

**2009**  
**MONITORING WELL REGULATIONS**

**GENERAL PERMIT CONDITIONS AND  
CONSTRUCTION REQUIREMENTS**



**CITY OF CONCORD**  
**NEW HAMPSHIRE**

## License and Permit Requirements

1. In accordance with City of Concord Ordinance No. 2763, a person shall not disturb, excavate, or open the ground or pavement in any street, highway, sidewalk, or greenbelt within the city's public right-of-way, or on city property for the purposes of installing a groundwater monitoring well without first obtaining a license by the City Council and written permit of authorization from the City Engineer. A license to install a monitoring well shall be prepared by the City Solicitor and approved by City Council. Monitoring well permits shall be issued by the Engineering Services Division on an application form provided by the department following issuance of the license by City Council.
2. The property owner or applicant for a license shall, before the issuance of a license, submit the following to the City Engineer:
  - a. A signed letter requesting a monitoring well license indicating:
    - i. the number of monitoring wells to be installed;
    - ii. the purpose or reason of action requiring the installation;
    - iii. a detailed drawing or plans indicating the proposed location(s) of the monitoring well(s) to be installed.

These documents will be used to present to City Council for a license required to permit the installation.

3. The applicant for a permit, the applicant's agent, or the contractor performing the work within the city's public right-of-way, or on city property, shall, before the issuance of a permit, submit the following to the City Engineer:
  - a. A permit bond or an irrevocable letter of credit written on a New Hampshire bank or other acceptable financial guarantee or cash deposit for a period of twenty-four (24) months after work has been completed and accepted by the City Engineer. The financial guarantee shall be a minimum amount of Five Thousand Dollars (\$5,000) (except that the City Engineer may require a multiple of that amount depending upon the volume of the work being performed by the Permittee) guaranteeing the condition of the excavation and the fulfillment of the provisions, instructions, and regulations prescribed herein. The financial guarantee must clearly identify the location(s) of the groundwater monitoring well(s) and the expiration date of guarantee.
  - b. A certificate of insurance, naming the City as additional insured, providing the following coverage:
    - i. Comprehensive General Liability Insurance with limits not less than \$1,000,000 per occurrence for bodily injury, \$1,000,000 per occurrence for property damage, \$2,000,000 general aggregate, \$50,000 fire damage (any one fire) and \$5,000 for medical expenses (any one person). This insurance should include coverage for collapse and underground (CU) hazard, explosions and blasting damage (X), and contractual liability.

- ii. Automobile liability insurance with not less than \$1,000,000 per occurrence for bodily injury, and \$1,000,000 per occurrence for property damage.
- iii. Workmen's Compensation Insurance including Employer's Liability Insurance with limits of \$100,000 for each accident, \$500,000 disease-policy limit and \$100,000 disease-each employee.

The applicant agrees to indemnify and save harmless the city from all claims for damage or injury whatsoever, that may arise from the encumbrance, obstruction, occupation, or use of the street, highway, sidewalk, or greenbelt within the city's public right-of-way, as well as claims for loss or interruption of business where the encumbrance or construction impedes the flow of traffic to any person or property arising out of the activities of the permit. The city in no case assumes any responsibility or liability by reason of granting this permit.

This indemnification obligation shall include all liabilities for environmental damage or releases of hazardous substances subject to any governmental or third party actions. "Hazardous substance" is defined as any chemical, substance or material constituting a prohibited or regulated substance under governmental law, rule, statute, or regulations in force at any time, or any substance with respect to which any present or future federal, state, or local environmental law or governmental agency requires environmental investigation or remediation or which has been identified as a hazardous waste by the NH Department of Environmental Services (NHDES) using the criteria established under RSA 147-A:3, I or as listed under RSA 147-A:3, II. Such wastes include, but are not limited to, those which are reactive, toxic, corrosive, ignitable, irritants, strong sensitizers or which generate pressure through decomposition, heat or other means. Such wastes do not include radioactive substances that are regulated by the Atomic Energy Act of 1954, as amended.

- c. An affirmation that the applicant is not delinquent in fees, fines, or payments due to the city on prior work.
  - d. Evidence that the applicant is competent and equipped to do the proposed work.
  - e. A plan for the subject property and adjacent properties showing existing surface and subsurface conditions including the placement of existing utilities, structures, street layouts, trees, or other vital structures within the public right-of-way or on private properties that may be affected by the work or as designated by the City Engineer.
4. The permit application must be submitted four (4) days prior to the proposed installation. Once issued and approved, the permit term is for thirty (30) days. Following approval by the City Engineer, the permit must be renewed after the expiration date. An additional administrative and inspection fee will be assessed for each permit renewal of thirty (30) days. Permits are valid only when authorized by the City Engineer and have been assigned a permit number.
5. Work authorized by the monitoring well permit shall be performed as designated in all streets, highways, sidewalks, or greenbelts within the city's public right-of-way, or on city

property, Monday through Friday, from April 15th through November 15th. All monitoring well permits shall expire on November 15th unless the applicant obtains written consent from the City Engineer to do work during another time. Such permission shall be granted only in the case of an emergency, in the event the work authorized by permit is to be performed in high traffic and congested areas, or under a direct environmental order.

