

## **EXCAVATION IN CITY OF BISMARCK RIGHT-OF-WAY REQUIREMENTS AND PROCESSES**

The Engineering Department has developed procedures and policies to minimize permit issuance and construction issues and delays prior to granting a permit. Permit applicants and CONTRACTORS should be familiar with the following procedures and City Specifications prior to permit application to excavate in the City of Bismarck.

All fees listed below may be subject to change without notice.

All references to the City Specifications refer to the latest edition of The City of Bismarck Construction Specifications for Municipal Public Works Improvements available online at: [www.bismarcknd.gov/1865/Construction-Specifications-Details](http://www.bismarcknd.gov/1865/Construction-Specifications-Details)

The ENGINEER will keep records, review for conformance, and recommend action by the City ENGINEER for all site plans. Office staff will issue permits, track billings, and assist the project manager in coordination between the CONTRACTOR and the Engineering Department. The project manager will perform inspections as required.

### **QUALIFICATIONS**

A permit to excavate may be granted to a CONTRACTOR who has a minimum of a North Dakota State "Class D" license, is bonded, and has demonstrated to the Engineering Department the ability to perform the work in a workmanlike manner in accordance with normal construction methods and codes. The duration of the excavation will also be an integral part of the permit approval.

For bonding with the City, the CONTRACTOR shall submit the following to the Engineering Department for approval:

- A letter requesting to be an excavation CONTRACTOR bonded with the City including: company name, address, email, and phone number.
- Class D or higher Contractors License with the State of North Dakota.
- Contractor's liability insurance as per City Specifications Section 102-5
- License/Permit Bond as per below
- Professional License for work to be performed: Plumbing, Electrical, etc.
- North Dakota State Installers License

Typical approval is approximately two weeks, CONTRACTOR shall not perform work within the City right-of-way while awaiting approval.

All CONTRACTORS excavating in the public right-of-way with intention to connect, install, or repair sanitary sewer or water services shall conform to any and all North Dakota State Plumbing Board Rules and Regulations. For questions regarding ND State Plumbing Board Rules and Regulations, please refer to or contact the Board at their website or 328-9979.

Upon meeting the above requirements, The CONTRACTOR shall be familiar with the information in this document and the City Specifications and return the enclosed Certification and Authorization Form. The CONTRACTOR and any authorized employees are required to be listed.

## **BONDING REQUIREMENTS**

The CONTRACTOR must provide the original or an emailed copy of their License/Permit Bond in the amount of \$25,000.00 (also called a License and Permit Bond). It must state "in accordance with City of Bismarck Ordinances." All work within the City right-of-way shall require a warranty period of two years for each permit approved.

The bond shall indemnify the City against all costs, loss, and damage caused by the excavation. The bond is to be further conditioned on the guarantee of the excavating party to keep the site in repair for two years from the date of completion.

If the CONTRACTOR fails to restore or maintain the excavation as required, the City may do the necessary work and recover all costs and expenses from the bond or the defaulting party.

## **EXCAVATION PERMITS**

CONTRACTORS intending to make any excavation within City of Bismarck rights-of-way (to connect, disconnect, repair, or install any sanitary, storm, or ground water drainage sewer, water, gas, power, television, telephone, communication, street lighting, traffic signal or other underground conduit) must obtain a permit prior to boring or excavating.

Any excavation upon private property for the express purpose of construction, repair or disconnect of any sewer or water service that is or will be connected to a City of Bismarck utility, including storm sewer, will require a permit before excavating. For larger sites, such as manufactured home parks or housing developments with a metered water main, permits are required for any drainage or sanitary sewer facility installation or repair on private property. A permit is not required for water services located behind the site's main water meter. All excavations must be inspected by the Engineering Department.

Work shall not begin in the spring until conditions are suitable and may be suspended in the fall/winter as determined by the City ENGINEER.

## **SITE PLANS**

A site plan will be required as per the [City Site Plan Review Guide](#) available on the City of Bismarck Website. A site plan shall be required for any commercial buildings or multiple building developments. Site plan approval shall be required prior to approval of an excavation permit. Contact the Engineering Department for more information.

The excavator shall have a copy of the approved site plan on site for review by City staff and shall not deviate from the site plan unless changes are approved in writing by the City Engineer or his authorized representative.

