

Attachment A

Lake Street Gas Main Installation Project
Haverhill, MA
Notice of Intent

PROJECT NARRATIVE

1 INTRODUCTION

BSC Group, Inc. (BSC) is filing this Notice of Intent (NOI) on behalf of the Boston Gas Company (BGC) for work associated with the installation of a gas main within the roadway along Lake Street and at the crossing of Creek Brook in Haverhill, MA (“the Project”). BGC proposes to install approximately 3,000 linear feet of gas main along Lake Street, of which approximately 827.5 feet of gas main will be installed via Horizontal Directional Drill (HDD) methodologies under Creek Brook. This NOI is being submitted in accordance with the Massachusetts Wetlands Protection Act (*M.G.L. Ch.131, S.40*) (WPA) and implementing regulations (*310 CMR 10.00*) and the City of Haverhill Wetlands Protection Ordinance (Chapter 253).

The work requires an Order of Conditions (OOC) under the WPA to satisfy Section 401 certification requirements under the state Clean Water Act (CWA). This Project can proceed under an OOC per *314 CMR 9.03(3)*¹. The location of the proposed activities is shown on the USGS Site Locus Map in **Attachment B**

1.1 Jurisdictional Activities

Activities which are the subject of this NOI include the installation of new gas main within the 100-ft Buffer to Inland Bank/Bordering Vegetated Wetland (BVW), 200-ft Riverfront Area (RFA), and/or the FEMA 100-yr Flood Zone (BLSF). This work qualifies as a Limited Project under 310 CMR 10.53(3) (d). However, no loss of or permanent alterations to resource areas are anticipated as a result of the work as all work is within the existing paved roadway and the gas main will be below ground level within or underneath the existing paved roadway footprint. Please refer to the enclosed Environmental Resources Map in **Attachment B**, and Site Photographs in **Attachment C** for depictions of the work site.

1.2 Exempt Activities

Components of the gas main installation within the roadway in 100-foot Buffer Zone and RFA are exempt minor buffer zone activities under the WPA; however, all work in resource areas is jurisdictional under the Haverhill Ordinance. Activities exempt under the WPA include the installation of approximately 2,660-ft of gas main within the 100-ft Buffer to Inland Bank/Bordering Vegetated Wetland (BVW), and 200-ft Riverfront Area (RFA), as these activities are considered an exempt minor buffer zone activity under WPA regulations 310 CMR 10.02 (2)(b)(2)(i).

2 EXISTING CONDITIONS

The Project is located within the existing paved roadway of Lake Street from the intersection with Pamela Lane to the roadway in front of 609 Lake Street. The roadway crosses Creek Brook, which

¹ MassDEP typically asserts discretionary authority under the 401 Water Quality Certification Program over HDD projects crossing waterbodies based on the “dredge” of Land Under Water and potential for inadvertent release into the waterbody.

flows under the roadway through an existing culvert. Creek Brook is a perennial stream. Land use immediately adjacent to the Project area is comprised of low-density residential use, with areas of mixed forest.

2.1 Resource Area Summary

BSC conducted both a desktop analysis using MassGIS data layers and publicly available data and field investigations of the proposed Project area to identify wetland resource areas and assess permitting requirements pursuant to the WPA and local Ordinance. BSC Wetland Scientists delineated the Banks of Creek Brook and associated wetlands on 04/30/2025, in accordance with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, ed. J.S. Wakely, R.W. Lichvar, and C. C. Noble. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center (Version 2.0) and methodology described in the Massachusetts Department of Environmental Protection's (MassDEP) *Handbook on Delineating Bordering Vegetated Wetlands* (Published in March 1995).

Existing conditions, wetland resource areas, and buffer zones in relation to the proposed activities are shown on the Environmental Resources Map in **Attachment B**. Representative photographs of site conditions are provided in **Attachment C**. Portions of the proposed activities are within 100-ft Buffer Zone to Inland Bank /BVW, RFA, and BLSF, all associated with Creek Brook.