### **License and Permit Fees**

1. All applications for a permit to excavate in, or open a public right-of-way or public property for the purposes of installing a groundwater monitoring well shall include for each permit applied for, the fee listed on Schedule I of Article 1-5 of the City of Concord Code of Ordinances.
2. An administrative and inspection charge of \$240.00 will be assessed per permit for all monitoring well installations within the public right-of-way or on City property.
3. An annual right-of-way occupation license fee of \$120.00 will be assessed for each monitoring well within the public right-of-way or on City property.
4. The fees for the administrative and inspection charge of the permit may be increased if the work results in additional administrative and inspection time required to complete the work, or if other permit violations occur as outlined in the penalties section of these Regulations. Any additional charges will be billed and due upon presentation.
5. Generally, a single monitoring well permit shall cover the entire work program outlined by a single NHDES approval unless otherwise determined by the City Engineer.

### **Penalties**

Persons who operate and install a groundwater monitoring well within the public right-of-way or on City property without a permit or violate the provisions of any permit required by this Ordinance shall be subject to the penalty outlined in Schedule II of Article 1-5, Fines and Penalties of the City of Concord Code of Ordinances.

1. If the City Engineer determines that a monitoring well installation activity is not being carried out in accordance with the requirements of this Ordinance, a written notice will be issued to the persons in violation. The written notice will generally contain information pertinent to the applicant's name, location, the nature of the violation, and summary of penalties or fines to be assessed. Penalties and fines may be issued for the following specific violations:
  - a. Excavation without a valid monitoring well license and permit.
  - b. Excavation without proof of the permit being available for review at the work site.
  - c. Excavation without proper notice to DIGSAFE.

- d. Excavation without proper notice to the City of Concord's Engineering Services Division.
  - e. Excavations that violate the Federal Highway Administration *Manual of Uniform Traffic Control Devices* (MUTCD), latest edition and the City of Concord traffic codes.
  - f. Excavations that do not meet requirements for restoration concerning backfill, replacement of pavement base, and finished pavement.
  - g. Excavations that exceed the scope of the permit, including, but not limited to, obstructing the path of automobile or pedestrian travel in excess of the permitted area.
2. Persons receiving a notice of violation will be issued a stop work order and required to cease all construction activities immediately. The stop work order will be in effect until the city's inspector confirms that construction activities are in compliance and the violation has been satisfactorily addressed. Failure to address a notice of violation in a timely manner can result in additional penalties in accordance with the enforcement measures authorized by this Ordinance.

Any Permittee who violates this Ordinance shall be assessed penalties as outlined below:

- a. A fine not to exceed \$100.00 for the first violation; and
  - b. A fine not to exceed \$500.00 for a second violation within one (1) year from the date of the first violation; and
  - c. A fine not to exceed \$1,000.00 for a third and each additional violation within one (1) year from the date of the first violation.
3. Penalties and costs assessed under this regulation shall continue to accrue against a responsible party until the violation is corrected or otherwise remedied in the judgment of the City Engineer, or when the responsible party pays the assessed penalties and fines.

### **General Monitoring Well Permit Conditions and Construction Requirements**

1. General Monitoring Well Permit Conditions
  - a. The permit application must be submitted four (4) days prior to the proposed installation. Once issued and approved, the permit term is for thirty (30) days only and must be renewed prior to the expiration date, following approval by the City Engineer.
  - b. A monitoring well permit gives the applicant the right to install monitoring wells in the public right-of-way with proper traffic controls as specified in the Manual on Uniform Traffic Control Devices (MUTCD) as long as a minimum of one lane of traffic (12 feet wide) is provided in the street at all times.
  - c. Any monitoring well installation permit restricting complete traffic movement, and closures of roadways, will only be issued with an approved traffic control plan. If a

complete street closure is necessary, a minimum of seven (7) days advance notice is required, with confirmation of the proposed closure three (3) working days in advance of the actual street closure.

