

APPENDIX 'B'

MANITOBA HYDRO GAS RESPONSES



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11/5/2019

MH Gas File # 2019-0293

Jarrold Boscow
KGS Group
865 Waverley Street
Winnipeg, Manitoba R3T 5P4

Dear Jarrold Boscow:

Re: 2020 Local Improvement Alleys - Utility Check

Manitoba Hydro (Gas) has reviewed the design submitted by KGS Group for the 2020 local alley improvement work. The following parameters shall be followed when working in proximity to all natural gas mains. Please ensure that all requirements are communicated to your contractor.

1. Special Concerns

Upon review, it was noted that proposed alley improvements between Horace and Marion Street occur over a high pressure 323.9 mm steel gas main. A Manitoba Hydro High Pressure Safety Watch is required for all construction activities within 3.0 m of this gas main. Alley improvements also occur over 114.3 mm and 60.3 mm steel distribution pressure gas mains. All excavations within 1.0 m of any natural gas main must be completed by hand or Hydro-excavation. During construction, gas mains should not be undermined or exposed past the 3 o'clock and 9 o'clock positions on the cross section of the pipe.

Please locate any mains within 1.0 m of proposed underground installations or underneath the proposed construction and investigate by hand or soft-digging to determine depth of cover in relation to both existing and proposed grades. Note that all locating and soft-digging requirements listed below are to be upheld.

If it is determined that a final minimum depth of cover of 750 mm for the 60.3 mm and 114.3 mm steel distribution mains cannot be maintained, or if 900 mm depth of cover cannot be maintained for 323.9 mm main, then contact Andrew Greaves at agreaves@hydro.mb.ca or 204-360-4170 to discuss options pertaining to relocations or lowerings as soon as possible. Under normal circumstances, the amount of time required to mobilize for small diameter distribution lowerings (60.3 mm and 114.3 mm) is approximately 3-5 months. High pressure distribution main lowerings (323.9 mm) would require approximately 6-12 months to complete due to engineering, approvals, and construction.

2. High Pressure Natural Gas Main

- Proposed asphalt and concrete works occur over an existing 323.9 mm high pressure natural gas main. A Manitoba Hydro High Pressure Safety Watch is required for all construction activities within 3.0 m of the high pressure natural gas main.
- Contact “Click before you dig” a minimum of 2 weeks prior to any work commencing within 3.0 m of the high pressure natural gas main to arrange for the pipeline to be properly located and marked by Manitoba Hydro personnel at **ClickBeforeYouDigMB.com** or **Call 1-800-940-3447**. Upon receiving clearances, the excavator will be provided with the phone number of the appropriate District in order to coordinate a Manitoba Hydro High Pressure Safety Watch.
- Prior to construction at this location, please expose the main by hand or hydro-excavation every 25 m in order to confirm elevation of the pipe. The elevations & corresponding locations shall be forwarded back to Andrew Greaves at agreaves@hydro.mb.ca.
- Once the pipeline depth and location has been confirmed by hand or hydro-excavation, the safety watcher may authorize the limited use of mechanical excavation. A smooth edged bucket must be used for excavations within 3.0 m of the main.
- A minimum 900 mm of cover shall be maintained in all areas where equipment will be crossing, traveling or compacting over the 323.9 mm gas mains. Vibratory compaction cannot be used over or within 3.0 m of a high pressure main.
- If equipment must cross, travel, or compact over the gas main with less than the minimum depth of cover, earth bridging or steel plates shall be placed over the main and extend a minimum of 1.0 m on either side at each crossing location.
- When working with less than minimum cover, a minimum 300 mm of granular material shall be bladed into place with tracked equipment offset from the pipeline. Then static compaction equipment would be allowed and built up in layers until minimum cover is achieved.
- Subbase material shall be bladed into place as opposed to being end dumped over the 323.9 mm gas main in areas with less than the minimum cover.
- Caution must be used to ensure the integrity of the pipeline coating. Any damages to the coating must be reported to and repaired at no cost by Manitoba Hydro prior to backfilling.
- The contractor and all site supervisory personnel and equipment operators shall be informed of the risks associated with working adjacent to, and over this pipeline by the Resident Inspector. New site personnel during construction shall be orientated as to the significance and constraints associated with working over and around a high pressure natural gas main.

3. Insufficient Cover

- Absolutely no work including concrete cutting or pavement breaking may occur over the pipeline (regardless of size) until depth of cover is determined and a safety watch is on site.

4. Catch Basin, Manhole, Sewer, and Subdrain Removal and Installation

- Proposed excavations for the removal and installation of catch basins, manholes, sewers and subdrains appear to be within 1.0 m of a gas main in which case will require exposure to be completed by hand or Hydro-excavation. Caution must be used when working in the vicinity of the natural gas mains at these locations.
- A minimum separation of 750 mm shall be maintained between any Manitoba Hydro facility and new underground structures.

