
TO: CITY MANAGER **DATE:** 2011 January 25

FROM: DIRECTOR PLANNING AND BUILDING **FILE:** 83000 03
Reference: BC Hydro

SUBJECT: BC HYDRO PROPOSED UNDERGROUND TRANSMISSION LINE

PURPOSE: To advise Council of a BC Hydro proposal for development of a new underground transmission line through Burnaby to the City of New Westminster.

RECOMMENDATION

1. **THAT** this report be received for information purposes.

REPORT

1.0 INTRODUCTION

In June 2009, BC Hydro approached the Planning and Building Department regarding the development of a new 69 kV transmission circuit through Burnaby to connect to the New Westminster (NWR substation). The new line is intended to form part of the transmission system which serves the electricity supply needs of the City of New Westminster. In consultation with BC Hydro, several alignment options and routes for the proposed utility installation have been reviewed, in which staff have identified a preferred route and underground alignment option.

This report presents Council with the preferred route and underground alignment for the proposed utility installation through Burnaby (see *attached* Sketch #1), including a summary of the review process. This report also provides a summary of the proposed Hydro utility installations and construction methodology, and outlines next steps to be undertaken, including BC Hydro's Public Consultation process and project timeline.

2.0 ROUTING OF THE PROPOSED TRANSMISSION LINE THROUGH BURNABY

In June 2009, BC Hydro's initial proposals involved the development of an overhead transmission circuit/line through Burnaby, connecting the New Westminster (NWR) substation to the Newell (NEL) Substation in Burnaby, generally following Kingsway from 10th Avenue to Griffiths Drive. These proposals were not supported by City staff as they were contrary to Council-directions to locate such utilities underground, and as an overhead alignment would pose visual and other development impacts to Burnaby.

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In July 2010, BC Hydro presented a revised proposal to City staff for an underground alignment and routing of the transmission line, generally in the southeast quadrant of Burnaby, connecting to the existing overhead transmission circuit at the north end of the BC Hydro utility corridor which is within a BC Hydro statutory right-of-way through Robert Burnaby Park.

Based on a joint review and refinement of the above noted proposal by Engineering, Park and Planning staff, and in discussion with BC Hydro, City staff support the route for the underground transmission line through Burnaby (from the NWR Substation in New Westminster) via Second Street, from 10th Avenue to 19th Avenue; 19th Ave, from Second to Fourth Street; Fourth Street to Lakefield Drive; and connecting to the existing overhead transmission circuit within the BC Hydro corridor/right-of-way (north end of the BC Hydro corridor in Robert Burnaby Park). It is noted that the proposed utility installation would not conflict with existing or future utilities (including the planned Sewer Separation Program along Second Street) and services along this route. The proposed utility installation also would not conflict with any existing or future park/conservation uses within Robert Burnaby Park.

Other proposed underground alignment and route options in this area were not supported by City staff, as they generally resulted in conflicting use of the road right-of-way with existing or future intended utilities; conflicting use of the road right-of-way with the Council-adopted Transportation Plan; potential impact on use of dedicated park land – Robert Burnaby Park; environmental impacts (i.e. impact on Ramsey Creek and surrounding riparian area); and visual impacts. These constraints and issues are not relevant to or pose no impact on the proposed underground alignment and route supported by City staff.

BC Hydro has also assessed the preferred alignment from an environmental, technical/design, and cost-magnitude viewpoint and has also indicated their preference for the City staff-supported underground alignment and route through Burnaby.

3.0 PROPOSED INSTALLATIONS AND CONSTRUCTION METHODOLOGY

Based on preliminary design submissions to the Engineering Department, the proposed underground transmission line would be aligned entirely within the road right-of-way until its point of connection to the existing overhead circuit which is within the BC Hydro right-of-way that runs through Robert Burnaby Park.