## **TRAFFIC CONTROL/LANE CLOSURES**

Traffic control devices shall be used to separate workers, equipment, and work areas from the travelling public (motorists, bicyclists, or pedestrians). Traffic control devices shall conform to current editions of the MUTCD and City Specification Section 1211 – Traffic Control. If sidewalks or streets are closed for more than one week without activity occurring, then sidewalk closure fees and/or street closure fees will be assessed as per [current rates](#).

If any of the below conditions are anticipated, the CONTRACTOR shall submit a traffic control plan to the CITY TRAFFIC ENGINEER for approval:

- A driving lane will be closed
- A sidewalk will be closed
- Vehicles will be required to cross an existing centerline or outside of an existing lane line
- Temporary lane widths reduced to less than 10ft
- On a street without centerline pavement markings, a 20ft wide travelled way cannot be provided. Note, fire code requires a 20ft width.
- Unusual situations

If needed, based on the above or as determined by the Traffic Engineer, traffic control plans shall be submitted for approval a minimum of one week in advance of work occurring. Traffic control plans shall show the proposed construction signing, lane widths, lane closures, work area boundary, and an estimated time schedule for when the closure will occur and when it will be restored to normal. If multiple phases are anticipated, include separate layouts for each phase.

Regardless of the need for a traffic control plan, the CONTRACTOR shall notify the City Traffic Engineer a minimum of two working days prior to work occurring so that advance notice can be provided to the general public, fire, police, and ambulance.

## **STORM WATER MANAGEMENT**

The CONTRACTOR is responsible for the actions and activities of the CONTRACTOR, subcontractor, and delivery personnel. Each CONTRACTOR must ensure that activities do not affect the erosion and sediment control Best Management Practices (BMPs) for any site. Should the CONTRACTOR damage or render ineffective any BMPs on site, the CONTRACTOR shall repair or replace the affected BMPs immediately and before any additional work continues.

Drainage ditches, gutters, and inlets for the storm water collection system shall, at all times, be kept clean, unobstructed, and protected from erosive material, or diverted as approved by the ENGINEER.

The CONTRACTOR shall provide appropriate inlet protection and sediment control during the course of the work so as to ensure the storm sewer system is protected from sediment and pollution. The CONTRACTOR shall provide street sweeping as necessary to ensure that sediments resulting from his activities do not enter the storm water system. Temporary stockpiles in the street must be removed by the end of the work day, the street shall be cleaned of all remaining material upon removal of stockpile.

All discharge water shall be treated before entering the storm sewer system. Acceptable treatment measures include: sedimentation basins, sediment socks/bags, and sand filters. All disturbed vegetation shall be replaced with seed and mulch, blanket or sod within 10 business days of completion. The CONTRACTOR shall be responsible for seed or sod and must provide maintenance, including any watering necessary to ensure the establishment of the sod or seed. The period to establish 70% vegetation for sod or seed shall be 30 days, after which the CONTRACTOR must re-sod or re-seed until satisfactory establishment is achieved.

Any failure may result in revocation of existing and denial of future excavation and/or building permits.

## **EXCAVATION PERMIT**

An excavation permit may be obtained from the City of Bismarck Engineering Department. The CONTRACTOR may also establish an E-TRAKiT account and submit your permit request online at: [trakitapi.bismarcknd.gov/etrakit/](http://trakitapi.bismarcknd.gov/etrakit/)

The applicant must complete the Excavation Permit Data form before requesting a permit. To minimize waiting time at the Engineering Department, it is helpful if requests for multiple permits are submitted several days before the date they are needed.

To receive an excavation permit for boring of electrical, gas or fiber lines, a detailed map must be submitted as part of the permit application. A printable form may be obtained at City of Bismarck website under the heading Permits for Work in Rights of Way: [Excavation Permit Data Form](#). Completed forms may be emailed to [engineering@bismarcknd.gov](mailto:engineering@bismarcknd.gov)

An accurate legal description (lot, block and subdivisions on which the excavation will occur) and address for the property are required for all permits.

## **EXCAVATION PERMIT COSTS**

The current rates for inspection and engineering fees can be found on the [City of Bismarck website](#) under the heading [Engineering Fees](#).

A permit will be required for each type of service (water, sanitary sewer, storm sewer, etc) at the current rate. If permits are requested for multiple services (for example, permits for both water and sanitary sewer) a permit and fee would be required for each service. Also, if a mainline and branch(es) are requested, each main line and each branch require a permit and fee. The number of permits required is listed on the site plan approval letter.