At the gas line crossing location of Creek Brook, the banks are well-defined rip-rap with minimal vegetation. The Brook is approximately six to eight-ft wide and between four inches near the crossing, with a cobble and silt bed. Vegetation surrounding Creek Brook consisted of Multiflora rose (*Rosa multiflora*), Honeysuckle (*Lonicera spp.*) and Japanese Knotweed (*Reynoutria japonica*). Please see photos in **Attachment C**.

3 PROJECT ACTIVITIES & ASSOCIATED IMPACTS

3.1 Project Need

The purpose of the Project is to provide reliable gas service to customers in Haverhill. BGC is proposing to install a new, underground gas line which crosses over Creek Brook. Installation of new gas main under Creek Brook will be accomplished via HDD. In total, BGC is proposing to install approximately 3,000-ft of gas main in Haverhill.

The Project has been designed to avoid adverse impacts to the greatest possible extent. Project impacts to the ground surface and topography are temporary in nature and will be restored upon completion of the Project. While no impacts to resource areas are anticipated from the HDD activities, this NOI is being filed as a contingency in the event of an inadvertent return (IR) of drilling fluid to the surface, and to fulfill the Section 401 requirements for work underneath LUWW. Details on the proposed activities are discussed further in the following sections. The work can begin as soon as the project is permitted.

3.2 Open Trench Gas Main Installation

BGC will install gas main from the existing main to the HDD entry/exit pits via direct trench installation within the roadway. This process involves cutting the roadway surface and removing the existing asphalt, using a backhoe or excavator to excavate to the required depth, sidecasting the trench spoils directly adjacent to the trench, and installing the replacement pipe in the prepared trench. BGC will complete the work in sections and backfill the trench with the excavated soils. Following the installation of the main, the disturbed area will be restored to pre-existing conditions and grades, which will involve repaving or patching the roadway surface. Excess soils and the removed asphalt will be removed from the site and disposed of in accordance with applicable regulations.

3.3 HDD Installation

HDD involves a specialized drill rig that creates or “bores” a tunnel along a pre-determined path under waterways or other impediments. This specialized rig then “pulls” the new pipeline through the drilled tunnel. This process results in no alteration of the overlying resource areas and only temporary disturbance at each end of the “tunnel.” During construction, BGC will stage HDD equipment on temporary work areas within the roadway and roadway shoulder on each side of the river.

BGC has incorporated a number of avoidance and minimization measures to protect resource areas adjacent to the work areas. All equipment will be located within the roadway or adjacent shoulder, crews will place erosion control devices and other Best Management Practices (BMPs) prior to and during the ground-disturbing work, and crew will restore disturbed or altered soil surfaces to pre-construction conditions to the extent practicable following completion of construction.

BGC will establish two HDD staging areas at the exit and entry locations of the new section of pipeline and mobilize equipment into these areas. Entry and Exit pits will help start the bore, receive the guided bore on the other side, and contain the drilling fluid returns. The entry and exit pit will require a work area of ~25-ft by 50-ft. To complete the HDD bore, a pilot hole is drilled using a small-diameter (3 to 5-inch) drill string and a drill bit entering the ground through the “entry pit.” Bentonite drilling fluid, composed of bentonite clay and water, is delivered to the cutting head through the drill string to cool the drill bit, provide hydraulic cutting action, and remove cutting spoils as the drilling fluid returns to the entry point of the pilot hole. A completed pilot hole and subsequent drilling will end with the drill head resurfacing at the “exit pit.” The pilot hole is then enlarged with one or more reaming passes, until the desired hole diameter is obtained based on the proposed pipeline diameter. Once the bore hole is appropriately sized, machinery will pull the replacement pipeline through the bore hole, test the pipe for integrity (to ensure there was no damage to the pipe during the pull), and tie the replacement pipeline into the existing lines.

HDD is done with the help of a viscous fluid known as drilling fluid, comprised of a non-toxic colloidal clay called bentonite. Bentonite absorbs water which causes it to swell, creating a viscous fluid. This fluid is used to remove cut borings, stabilize the bore hole, and cool the drill head. Fresh drilling fluid is expelled through a nozzle at the tip of the drill head. Throughout the process, the fluid is cycled through a reclaimer, a machine which removes the drill cuttings and allows the fluid to be recycled for continuous use within the project. The entry and exit pits will also ensure that the drilling fluid is collected and contained.