The construction methodology of the proposed line would involve the excavation of a 2 m deep trench within the road right-of-way. Seven plastic conduit pipes (ducts) encased within a concrete duct bank in square formation would be installed in the trench. These seven conduit pipes would consist of four - 150 mm ducts for transmission cables, of which one duct would remain vacant to facilitate future repair works; and three - 50 mm ducts for a new fibre optic line, ground wiring and vacant duct. At intervals along the route, larger excavations within the road right-of-way would also be required to install a total of four vault/manholes. Upon completion of the above described civil works, the trench would be filled and paved such that there would be no visual impact of the proposed installation with the exception of the four surface vault/manhole covers.

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It is noted that there are four culverts along Fourth Street which drain into nearby water courses (tributaries to Ramsey Creek), wherein BC Hydro has proposed to trench the line over or under the existing culvert. The proposed development and related construction activities would be managed so as to not have any undue environmental impact to the watercourses or nearby riparian areas.

With regard to the connection of the new underground transmission line to the existing overhead transmission circuit, BC Hydro proposes to bring the underground transmission line overhead on the north side of the Lakefield Drive within the BC Hydro right-of-way by connecting the proposed underground line to the existing overhead circuit. The new connections would require the relocation of two existing wooden poles and one new additional wooden pole within the BC Hydro right-of-way. No installation of new overhead lines is proposed with this project. As such, the proposed utility installation would not pose any significant visual impacts in this area.

4.0 NEXT STEPS

Staff would propose to work with BC Hydro to accommodate the proposed transmission line through Burnaby, subject to the appropriate City-Engineering approvals process to ensure the work respects and protects the City's existing and planned civil infrastructure.

4.1 Project Timeline

BC Hydro is seeking to commence construction of the proposed transmission line by July/August 2011, subsequent to receiving the appropriate City approvals. Civil construction activities would be over a seven or eight month period and completed by January/February 2012. During this time, vehicular and pedestrian traffic along the proposed route would be re-routed, as needed, to accommodate construction activities. A traffic management plan would be established by BC Hydro, subject to City-Engineering approvals, to manage vehicular and pedestrian traffic during construction activities.

Electrical installation of the transmission line would commence in February/March 2011 and be completed by August/September 2012. It is anticipated that the underground transmission line would in operation by October 2012.

4.2 BC Hydro Public Consultation and Information Dissemination Processes

BC Hydro proposes to undertake a public consultation process prior to and during the construction of the underground transmission line. The purpose of these processes would be to inform communities (i.e. schools), businesses and residents of the project, construction activities and potential construction-related disruption to vehicular and pedestrian traffic, scheduling/timeline and contact information should they have any comments or concerns regarding the project. The public consultation/notification process includes:

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- Development of a website providing information on the project, as well as contact information to provide public comments or concerns;
- Open House;
- On-site project signage; and
- Information letter to residents/businesses along the route of the project

Further, one week prior to the start of road construction, BC Hydro proposes to post advertisements in the local newspaper regarding the project and normal construction-related disruption to vehicular and pedestrian traffic.

5.0 CONCLUSION

BC Hydro has approached the City with the need to develop a new transmission line through Burnaby to serve the power supply needs of the City of New Westminster. In discussion with BC Hydro, staff support the route and underground alignment of the proposed line is via Second Street, from 10th Avenue to 19th Avenue; 19th Ave, from Second to Fourth Street; Fourth Street to Lakefield Drive; and connecting to the existing overhead transmission circuit within the BC Hydro corridor/right-of-way (north end of the BC Hydro corridor in Robert Burnaby Park) (see *attached* Sketch #1). With Council's receipt of this report, staff will work with BC Hydro to accommodate this necessary utility installation through the appropriate City approvals processes.