- d. Construction on major arterial highways and collector streets shall commence at a time designated by the City Engineer. The local media (newspaper and the radio stations) shall be notified by the Applicant three (3) days prior to work to advise motorists of the construction. This notification shall be at the applicant's expense. The City Engineer will review and approve any detours required. The applicant shall also notify the Police Department, Fire Department, and other City Departments involved with the review of any detours.
- e. The applicant shall notify the Engineering Services Division twenty-four (24) hours before the construction begins. A twenty-four (24) hour notice prior to backfill inspection is requested with a minimum period of four (4) hours being required. The Engineering Services Division shall be notified twenty-four (24) hours in advance of the placement of all permanent pavement patches. The location of all utility facilities shall be determined prior to excavation work to avoid damage to those facilities and permit their relocation if necessary. The applicant shall, as specified by New Hampshire RSA 374:51 and 374:55, call DIG SAFE (1-888-344-7233) at least 72 hours prior to any excavation. In addition to notifying the Engineering Services Division, the applicant shall also notify the Concord Police Department, Fire Department, and Concord Area Transit
- f. Every applicant will be required to place around openings, excavations, encumbrances, or obstructions such barriers, barricades, lights, warning flags, danger signs, and traffic control personnel as may be required by the Engineering Services Division to protect the safety of the general public. Adequate artificial lighting devices are required to call attention to and indicate the actual location of obstructions and hazards. Adherence to Part VI of the MUTCD for traffic control and work area safety will be required.
- g. In general, where compliance to these regulations and their intent is in question, the applicant at his expense shall provide any and all proof of compliance to the City Engineer. Acceptable proof shall be by, but not limited to, approved independent laboratory tests, approved independent field tests, shop drawings, and certificates of compliance from manufacturers. Specific tests as required by regulations and specifications shall be performed.
- h. After an installation has commenced, the work shall proceed in a continuous manner with diligence and expedition and shall be completed and the street restored, as nearly as possible to its original condition, so as not to obstruct the public access or travel thereon more than is reasonably necessary. The Applicant shall notify the City Engineer in writing should more time be needed than the completion date indicated on the permit. This notification shall include an explanation as to why the additional time is needed. In any event, the Applicant shall place temporary hot bituminous pavement immediately upon completion of each installation.
- i. As a condition of this permit, the applicant agrees that following the monitoring well installation, all pavement areas will be permanently restored under the pavement

scheduling and construction guidelines set forth within this regulation. No permanent street restoration will be allowed between November 15th and April 15th, unless specifically authorized by the City Engineer.

- j. The City Engineer, as a condition of the permit, reserves the right to order the applicant to restore the street or highway or order the same to be restored by others if in the opinion of the City Engineer the applicant is non-responsive or in default of performance of the permit. The applicant shall reimburse the City for any and all liability and expense suffered by reasons of such work especially in the case where an independent contractor, after notice, has been ordered to make final restorations. The Applicant shall reimburse the City for any liability and expense suffered by reasons of such work.
- k. The applicant hereby agrees that any financial obligations that it may incur to the City are due upon presentation. According to Article 2-4 of the City of Concord Code of Ordinances, an amount of one and one-half (1½) percent per month (18% per year) will be added to the unpaid balance due the City. Further, the Applicant agrees that this permit is in the nature of or intent of a special assessment and as such is entitled to become a tax lien per New Hampshire RSA 80:19.
- l. The Permit shall be kept with the foreman at the place where the work is being performed and shall be produced for examination upon request of any member of the Engineering Services Division, General Services Department, and the Police and Fire Departments of the City of Concord. All materials and construction shall conform to the latest editions of the "City of Concord Construction Standards," available for sale at the Engineering Services Division office, and the "NHDOT Standard Specifications for Road and Bridge Construction." All permit holders are responsible for subcontractors to adhere to these regulations, no exceptions.

## 2. Monitoring Well Installation Requirements

- a. Top of well casing shall be flush with the ground surface unless the location of well poses a hazard and all wells be equipped with a sturdy lockable, water tight cover. Each monitoring well shall be permanently labeled in the field so that it is readily identifiable and coincides with the designation provided on a scale map. Monitoring well(s) shall be constructed in accordance with New Hampshire Department of Environmental Services (NHDES) requirements and regulations as well as generally accepted industry standards.
- b. The applicant must maintain and repair, as necessary, the monitoring well(s) and any associated equipment. Upon completion of the use of monitoring well(s), all wells shall be properly abandoned in accordance with current NHDES standards. At least 72 hour advance written notice shall be given to the City of Concord prior to monitoring well abandonment activities. The applicant shall provide the City of Concord with a copy of a monitoring well abandonment report.
- c. Following the installation of any monitoring wells in accordance with this permit, the applicant shall provide the City with GPS (Geographic Positioning System) locations specifically identifying all locations of the monitoring wells. References to the locations

of wells shall also be measured from permanent monuments, structures, streets and/or intersections.