5. Sidewalk Renewals

- Excavations shall be limited to removal of the existing concrete sidewalk. All further excavations within 1.0 m of any natural gas main or service must be completed by hand or soft dig methods.

6. Asphalt Overlays and Road Reconstruction

- When excavations for concrete works are required within 1.0 m of any natural gas main, the main must be exposed by hand or soft dig methods to verify the main elevation at intervals to be determined by the site inspector.
- Should a main be exposed to sub-base, the main requires rock wrap and may also require lowering.

7. Please add a “Caution – Gas” note to your drawing set wherever gas mains are present

8. Service Relocations (road reconstruction)

- This project may impact services. Services that are to be exposed in the subgrade must be rock wrapped and lowered during construction or replaced prior to construction. Manitoba Hydro will not be able to complete rock wrapping or lowering of any services unless the lowering is minimal (i.e. < 100-150 mm or < 4-6”).
- Manitoba Hydro is currently performing lowerings and rock wrapping free of charge to City Of Winnipeg works during normal working hours.
- Under normal circumstances, the amount of time required to mobilize for this work is approximately 2-3 weeks.
- Please contact Larry Tole at 204-360-5220 or ltole@hydro.mb.ca for any work required on site.

9. General:

- Please note that the requirements of Manitoba Hydro’s Safe Excavation and Safety Watch guidelines shall apply. All natural gas pipelines and service lines must be properly located and marked by Manitoba Hydro personnel. This can be arranged by visiting ClickBeforeYouDigMB.com or call 1-800-940-3447. Construction operations are not to commence unless these conditions are adhered to.
- All excavations within 1.0 m of any natural gas main must be completed by hand or Hydro-excavation.
- A minimum vertical separation of 750 mm from gas mains and 300 mm from gas service lines must be maintained between any Manitoba Hydro facility and any new installations.

- A minimum 750 mm of cover shall be maintained in all areas where equipment will be crossing, traveling or compacting over the 114.3 mm and 60.3 mm gas mains. Vibratory compaction cannot be used over or within 1.0 m of a main.
- A minimum 450 mm of cover shall be maintained in all areas where equipment will be crossing, traveling or compacting over the gas service lines. Vibratory compaction cannot be used over or within 1.0 m of a service.
- If equipment must cross, travel, or compact over the gas main with less than the minimum depth of cover, earth bridging or steel plates shall be placed over the main and extend a minimum of 1.0 m on either side at each crossing location.
- All construction operations within the vicinity of natural gas pipelines are to take place in a manner so as not to damage or cause detriment to the integrity of the natural gas pipeline. Any damages to the coating must be reported to and repaired at no cost by Manitoba Hydro prior to backfilling.

Manitoba Hydro believes that there should be no problem with this work however; Manitoba Hydro makes no representations or warranties in that regard.

Please note that all construction drawings requiring review or approval must be mailed to Gas Design, 360 Portage Ave (18) Winnipeg, Manitoba, R3C 0G8. If you wish to send construction drawings electronically, they may be sent to GasDesign@hydro.mb.ca.

If you have any questions or comments, please contact the undersigned.

Regards,



Andrew Greaves, P.Eng.
Gas Design Engineer – City of Winnipeg
Manitoba Hydro - Gas Design
360 Portage Ave (18), Wpg. MB., R3C 0G8
P: (204) 360-4170 C: (204) 479-2850
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AG/DF

Cc: Larry Tole, Gas Distribution MTCE – Sutherland Ave, Manitoba Hydro
Robert Morrison, Damage Prevention – Sutherland Ave, Manitoba Hydro
Aaron Dueck, District Service Worker – Henlow Bay, Manitoba Hydro
Brian Jensen, Gas Distribution MTCE – Sutherland Ave, Manitoba Hydro
Aldo Garofalo, Gas Distribution MTCE – Sutherland Ave, Manitoba Hydro



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June 28, 2019

MH Gas File # 2019-0119

Giles Smalley
Municipal Infrastructure Department
KGS Group
3rd Floor – 865 Waverley Street
Winnipeg, MB, R3T 5P4

Dear Giles Smalley:

Re: 2019 Alleys C2: Drawings for Review - Hydro Gas

Manitoba Hydro (Gas) has reviewed the design submitted by KGS Group for the proposed alley renewals. The following parameters shall be followed when working in proximity to all natural gas mains. Please ensure that all requirements are communicated to your contractor.