Excavation permits not used become invalid after 90 days and will require issuance of a new permit at the costs stated above.

## **MULTIPLE EXCAVATIONS WITHIN A SINGLE PROJECT**

For City of Bismarck utilities a separate permit will be required for each excavation.

For Private Utilities (including “potholing” utility locates”) a single permit may be issued for multiple excavations on a project within the same general area. However, the ENGINEER reserves the right to require a compaction test for each individual excavation.

## **CONTRACTOR REQUIREMENTS PRIOR TO AND DURING EXCAVATION**

The CONTRACTOR is responsible for the location of all areas of potential utilities and/or other hazardous conditions or conflicts. The CONTRACTOR shall provide advance notification to OWNERS of underground facilities prior to excavation, auguring, boring, blasting, or other activities that may endanger underground facilities by using the ND One-Call system at 1-800-795-0555.

Prior to and during excavation, the CONTRACTOR shall:

- Report any damage, potential damage, or suspected damage of any utility immediately to the owner of the utility and to the City of Bismarck.
- Notify the Fire Department at 355-1400 when fire hydrants are removed from and returned to service.
- Notify the Forestry Department at 355-1700 prior to beginning any construction which is within 10 feet or within the drip of any tree, shrub, or woody plant within the City right-of-way.
- Notify the project manager within two to 24 hours prior to breaking ground. For large sites, 48 hours’ notice is required.
- Complete the project in a continuous and orderly manner.
- Notify the ENGINEER to arrange for inspection when:
  - The utility is installed
  - Prior to connection to existing main
  - Properly bedded
  - Prior to backfilling
  - Prior to surface cut restoration

Due to staffing limitations, the Engineering Department cannot guarantee that an inspection will be made on the day of notification for an inspection after 4:00 p.m. on that day. The CONTRACTOR must be present for all inspections.

The CONTRACTOR must contact the Public Works Utility Operations at 355-1700 between the hours of 8:30 am and 4:00 pm, a minimum of 24 hours in advance for a tap to the City water main. Large taps may require more notice. The CONTRACTOR shall not make taps to the water main nor operate City or private water valves or hydrants unless approved by Public Works Utility Operations.

## **DAMAGED LOT CORNERS**

The protection of lot corners or other monuments is the responsibility of the CONTRACTOR. If a lot corner must be moved to facilitate excavation, the lot corner should be offset prior to construction. Offsetting or replacement of disturbed or damaged monuments must be accomplished only by a registered land surveyor at the expense of the applicant.

## **CONTRACTOR RESPONSIBILITY FOR PROTECTING TREES**

A CONTRACTOR working in public right-of-way or properties shall be responsible for the prevention of damage to trees, shrubs, bushes, hedges, or other woody plants and their root systems located within, or infringing upon, the public rights-of-way and properties, including parks as per Section 105-5 of the City Specifications.

The City Forestry Division of the Public Works Department, 355-1700, shall be notified at least 24 hours in advance of working on site, between 8:00 a.m. and 4:30 p.m., prior to beginning of any construction near said areas.

The excavation shall be offset away from the nearest tree to make the excavation, rather than centered over the facility.

## **EXCAVATION WORK PERFORMED WITHOUT A PERMIT, FAILURE TO SCHEDULE AN INSPECTION, OR OTHER VIOLATION OF CITY SPECIFICATIONS, STANDARDS OR CODE**

1<sup>st</sup> offense: Written warning.

2<sup>nd</sup> offense (within one calendar year of 1<sup>st</sup> offense): Suspension for 30 calendar days.

3<sup>rd</sup> offense (within one calendar year of 2<sup>nd</sup> offense): Suspension for six months.

4<sup>th</sup> offense (within one calendar year of 3<sup>rd</sup> offense): Suspension for one calendar year.

Note: all suspensions will begin from date of discovery of violation

## **REPAIR PATCHES**

Asphalt repair patches shall conform to Section 401 - Asphalt Concrete Pavement and Standard Detail 400-1 of the City Specifications. The City of Bismarck's excavation inspector must be notified prior to the repair to ensure compliance with specifications are met.

Concrete repair patches must conform to Section 504 - Concrete Pavement Repair and Standard Detail 504-3 and 504-4 of the City Specifications. The excavation inspector must be notified prior to the repair to ensure compliance with specifications are met.

