.

L) Fly Rock Control: Before the firing of any blast in areas where flying rock or debris may result in personal injury or damage to property, the rock to be blasted shall be covered with approved blasting mats, soil, or other equally serviceable material to prevent fly rock.

M) Responsibility for Blasting Operations: Review of the Applicant's blasting submittals by the Town of North Hampton, the Blast Administrator or their authorized representative will not relieve the Applicant of his/her responsibility for the accuracy, adequacy, and safety of the blasting; for exercising proper supervision and field judgment; for preventing damage to structures; and for producing results in accordance with the State of New Hampshire regulations and NHDOT Specifications. The Applicant shall be solely and completely responsible for the safety of all persons deemed necessary, in addition to the requirements herein, to protect the safety of persons and property, both at the blasting site and away from the site. The Applicant shall have full and complete responsibility for the handling, discharging, or settling of any and all damage or annoyance claims resulting from the blasting activities on the project. Any monitoring and/or review of the Applicant's procedures and performance conducted by the Town of North Hampton, the Blast Administrator's Office or their acting Administrator's Office or their authorized representative shall not relieve the Applicant of his/her responsibility for safety at and away from the site, or for preventing damage to adjacent structures or property.

N) Blasting Monitoring: The Blast Administrator reserves the right to visit any blasting site to monitor the operation. The Blast Administrator may also confer with other town departments or private blasting consultants for advice or assistance in the review or monitoring of a blasting site. The Blast Administrator may require a Fire Department work detail to standby a site for safety or monitoring duties. The cost of the Fire Department work detail or any other private consultants necessary for enforcement of these regulations will be at the Applicant's expense.

O) Dust Control: During and after the firing of any blast. Dust control shall be in place to control the dust from the blast and the removal of the blasted rock and dirt. Dust migration from blasting operations, including rock removal and rock processing, to adjacent properties shall be controlled and kept to a minimum. Dust control plans and procedures shall be submitted with all blasting permit applications and approve by the Blast Administrator.

SECTION X LOCAL REQUIREMENTS REGARDING PROTECTION OF GROUND WATER AQUIFERS

In addition to any other requirements of State law, the following additional requirements shall apply to blasting activity within the town of North Hampton.

A) Site and Environmental Monitoring: The Blast Administrator and Applicant and Town consultants shall review the Applicant's blasting plan to determine what type of monitoring will be required to test the ground water quality and blasting procedures during blasting operations. The Blast Administrator will be responsible for coordinating the development of a blasting plan to protect the aquifer from any and all possible contamination from the blasting operations. Prior to undertaking any blasting, the Applicant for a blasting permit shall set up an escrow account to pay for geological and ground water monitoring consultants hired by the Town to oversee the blasting operations. The cost of this monitoring shall be paid for by the Applicant.

B) Responsibility for Blasting Operations: Review of the Applicant's blasting submittals by the Town of North Hampton, the Blast Administrator or their authorized representative will not relieve the Applicant of his/her responsibility for the accuracy, adequacy, and safety of the blasting; for exercising proper supervision and field judgment; for preventing damage, pollution or other negative impacts upon the Ground Water Aquifers; and for producing results in accordance with the State of New Hampshire regulations and NHDOT Specifications. The Applicant shall be solely and completely responsible for the safety of all persons deemed necessary, in addition to the requirements herein, to protect the safety of persons and property, both at the blasting site and away from the site. The Applicant shall have full and complete responsibility for the handling, discharging, or settling of any and all damage or annoyance claims resulting from the blasting activities on the project. Any monitoring and/or review of the Applicant's procedures and performance conducted by the Town of North Hampton, the Blast Administrator's Office or their acting Administrator's Office or their authorized representative shall not relieve the Applicant of his/her responsibility for safety at and away from the site, or for preventing damage to the Ground Water Aquifers.

SECTION XI LOCAL REQUIREMENTS REGARDING PROTECTION OF EXISTING WATER WELL OUTPUT AND WATER QUALITY

In addition to any other requirements of State law, the following additional requirements shall apply to blasting activity within the town of North Hampton.