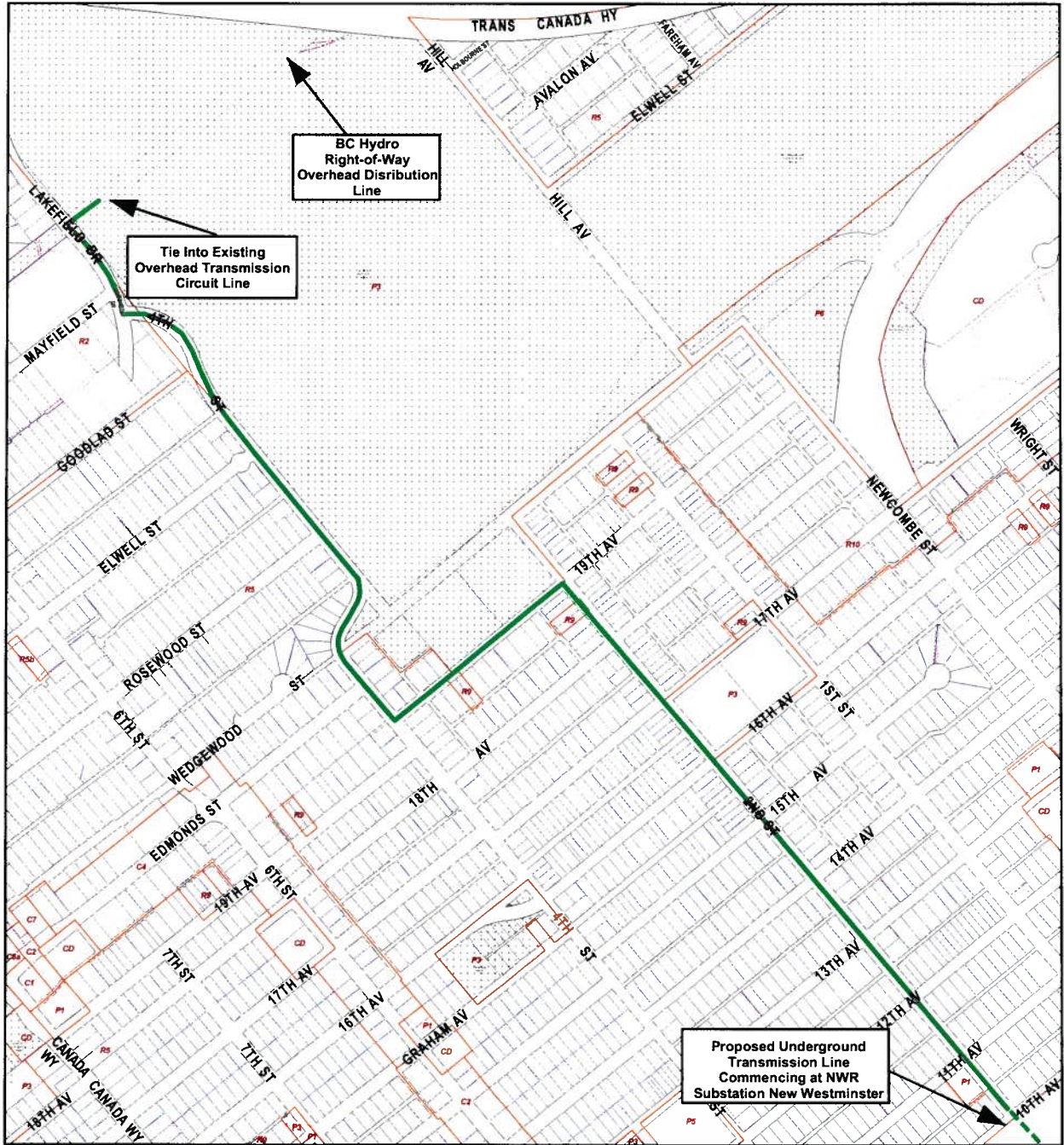


B. Luksun, Director
PLANNING AND BUILDING

ZM:spf
Attachment

cc: Director Finance
Director Engineering
Director Parks, Recreation and Cultural Services
City Clerk
City Solicitor

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PLANNING & BUILDING DEPARTMENT



DATE:
JAN 24 2011

SCALE:
1:9,133

DRAWN BY:
DJ

Proposed BC Hydro Underground Transmission Line Route