All sidewalk patches shall be full panel replacement. All curb and gutter patches shall be a minimum of five lineal feet as deemed adequate by the ENGINEER. All apron patches shall be an area deemed adequate by the ENGINEER. All repair expenses shall be the responsibility of the CONTRACTOR.

All concrete repairs shall be made by a licensed and bonded concrete contactor in accordance with City Specifications.

## **SURFACE CUTS WITHIN RIGHT-OF-WAY**

All surface cuts due to excavation permits shall be inspected by the project manager prior to replacement.

An asphalt surface cut will be allowed if asphalt materials are available from a supplier with an approved job mix formula on file. The edge of the asphalt pavement shall be square cut prior to

replacement of mix. Construction methods of replacement shall be in accordance with the City of Bismarck standard specifications. All asphalt surface cuts shall be sealed with a bituminous seal coat and cover aggregate. Surface cuts shall be patched temporarily with concrete (2 inches for sidewalks, 4 inches for streets, or as directed by the ENGINEER) when asphalt materials are not available; however, the CONTRACTOR shall maintain the temporary patch and construct a permanent pavement repair as soon as materials are available.

No cleated equipment, buckets, or outriggers may be used on pavement unless pavement can be protected from any damage to surface or subgrade.

All roadway and surface cuts shall be replaced, less bituminous seal coat, within 48 hours of the completion of the backfill. If the surface cut is not restored either temporarily or permanently within 48 hours, the ENGINEER may order the patch replaced by others at the CONTRACTOR'S expense. The CONTRACTOR may be billed twice if a temporary patch is made first and the permanent patch is not made within a reasonable timeframe, requiring the ENGINEER to order the permanent patch to be made by others.

The cutoff and startup dates for the issuance of permits with surface cuts shall be set by the CITY ENGINEER. These dates are contingent upon judgment as to the quality of workmanship probable, availability of materials, load restrictions, acceptance of temporary patching, and the necessity of the improvement or repair. The City ENGINEER may waive these dates for emergency utility repairs or where the project may be unduly delayed. Temporary patches must be replaced as soon as allowed.

## **CONSTRUCTING AND REPAIRING WATER SERVICE CONNECTION**

Construction methods and materials shall be in accordance with City Specifications .

No valve or other control on the existing water system shall be operated for any purpose by the CONTRACTOR without approval by the ENGINEER. All consumers affected by such operation shall be notified, in advance, by the CONTRACTOR a minimum 24 hours for residential and 48 hours for commercial before the operation and advised of the probable time when the service will be restored. If possible, the existing water system shall not be turned off before 9:00 a.m.

Water service lines shall be pushed or bored under asphalt streets, curb and gutter, and the tree root systems unless permission to cut the same is received from the ENGINEER.

Public Works Utility Operations will tap the main for new connections, taps will be charged when replacing or repairing an existing service for any size larger than 2 inches. The current rates (rates may change at any time) are as per attached fee schedule. The CONTRACTOR must be present to assist PW Utility staff with operations and provide necessary equipment.

## **CONSTRUCTING OR REPAIRNG SEWER SERVICES**

- a. Construction methods and materials shall be in accordance with the City Specifications.
- b. Sewer services shall be extended to the street right-of-way line only. Sanitary sewer service lines shall be installed to an invert depth of 10 feet below the finished sidewalk grade or at a minimum positive grade of two percent (1/4 inch per foot) from the connection at the sewer

main. It shall be the property owner's responsibility to provide at least the two front property corners (including future designed sidewalk grades where sidewalk or curb and gutter are not constructed) to establish the location of the service line for construction and recording purposes.

For each sewer stub out, a 2" x 4" wood marker shall be placed within one foot of the end of the sewer service, shall extend vertically and plumb to not less than two feet above the existing surrounding ground, and shall be painted green.

- c. Connections to Main – When a wye is not available for connection to a sanitary sewer main, the connection shall be made as per Section 801 of the City standard specifications.

Taps into VCP sanitary sewer required for the Inserta Tee shall be done by the Public Works Department. The current rates (rates may change at any time) are as per attached fee schedule.

- d. Any trench with unsuitable material shall be excavated to a sufficient depth below invert grade and backfilled with subcut gravel to support the pipe prior to the placement of sand bedding. Sub cut gravel shall be a granular material as per City Specification 801-2.9.
- e. Disconnections - All sewer line disconnections shall be cut off and capped or plugged at the back of the sidewalk or at the property line.