A) General: All activities related to blasting shall follow Best Management Practices (BMPs) to prevent the use of blasting from reducing the capacity or water quality of both private and commercial groundwater wells. This section (Section XI) supplements the requirements of Section IX and Section X.

B) Pre-blast Condition Survey: Prior to conducting any blasting, the Applicant or his/her agent shall conduct a pre-blast condition survey of all existing wells on the site, adjacent to the site, and within 750 feet of the site. All landowners within 750 feet shall be notified by certified mail of the blasting application and be given ten (10) days to reply whether they elect to participate in the well survey or decline to participate. The pre blast well survey shall be conducted by a licensed well installer or inspector.

The survey shall include:

1. General well condition including well depth, depth to well pump, and depth to water level with the well non-operating in the prior 30 minutes.

2. Pump test with the well pump operating continuously at maximum output for 30 minutes. The well shall not have been drawn from at any time during the previous 60 minutes.

- a. Output flow shall be recorded in 5 minute increments.
- b. Water level within the well shall be recorded in 5 minute increments.

3. Water samples shall be collected and tested for:

- a. Total Coli forms
- b. Nitrate
- c. Nitrite
- d. Arsenic
- e. Radon
- f. Turbidity
- g. The Blast Administrator may at his/her sole discretion modify and or add to any of these required tests as necessary due to the specific nature of the project and/or the results obtained from initial tests samples.
- h. All testing will be done in accordance with New Hampshire Department of Environmental Services standards.

4. The pre-blast well inspection survey shall consist of a written description and data findings of the well survey. This survey shall be kept for a minimum of three (3) years in the Town Administrative Offices. In addition, copies of the completed survey shall be delivered to each well owner free of charge within 14 days. The well owner will have a fourteen (14) day period to comment and/or respond to the results of the survey. All well owner comments and responses will be to the Blast Administrator.

5. The individual responsible for conducting the survey shall give written notice to the owner of the property concerned, as well as to any tenants of the property. The notice shall state the dates on which surveys are to be made. Copies of all notices shall be provided to the Blast Administrator.

6. Upon completion of all earth/rock excavation and blasting work, the Applicant shall conduct a post-blast survey of any wells for which complaints of damage have been received or damage claims have been filed within a sixty (60) day period after completion of the blasting. Notice shall be given to the affected property owner(s) and all interested parties so that they may be present during the final examination. The final examination must be initiated with ten (10) days of the complaint or claim being filed. The final examination must be completed with thirty (30) days of the complaint or claim being filed. Records of the final examination shall be distributed in the same manner as the original pre-blast condition survey.

7. All costs associated with condition surveys shall be borne by the Applicant.

The Applicant, as well as the owner of the well being surveyed, shall sign all such surveys once completed. If a property owner, for whatever reason, refuses to allow for the conducting of a pre-blast survey or to sign a pre-blast survey form, then the Applicant shall note this on the form.

C) Map of Operations: The Applicant shall provide a vicinity map and plan, locating the blast site, blast area, and the locations of wells surveyed.

SECTION XII NO STORAGE OF EXPLOSIVES OR BLASTING AGENTS

The overnight storage of explosives or blasting agents, whether supervised or not, is not allowed in the Town. Loaded explosives shall have twenty-four hour supervision and be guarded overnight when conditions or circumstances delay the blast and the Blast Administrator has approved in writing the overnight delay in blasting.

SECTION XIII GENERAL EXPLOSIVE AND SITE PRACTICES

A) General: All activities related to blasting shall follow Best Management Practices (BMPs) to prevent contamination of property, groundwater and wells including preparing, reviewing and following an approved blasting plan; proper drilling, explosive handling and loading procedures; observing the entire blasting procedures; evaluating blasting performance; and handling and storage of blasted rock. This section (Section XIII) supplements the requirements of Sections IX, X and XI.