At the end of the installation, the drilling fluid remaining in the drill pits or on-site will be collected and transported to an appropriate location offsite for disposal.

The gas main will be installed at an appropriate depth to avoid any impacts to the existing bridge/culvert structure. As the activities are well below the ground surface, no alteration of resource areas including LUWW, Bank, BVW, or BLSF is anticipated, and no impacts to flood storage capacity are proposed. The alignment of the drill path will pass underneath approximately 10 linear feet of LUWW. Because the pipeline is installed underneath the bed of the creek, no alteration to LUWW is anticipated.

3.4 HDD Contingency Plan

Since HDD gas line installation methods involves the use of drilling fluid that is slightly pressurized during the drilling process in order to function properly, there is potential with any HDD that some drilling fluid may migrate out of the drill hole through existing cracks or fissures in the ground and escape to the surface as an “inadvertent return.” However, the design of the HDD, including length and depth of the drill path, takes into consideration the nature of the underlying soil and bedrock geology to be drilled through, as well as the presence of natural resources, to minimize the potential for an inadvertent return. General guidance for “Inadvertent Return” (IR) Contingency Plans is provided in **Attachment E**, however, the contractor will be responsible for providing a site-specific IR Contingency Plan prior to construction.

BGC’s drilling contractor will prepare an IR Contingency Plan prior to the commencement of construction. This plan will set forth the methodologies, monitoring activities, and procedures to be followed to prevent an inadvertent release of drilling fluid and will establish the process and procedures to be followed if an inadvertent release of drilling fluid occurs. Response and restoration actions will include:

- Continuous resource area monitoring during installation and stop work procedures if an IR is observed
- Detailed descriptions and locations of containment devices such as booms, curtains, or sediment and erosion controls
- Materials removal and disposal procedures both in resource areas and in uplands
- Reporting procedures and timelines

4 ALTERNATIVES ANALYSIS

BGC identified the need for new gas service along Lake Street to provide service to residents. The no-build option is not a feasible alternative, as the purpose of the Project is to provide reliable utility services to the residents along Lake Street in Haverhill. The other alternative would be to install the gas main with open trenching, however that would leave a section of the gas main exposed over Creek Brook where it is vulnerable to damage during extreme weather and flooding events.

4.1 HDD Alternative

The HDD Alternative will not involve any permanent impacts to jurisdictional resource areas, will not include reconstruction of exposed sections of gas main, and will eliminate the risk of failure should the bridge washout or otherwise suffer structural damage during extreme weather events and flooding. Furthermore, by eliminating the current and future risks of climatic and environmental conditions damaging the infrastructure, this option will also reduce the risk of negative impacts to the resource areas in the event of bridge failure or washout. For these reasons the HDD Alternative is the preferred alternative.

5 PROPOSED AVOIDANCE AND MINIMIZATION MEASURES

BGC has established procedures that are to be followed by all employees and its contractors for accessing sites and performing construction and maintenance activities on natural gas transmission ROWs. These procedures, discussed in National Grid's Environmental Guidance Document (EG-303NE) Access, Maintenance and Construction Best Management Practices, ensure that BGC's projects are completed in accordance with all applicable environmental laws and regulations as well as company policies and compliance objectives.

5.1 Sediment and Erosion Controls

Erosion and sediment control measures will be installed prior to the commencement of work based on site conditions. These controls will function to mitigate work-related erosion and sedimentation, and to serve as a physical boundary to delineate work areas to contain construction activities within approved locations. Proposed erosion and sediment control measures may include a turbidity curtain, straw wattles, weed-free bale barriers, fiber rolls, or similar treatment.

Erosion and sediment controls will be inspected on a regular basis and maintained in working order until all disturbed areas are stabilized. Please refer to **Attachment E** for erosion and sediment control details.

5.2 Construction Access

Construction access will be from the existing paved roadway or roadway shoulder of Lake Street. The last crew to leave the site each day will be responsible for regularly sweeping the roadways, if and when sediment and/or rock have been tracked onto the street. No off-road vehicle or equipment access is anticipated for the Project.