## **SEPARATION OF WATER AND SEWER SERVICES**

Building sewers or drainage piping of clay or materials which are not approved for use within a building shall not be run or laid in the same trench as the water pipes unless the bottom of the water pipe, at all points, is at least 12 inches above the top of sewer line. The water pipe shall be placed on a solid shelf excavated at one side of the common trench with a minimum clear horizontal distance of at least 12 inches from the sewer line.

## **FIRE LINE AND SPRINKLER LINE FLUSHES**

The Engineering Department provides, monitors, and observes flushing of fire lines and sprinkler lines according to the following standards:

- Underground piping, from the water supply to the system riser, shall be completely flushed before connection is made to downstream fire protection system piping.
- The flushing operation shall continue for sufficient time to ensure thorough cleaning.
- Provision shall be made for proper disposal of water used for flushing. Overland flow of flushed water should be avoided. Any erosion damage and sedimentation shall be corrected.
- A minimum 2½" hose shall be used to conduct a fire line flush. Additional lines will be needed to achieve the required rate for larger pipes. It is the CONTRACTOR'S responsibility to provide the necessary taps and hoses as follows:

Pipe Size	GPM	Hose Size
4"	390	2½"
6"	880	(2) 2½"
8"	1560	(2) 3"

10"	2440	(2) 3"
12"	3520	(2) 4"

**BACKFILL AND COMPACTION METHODS**

Trenches and excavations shall be backfilled immediately after inspection or installation or repair of conduit. Backfilling shall be completed within 24 hours. Compaction tests shall be taken at one-half the depth and the top of the trench at minimum.

Compaction shall be as per Section 801 of the City standard specifications, with the exception of narrow (maximum 6-inch width digging chain or earth saw) trenches must be backfilled in a maximum of 6-inch layers and obtain a dry density of 90% from 0-4' deep at optimum moisture in accordance with ASTM D1557 (modified proctor).

Trenches shall be backfilled and compacted to the foundation. A drop pile hammer, clam shell, backhoe bucket, or other similar equipment will not be allowed in the initial backfill. The CONTRACTOR shall correct all deficiencies in material or moisture needed for backfilling.

When required compaction is unattainable due to weather conditions (during winter months), trench shall be temporarily backfilled. Trench shall be re-excavated and compacted to meet requirements when as conditions allow. If excavated soil is unsuitable to meet compaction requirements, CONTRACTOR shall import suitable fill.

Backfilling gas piping, telephone, electrical, cable television, conduits, or other private utilities not connected to City utilities shall follow the procedure for sewer and water lines, except pit run gravel may be omitted from the bed of the trench unless required by the ENGINEER or Utility.

**RESPONSIBILITY OF THE CONTRACTOR FOR CORRECTION OF FAULTY TRENCHES, MATERIALS, AND/OR WORKMANSHIP DEFICIENCIES**

Undue inconvenience or time delays affecting the public are considered deficiencies by the CONTRACTOR. If inconveniences, time delays, construction methods, materials, or quality of workmanship are deficient at any time during construction, said deficiency shall be corrected within 4 hours of notification. When material availability will delay the correction, a temporary corrective measure such as barricades or temporary patch shall be made until the pavement correction completed. Failure by the CONTRACTOR to correct a deficiency, either temporary or permanent, in a timely matter, shall give the City the right to correct or contract a third party to correct the deficiency at the CONTRACTOR'S expense. No additional permits will be issued until the correction or payment for the correction is made.

**CONDUCTOR DAMAGE AND RELOCATION OF LIGHT POLES**

Any damage to existing City Conductors shall be repaired as per City Specification 105-6.

When a light standard requires relocation, CONTRACTOR shall contact the Engineering Department for approval to move the standard. Light standard shall be relocated as per Section 1004-3.5 of the City Specifications. All costs associated with relocation shall be at the Land Owner's expense. Any damage that occurs to the light as part of the relocation shall be the responsibility of the CONTRACTOR.

### **Watermain Tap**

Water Service

<u>Size</u>	<u>Fee*</u>
1"-2"	No Fee
3"-6"	\$500
8"-12"	\$800

\*Plus labor and materials

### **VCP SS Inserta Tee**

<u>SS Service Size</u>	<u>Fee*</u>
4"-6" PVC	\$200
4"-6" non-PVC	\$300
8" PVC	\$600

\*Plus labor and materials