- d. Any costs, expense, or liability for environmental response or remediation shall be considered as restoration and shall be the sole responsibility of the applicant.
- e. The applicant warrants and represents that it has all required permits, licenses or approvals from NHDES, or other government departments or agency with the jurisdiction over the applicant's activities.
- f. The City of Concord reserves the right to require the applicant to remove any or all well(s) if in the sole opinion of the City, it is necessary to facilitate other improvements within the right-of-way, with no reimbursement of costs to the applicant or its contractor.
- g. The City of Concord is not responsible for any injury or damage caused by the applicant, its contractor, their representatives, employees or agents.
- h. The applicant shall provide the City of Concord a copy of data collected from the monitoring well(s) to the City of Concord upon request.
- i. No monitoring well installations will be permitted to be left open overnight unless specifically authorized by the City Engineer. Open excavations shall be protected by concrete jersey barriers, steel plates, or other methods approved by the City Engineer. Construction materials and equipment shall not be left in the public right-of-way overnight unless approved by the City Engineer. If approved, proper warning devices and protection shall be provided as required.
- j. Any areas disturbed by the work shall be restored to the condition that existed before the excavations or as directed by the City Engineer. Any existing grassland shall be restored with four (4) inches of screened loam that shall be fine graded, fertilized, seeded, rolled, and mulched. Salt tolerant seed mixtures shall be used immediately adjacent to the roadway; slope seed shall be used on all slopes; park seed mixtures shall be used in all other areas; or a specific seed mixture may be specified by the City Engineer.

### 3. Monitoring Well Maintenance Requirements

- a. Monitoring well casings, seals and well cap must be maintained so the structural integrity of the monitoring well casing, seals, and well cap prevent surface water and contaminants from the surface from entering the well. To avoid problems with surface runoff or contaminants from the surface entering the subsurface through the top of the well casing and unauthorized access or entry into the well, exterior maintenance checks are necessary, consisting of a visual inspection of the exterior of the well identifying such problems as cracked or corroded well casing; broken or missing well cap or lock; damage to protective casing; and settling and cracking of surface seals.
- b. If the subsurface materials or pavement over or within the monitoring well installation influence area becomes depressed or broken at any time, the area shall be immediately

repaired. Repairs to the installation or backfill shall be made and the pavement restored in the manner and within the time period specified by the City Engineer.

#### 4. Decommissioning of Wells

- a. Each monitoring well shall be decommissioned in accordance with NHDES We 100-1000, as amended, and the practices described in:
  - i. “Standards Relating to Environmental Site Characterization” Second Edition, document identification number ASTM ENVSIT-06, dated 2006; and
  - ii. ASTM ENVSAM-06.
- b. Prior to decommissioning, all wells should be investigated to determine their condition, the details of construction, and whether or not any obstructions exist that will interfere with the filling and sealing process. Any obstructions should be removed by cleaning out the hole, if possible.
- c. Abandoned monitoring wells should be sealed from the bottom to the top by pressure grouting the well through a tremie line. If possible, the casing should be removed prior to sealing. Some monitoring wells are constructed with a filter pack which is an artificial gravel pack placed in the annular space between the borehole and the well screen and used to create a better hydraulic connection with the aquifer. In order to properly seal this type of well, the casing should first be removed and the filter pack should be drilled out. This well should then be filled by the pressure grout method from the bottom of the well to the top using a tremie pipe.

#### 5. Traffic Control

- a. The applicant is required to take all appropriate measures to assure that during performance of the monitoring well installation, inspection, maintenance, or decommissioning, so far as practicable, normal traffic conditions including vehicular, bicycle and pedestrian traffic shall be maintained at all times so as to cause as little inconvenience as possible to the occupants of the adjoining property and to the general public.
- b. The City Engineer and/or the Concord Police Chief may require, while monitoring well installation, inspection, maintenance or decommissioning is in progress, that the applicant engage a police detail to maintain traffic control and public safety at a project site, if in their opinion the work within the street or highway constitutes a compromise to public safety, or a potential for significant traffic delays or congestion on certain streets.
- c. Minimally, the applicant will be required, while monitoring well installation, inspection, maintenance, or decommissioning work is in progress, to utilize a certified flagger detail to maintain traffic control and public safety at the project site.

**Signatures**

These regulations shall take effect upon their approval.

APPROVED:  DATE: 5-10-10  
Edward L. Roberge, PE, City Engineer

APPROVED:  DATE: 5-10-10  
Carlos Baía, Deputy City Manager

APPROVED:  DATE: 5.10.10  
Thomas J. Aspell, Jr., City Manager