5.3 Dewatering

Dewatering may be necessary during construction of the entry/exit pits or pipeline trench within the roadway. If there is adequate vegetation in upland areas to function as a filter medium, the water generally will be discharged to the vegetated land surface. Where vegetation is absent or where slope prohibits, water will be pumped into a filter bag, or a dewatering basin consisting of a filter bag with straw bale or silt fence perimeter controls which will be located in approved areas outside wetland resource areas. The pump intake hose will not be allowed to set on the bottom of the

excavation throughout dewatering. The basin and all accumulated sediment will be removed following dewatering operations and the area will be seeded and mulched with straw. The bag will be surrounded with additional sediment filtration such as fiber rolls, straw bales, or other appropriate containment.

5.4 Stormwater Management

There will be no change in grade or increase in impervious area as a result of this Project. Therefore, additional stormwater management appurtenances will not be required.

5.5 Inadvertent Return Contingency Plan

In the unlikely event of an inadvertent return of drilling fluid during HDD operations, BGC will implement their IR Contingency Plan, a copy of which is provided in **Attachment E**.

5.6 Restoration

Following the completion of construction, crews will stabilize disturbed areas and restore the construction site to pre-construction conditions to the maximum extent practicable. As most work will be performed within the roadway, BGC anticipated restoration to primarily include re-paving/patching along the roadway surface. Where work is within the roadway shoulders, BGC will rake or re-grade to match surrounding contours. Where applicable, BGC will apply seed and straw or mulch to encourage revegetation. All construction materials, vehicles, and non-biodegradable sediment controls will be removed from the site upon completion of work.

6 CONFORMANCE WITH THE PERFORMANCE STANDARDS OF THE WPA AND LOCAL ORDINANCE

The Project has been designed to meet all applicable performance standards for each affected resource area under the WPA. In accordance with general condition *310 CMR 10.56(4)*, *310 CMR 10.57(4)*, and *310 CMR 10.58(4)*; BGC will implement BMPs to ensure the adjacent resource areas are adequately protected, and impacts to the surrounding area are minimized and restored to the maximum extent practicable.

6.1 Land under Water Bodies and Waterways [310 CMR 10.56(4)]

- a) Where the presumption set forth in 310 CMR 10.56(3) is not overcome, any proposed work within Land under Water Bodies and Waterways shall not impair the following:*

- 1. The water carrying capacity within the defined channel, which is provided by said land in conjunction with the banks;*

No impacts to water carrying capacity are anticipated as part of the Project – Project activities will be located underground, well below the stream bed within LUWW. There will be no alteration of the Banks or stream channel resulting from the Project.

2. Ground and surface water quality.

No impacts to water quality are anticipated as part of the Project – Project activities will be located underground, well below the stream bed within LUWW. In the event of an inadvertent release to LUWW, BGC will immediately take corrective actions to contain and remove drilling fluid and restore the stream bed per the IR Contingency Plan.

3. The capacity of said land to provide breeding habitat, escape cover and food for fisheries; and

No impacts to aquatic habitat functions are anticipated as part of the Project – Project activities will be located underground, well below the stream bed within LUWW. There will be no alteration of the stream channel resulting from the Project that would reduce the current ability of LUWW to provide fisheries habitat.

4. The capacity of said land to provide important wildlife habitat functions. A project or projects on a single lot, for which Notice(s) of intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures established under 310 CMR 10.60.

No impacts to wildlife habitat functions are anticipated as part of the Project - Project activities will be located underground, well below the stream bed within LUWW. There will be no alteration of the stream channel resulting from the Project that would reduce the current ability of LUWW to provide wildlife habitat.

5. Work on a stream crossing shall be presumed to meet the performance standard set forth in 310 CMR 10.56(4)(a) provided the work is performed in compliance with the Massachusetts Stream Crossing Standards by consisting of a span or embedded culvert in which, at a minimum, the bottom of a span structure or the upper surface of an embedded culvert is above the elevation of the top of the bank, and the structure spans the channel width by a minimum of 1.2 times the bankfull width. This presumption is rebuttable and may be overcome by the submittal of credible evidence from a competent source. Notwithstanding the requirements of 310 CMR 10.56(4)(a)4., the impact on Land under Water Bodies and Waterways caused by the installation of a stream crossing is exempt from the requirement to perform a habitat evaluation in accordance with the procedures established under 310 CMR 10.60.