B) Best Management Practices include but are not limited to the following:

1. Loading practices. The following blast hole loading practices to minimize environmental effects shall be followed:

- a. Drilling logs shall be maintained by the driller and communicated directly to the Blast Supervisor. The logs shall indicate depths and lengths of voids, cavities, and fault zones or other weak zones encountered as well as groundwater conditions.
- b. Explosive products shall be managed on-site so that they are either used in the borehole, returned to the delivery vehicle, or placed in secure containers for off-site disposal.
- c. Spillage around the borehole shall either be placed in the borehole or cleaned up and returned to an appropriate vehicle for handling or placement in secured containers for off-site disposal.
- d. Loaded explosives shall be detonated as soon as possible and shall not be left in the blast holes overnight, unless weather or other safety concerns reasonably dictate that detonation should be postponed.
- e. Loading equipment shall be cleaned in an area where wastewater can be properly contained and handled in a manner that prevents release of contaminants to the environment.
- f. Explosives shall be loaded to maintain good continuity in the column load to promote complete detonation. Industry accepted loading practices for priming, stemming, decking and column rise shall be followed.

2. Explosive Selection. The following best management practices shall be followed to reduce the potential for groundwater contamination when explosives are used:

- a. Explosive products shall be selected that are appropriate for site conditions and safe blast execution.
- b. Explosive products shall be selected that have the appropriate water resistance for the site conditions present to minimize the potential for hazardous effect of the product upon groundwater.

3. Prevention of Misfires. Appropriate practices shall be developed and implemented to prevent misfires.

4. Muck Pile Management. Muck piles (the blasted pieces of rock) and rock piles shall be managed in a manner to reduce the potential for contamination by implementing the following measures:

- a. Remove the muck pile from the blast area as soon as reasonably possible.

- b. Manage the interaction of blasted rock piles and storm water to prevent contamination of water supply wells or surface water.

5. Spill Prevention Measures and Spill Mitigation. Spill prevention and spill mitigation measures shall be implemented to prevent the release of fuel and other related substances to the environment.

The measures shall include at a minimum:

- a. The fuel storage requirements shall include:
 - i. Storage of regulated substances on an impervious surface.
 - ii. Secure storage areas against unauthorized entry.
 - iii. Label regulated containers clearly and visibly.
 - iv. Inspect storage areas weekly.
 - v. Cover regulated containers in outside storage areas.
 - vi. Wherever possible, keep regulated containers that are stored outside more than 50 feet from surface water and storm drains, 75 feet from private wells, and 400 feet from public wells.
 - vii. Secondary containment is required for containers containing regulated substances stored outside, except for on premise use heating fuel tanks or aboveground or underground storage tanks otherwise regulated.
- b. The fuel handling requirements shall include:
 - i. Except when in use, keep containers containing regulated substances closed and sealed.
 - ii. Place drip pans under spigots, valves, and pumps.
 - iii. Have spill control and containment equipment readily available in all work areas.
 - iv. Use funnels and drip pans when transferring regulated substances.
 - v. Perform transfers of regulated substances over an impervious surface.
- c. The training of on-site employees and the on-site posting of release response information describing what to do in the event of a spill of regulated substances.
- d. Fueling and maintenance of excavation, earthmoving and other construction related equipment will comply with the regulations of the New Hampshire Department of Environmental Services. (note: these requirements are summarized in WD-DWGB-22-6 Best Management Practices for Fueling and Maintenance of Excavation and Earthmoving Equipment" or its successor document)

SECTION XIII REVOCATION OF PERMIT

A permit issued hereunder may be revoked by the Blast Administrator for just cause including but not limited to: failure to conduct operations in accordance with the standards herein, operations resulting in property damage that does or has the potential to exceed 50% of the amount of liability insurance held by the Applicant; lapse or revocation of the State license, or the institution of proceedings (civil, criminal, or administrative) by the State or violation of applicable State law or regulations. Revocation of permission to perform blasting operations in North Hampton may result in the loss of all blasting permits for one year. An Applicant who has had a permit revoked may apply for a re-issuance to the Select Board who shall hold a public hearing on said request and, following same, determine whether or not a permit shall be reissued. The Applicant requesting the permit shall provide a detailed report to the Blast Administrator outlining why they believe said permit should be issued along with any other information requested by the Blast Administrator.

SECTION XIV APPEAL

Any person who is denied a permit, or has such permit revoked, may request a hearing before the Select Board. Appeals shall be made in writing within ten (10) days to the Select Board, who shall hold a hearing within thirty (30) days to render a decision. The decision of the Select Board shall be final.

SECTION XV EFFECTIVE DATE April 17, 2012