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APPENDIX A – MANITOBA HYDRO



820 Taylor (1) ♦ Winnipeg, Manitoba Canada • R3M 3T1
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June 14, 2016

MH File # 2016-0096

Dylan Mourant Transportation Project Manager Stantec 500-311 Portage Ave Winnipeg, MB R3B 2B9

Dear Mr. Mourant:

Re: 16-C-05 Archibald/Watt St Rehabilitation – Hydro Works

Manitoba Hydro (Gas) has reviewed the design submitted by Stantec for the street rehabilitation on Archibald St and Watt St. 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. Natural Gas Record Drawings

- It was noted that the construction drawings you supplied did not show any gas facilities at the intersection of Nairn Ave and Watt St. Please add our facilities to the construction drawings below in accordance to the attached as-built drawings. Please add "Caution Gas" notes at the locations of intersect between the proposed construction and Manitoba Hydro's gas mains in the provided construction drawings.
- Note: The annotation labeled "Confirm 100 gas abandonment limit" in the drawing provided is actually an energized 60.3 mm polyethylene gas distribution pipeline.

2. High Pressure Natural Gas Main - Archibald St:

- Proposed road rehabilitation 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 "Call before you dig" 2 weeks prior to any work commencing within 3.0 m of the high pressure natural gas main to arrange for a Manitoba Hydro High Pressure Safety Watch at ClickBeforeYouDigMB.com or Call 1-800-940-3447.
- 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.
- A minimum 900 mm of cover shall be maintained in all areas where equipment will be crossing, traveling or compacting over the 323.9mm gas mains. Vibratory compaction cannot be used over or within 3 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 meter on either side at each crossing location.

- When working with less than minimum cover, a minimum 300mm 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.
- A smooth edged bucket shall be used for any excavations within 3.0m of a high pressure main.
- Subbase material shall be bladed into place as opposed to being end dumped over the 323.9mm 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. Sidewalk Renewals

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

5. Asphalt Overlays and Road Rehabilitation

- When excavations for concrete works are required within 1.0 meters 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.

6. 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 meter of any natural gas main must be completed by hand or Hydro-excavation..
- A minimum 600 mm of cover shall be maintained in all areas where equipment will be crossing, traveling or compacting over the 60.3 mm and 114.3 mm gas mains. Vibratory compaction cannot be used over or within 1 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 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 meter 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, 820 Taylor Avenue (1) Winnipeg, Manitoba, R3M 3T1. 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

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AG/MA

Cc:

Larry Tole, Gas Supervisor - Sutherland, Manitoba Hydro Rick Kowalski, Gas Distribution MTCE - Sutherland, Manitoba Hydro Ed Kuypers, Gas Program Advisor - Sutherland Ave, Manitoba Hydro Aaron Dueck, District Service Worker – Henlow Bay, Manitoba Hydro