This standard is not applicable to the project – Project activities will be located underground, well below the stream bed and Banks. There is no potential to alter the carrying capacity of the stream or alter the stream bed.

6.2 BLSF [310 CMR 10.57(4)(a)]:

1. *Compensatory storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within Bordering Land Subject to Flooding, when in the judgment of the issuing authority said loss will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows. Compensatory storage shall mean a volume not previously used for flood storage and shall be incrementally equal to the theoretical volume of flood water at each elevation, up to and including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Further, with respect to waterways, such compensatory volume shall be provided within the same reach of the river, stream or creek.*

No loss of flood storage volume is proposed as part of the Project – all activities within BLSF will be located below ground.

2. *Work within Bordering Land Subject to Flooding, including that work required to provide the above-specified compensatory storage, shall not restrict flows so as to cause an increase in flood stage or velocity.*

No restriction of flows is proposed as part of the Project – all activities within BLSF will be located below ground and below the channel of the stream.

3. *Work in those portions of bordering land subject to flooding found to be significant to the protection of wildlife habitat shall not impair its capacity to provide important wildlife habitat functions.*

No impacts to wildlife habitat are proposed as part of the Project – all activities within BLSF will be located below ground, and below the river channel of Creek Brook.

6.3 Riverfront Area [310 CMR 10.58(4)]

- (a) *Protection of Other Resource Areas. The work shall meet the performance standards for all other resource areas within the riverfront area, as identified in 310 CMR 10.30 (Coastal Bank), 10.32 (Salt Marsh), 10.55 (Bordering Vegetated Wetland), and 10.57 (Land Subject to Flooding). When work in the riverfront area is also within the buffer zone to another resource area, the performance standards for the riverfront area shall contribute to the protection of the interests of M.G.L. c. 131, § 40 in lieu of any additional requirements that might otherwise be imposed on work in the buffer zone within the riverfront area.*

No impacts to any resource area are proposed as part of the Project – all activities within other resource areas within Riverfront Area will be located below ground and/or within the footprint of the roadway layout.

(b) Protection of Rare Species. No project may be permitted within the riverfront area which will have any adverse effect on specified habitat sites of rare wetland or upland, vertebrate or invertebrate species, as identified by the procedures established under 310 CMR 10.59 or 10.37, or which will have any adverse effect on vernal pool habitat certified prior to the filing of the Notice of Intent.

There are no Rare Species Habitat or Priority Habitat mapped within proximity to the project area.

(c) Practicable and Substantially Equivalent Economic Alternatives. There must be no practicable and substantially equivalent economic alternative to the proposed project with less adverse effects on the interests identified in M.G.L. c. 131 § 40.

See the alternatives analysis above (Section 4).

(d) No Significant Adverse Impact. The work, including proposed mitigation measures, must have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L. c. 131, § 40.

No permanent impacts to any resource area are proposed as part of the Project – all activities within Riverfront Area will be located below ground and/or within the roadway footprint. Where BGC will establish temporary entry and exit pits, these work areas will be restored to pre-construction conditions to the extent practicable.

7 CONCLUSION

Although portions of the Project will occur within jurisdictional wetland resource areas, the proposed Project will:

- Result in no impacts to BLSF or LUWW, as all activities will be underground or involve the removal of existing infrastructure.
- Utilize appropriate BMPs to protect wetland resource areas from sedimentation and soil disturbance during Project activities; and,
- Implement an IR Contingency Plan in the event of an inadvertent return.

Therefore, BGC respectfully requests the Haverhill Conservation Commission find this proposal adequately protective of the public interests identified in the WPA and issue an Order of Conditions for the proposed Project as currently designed. This OOC will also serve to satisfy Section 401 requirements, as allowed by 314 CMR 9.03(3).