1. Special Concerns

Upon review, it was noted that the proposed road reconstruction appears to cross or be in close proximity to existing 219.1mm, 114.3mm and 60.3mm distribution pressure gas mains in multiple locations. All excavations within 1.0 m of any distribution pressure gas main must be completed by hand or Hydro-excavation. Manitoba Hydro Safety Watch may be required if any excavations are within 1.0 m of the 219.1 mm natural gas main. Additional conditions are stated in section 3 of this letter when working around the large diameter 219.1mm STL distribution pressure mains. Lastly the proposed road reconstruction on Sheet 7 appears to be in close proximity to an existing 323.9mm large diameter steel high pressure gas main. A Manitoba Hydro High Pressure Safety Watch is required for all construction activities within 3.0 m of the high pressure natural gas main. Additional requirements for working around this high pressure gas main are provided in section 2 of this letter. During construction any main should not be undermined or exposed past the 3 o'clock and 9 o'clock positions on the pipe. If it is determined that a final minimum depth of cover (600mm for distribution pressure and 750mm for high pressure) cannot be maintained then relocations or lowerings will be required. Please determine if any lowerings or relocations will be necessary and contact Phil Robertson at probertson@hydro.mb.ca or 204-360-5709 as soon as possible for scheduling. Under normal circumstances, the amount of time required to mobilize for small diameter distribution work such as the 60.3 mm or 114.3 mm is approximately 3-5 months. Whereas the 323.9 mm high pressure gas main would require approximately 6-12 months to complete engineering, approvals, and construction.

2. High Pressure Natural Gas Main

- If the proposed road reconstruction crosses over an existing 323.9 mm high pressure natural gas main. A Manitoba Hydro High Pressure Safety Watch is required for all construction activities within 3.0 m of the high pressure natural gas main.
- Contact “Click before you dig” a minimum of 2 weeks prior to any work commencing within 3.0 m of the high pressure natural gas main to arrange for the pipeline to be properly located and marked by Manitoba Hydro personnel at **ClickBeforeYouDigMB.com** or **Call 1-800-940-3447**. Upon receiving clearances, the excavator will be provided with the phone number of the appropriate District in order to coordinate a Manitoba Hydro High Pressure Safety Watch.
- Prior to construction at this location, please expose the main by hand or hydro-excavation in order to confirm elevation of the pipe. The elevations & corresponding locations shall be forwarded back to Phil Robertson at probertson@hydro.mb.ca.
- Once the pipeline depth and location has been confirmed by hand or hydro-excavation, the safety watcher may authorize the limited use of mechanical excavation. A smooth edged bucket must be used for excavations within 3.0 m of the main.
- A minimum 900 mm of cover shall be maintained in all areas where equipment will be crossing, traveling or compacting over the 323.9 mm gas mains. Vibratory compaction cannot be used over or within 3.0 m of a high pressure main.
- If equipment must cross, travel, or compact over the gas main with less than the minimum depth of cover, earth bridging or steel plates shall be placed over the main and extend a minimum of 1.0 m on either side at each crossing location.
- When working with less than minimum cover, a minimum 300 mm of granular material shall be bladed into place with tracked equipment offset from the pipeline. Then static compaction equipment would be allowed and built up in layers until minimum cover is achieved.
- Subbase material shall be bladed into place as opposed to being end dumped over the 323.9 mm gas main in areas with less than the minimum cover.
- Caution must be used to ensure the integrity of the pipeline coating. Any damages to the coating must be reported to and repaired at no cost by Manitoba Hydro prior to backfilling.
- The contractor and all site supervisory personnel and equipment operators shall be informed of the risks associated with working adjacent to, and over this pipeline by the Resident Inspector. New site personnel during construction shall be orientated as to the significance and constraints associated with working over and around a high pressure natural gas main.

3. 219.1 mm Distribution Pressure Natural Gas Main

- If the proposed road reconstruction crosses over an existing 219.1 mm distribution pressure natural gas main. A Manitoba Hydro Safety Watch may be required if any excavations are within 1.0 m of the 219.1 mm natural gas main.
- Contact "Click before you dig" a minimum of 2 weeks prior to any work commencing within 1.0 m of the 219.1 mm distribution pressure natural gas main to arrange for the pipeline to be properly located and marked by Manitoba Hydro personnel at **ClickBeforeYouDigMB.com** or **Call 1-800-940-3447**. Upon receiving clearances, the excavator will be provided with the phone number of the appropriate District in order to coordinate a Manitoba Hydro Safety Watch, if required.
- A minimum 900 mm of cover shall be maintained in all areas where equipment will be crossing, traveling or compacting over the 219.1 mm gas mains. Vibratory compaction cannot be used over or within 1.0 m of a main.
- If equipment must cross, travel, or compact over the gas main with less than the minimum depth of cover, earth bridging or steel plates shall be placed over the main and extend a minimum of 1.0 m on either side at each crossing location.
- When working with less than minimum cover, a minimum 300 mm of granular material shall be bladed into place with tracked equipment offset from the pipeline. Then static compaction equipment would be allowed and built up in layers until minimum cover is achieved.
- Once the pipeline depth and location has been confirmed by hand or hydro-excavation, the safety watcher may authorize the limited use of mechanical excavation. A smooth edged bucket must be used for excavations within 1.0 m of the main.
- Subbase material shall be bladed into place as opposed to being end dumped over the 219.1 mm gas main in areas with less than the minimum cover.
- Caution must be used to ensure the integrity of the pipeline coating. Any damages to the coating must be reported to and repaired at no cost by Manitoba Hydro prior to backfilling.

4. Insufficient Cover

- Absolutely no work including concrete cutting or pavement breaking may occur over the pipeline (regardless of size) until depth of cover is determined and a safety watch is on site.

5. Catch Basin Removal and Installation

- Proposed excavations for the removal and installation of catch basins appear to be within 1.0 m of a gas main in which case will require exposure to be completed by hand or Hydro-excavation. Caution must be used when working in the vicinity of the natural gas mains at these locations.
- A minimum separation of 300 mm shall be maintained between any Manitoba Hydro facility and new underground structures.

6. Sidewalk Renewals

- Excavations shall be limited to removal of the existing concrete sidewalk. All further excavations within 1.0 m of any natural gas main or service must be completed by hand or soft dig methods.

7. Asphalt Overlays and Road Reconstruction

- When excavations for concrete works are required within 1.0 m of any natural gas main, the main must be exposed by hand or soft dig methods to verify the main elevation at intervals to be determined by the site inspector.
- Should a main be exposed to sub-base, the main requires rock wrap and may also require lowering.

8. Please add a “Caution – Gas” note to your drawing set wherever gas mains are present

9. Service Relocations (road reconstruction)

- This project may impact services. Services that are to be exposed in the subgrade must be rock wrapped and lowered during construction or replaced prior to construction. Manitoba Hydro will not be able to complete rock wrapping or lowering of any services unless the lowering is minimal (i.e. < 100-150 mm or < 4-6”).
- Manitoba Hydro is currently performing lowerings and rock wrapping free of charge to City Of Winnipeg works during normal working hours.
- Under normal circumstances, the amount of time required to mobilize for this work is approximately 2-3 weeks.
- Please contact Larry Tole at 204-360-5220 or ltole@hydro.mb.ca for any work required on site.

10. General:

- Please note that the requirements of Manitoba Hydro’s Safe Excavation and Safety Watch guidelines shall apply. All natural gas pipelines and service lines must be properly located and marked by Manitoba Hydro personnel. This can be arranged by visiting ClickBeforeYouDigMB.com or call 1-800-940-3447. Construction operations are not to commence unless these conditions are adhered to.
- All excavations within 1.0 m of any natural gas main must be completed by hand or Hydro-excavation.
- A minimum vertical separation of 300 mm from gas mains and 100 mm from gas service lines must be maintained between any Manitoba Hydro facility and any new installations.
- A minimum 600 mm of cover shall be maintained in all areas where equipment will be crossing, traveling or compacting over the 114.3 mm and 60.3 mm gas mains. Vibratory compaction cannot be used over or within 1.0 m of a main.
- A minimum 450 mm of cover shall be maintained in all areas where equipment will be crossing, traveling or compacting over the gas service lines. Vibratory compaction cannot be used over or within 1.0 m of a service.

- If equipment must cross, travel, or compact over the gas main with less than the minimum depth of cover, earth bridging or steel plates shall be placed over the main and extend a minimum of 1.0 m on either side at each crossing location.
- All construction operations within the vicinity of natural gas pipelines are to take place in a manner so as not to damage or cause detriment to the integrity of the natural gas pipeline. Any damages to the coating must be reported to and repaired at no cost by Manitoba Hydro prior to backfilling.

Manitoba Hydro believes that there should be no problem with this work however; Manitoba Hydro makes no representations or warranties in that regard.

Please note that all construction drawings requiring review or approval must be mailed to Gas Design, 360 Portage Ave (18) Winnipeg, Manitoba, R3C 0G8. If you wish to send construction drawings electronically, they may be sent to GasDesign@hydro.mb.ca.

If you have any questions or comments, please contact the undersigned.

Regards,



Phil Robertson, P.Eng.
Gas Design Engineer – Rural Area
Manitoba Hydro - Gas Design
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PR/ND

Cc: Larry Tole, Gas Distribution MTCE – Sutherland Ave, Manitoba Hydro
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