

Attachment 11

Engineering Services Memo

Memorandum

To: Mike Watson, Senior Planner

Date: September 18, 2020

From: Roger Chang, Engineering Technologist

File: PRJ-008893

Subject: WORKS AND SERVICES REQUIREMENTS FOR 909, 911 & 915 TWELFTH STREET – DP000826

We are responding to your preliminary application as referenced above dated January 21, 2020 for the proposed five level multi-unit residential building.

Provided the applicant is successful in obtaining a Development Permit, the Engineering Department requirements include but may not necessarily be limited to the following:

1. The applicant shall, at a minimum, familiarize themselves with the following documents and plans:
 - Subdivision and Development Control Bylaw
 - Tree Protection and Regulations Bylaw
 - Erosion and Sediment Control Bylaw
 - Master Transportation Plan
 - Urban Forest Management Strategy
2. Modeling of the storm, sanitary and watermain systems are required to confirm if the available capacity is sufficient for the proposed development. In order to complete a detailed review for this project your engineering consultant will need to submit a completed “Utilities Modeling Analysis Application Form (attached) and pay a modeling fee in the amount of **\$7,899.15**. Any capacity constraints identified in the modeling analysis may require upgrades to the existing infrastructure as a requirement to proceed with your development.
3. The applicant needs to acquire the existing lane behind 909 and 911 Twelfth Street from the City in accordance to the submitted plans.
4. Consolidation of the lands 909, 911, 915 Twelfth Street and the existing lane behind 911 & 915 Twelfth Street to create one (1) single parcel.
5. All site drainage works shall be designed and constructed in accordance with the City’s Erosion and Sediment Control Bylaw 7754, 2016. The developer shall retain a qualified professional to ensure that the design and implementation of the erosion and sediment controls meets the requirements outlined in the Bylaw.
6. Onsite storm sewer water management will be required to limit the post development flow to pre-development flow. The onsite works shall be designed in accordance with the City’s Integrated Storm Water Management Plan.
7. All existing trees are to be protected in accordance with the City’s Tree Protection and Regulation Bylaw No. 7799, 2016 and any trees identified for removal will need to have a permit approved and in place prior to removal.

8. Provision of easement, dedications and statutory rights of way that may be required to meet the capacity, functionality and design objectives for all modes of travel of the City including access to the proposed development. To be confirmed through a complete review of a full application with required technical information, studies and analysis. At a minimum, the City will be requiring, but not necessarily limited to the following:
 - 8.1. A 3.0m x3.0m corner truncation will be required at the corner of Twelfth Street and London Street.
 - 8.2. A 3.0m x3.0m corner truncation will be required at the corner of Twelfth Street and lane.
9. All construction to be in accordance with the most current MMCD (Platinum Edition), City of New Westminster Subdivision and Development Control Bylaw No. 7142, 2007, Design Criteria and Supplementary Specifications unless specified elsewhere.
10. At the time of Demolition Permit issuance, the applicant will be required to make a payment of a flat fee in the amount of **\$5,600.00** plus GST per serviced parcel for capping at the main, by the City, of all existing sewer and water service connections not for reuse.

Transportation Review – On and Off Site

11. On and off site detailed transportation servicing and other requirements shall include, but are not necessarily limited to that which is listed and described in the attached *Transportation Review – 909-915 Twelfth Street REZ00196*.

Off-site Works and Services

12. Under the City of New Westminster Subdivision and Development Control Bylaw No. 7142, 2007 and amendments thereto, the developer for the above noted property is also required to enter into a Works and Services Agreement with the City addressing off-site servicing requirements prior to issuance of a building permit. The off-site services shall include, but are not necessarily limited to the following:

ROADWORKS

The subject site is bounded by Edinburgh Street to the north, Twelfth Street to the east and a lane to the south. According to the City's Master Transportation Plan (MTP) Edinburgh Street is classified as a local road, and Twelfth Street is classified as city collectors.

Twelfth Street (Great Street)

- 12.1. Any impacts on Twelfth Street shall be repaired to its original or better condition.
- 12.2. Reconstruction of the existing road structure shall be based on the analysis of a Benkelman Beam Test, or other approved method, carried out on the existing road which is to be upgraded. If the test results are proven satisfactory, the minimum requirements shall be a mill and overlay.
- 12.3. Upgrades to the marked pedestrian crossing on Twelfth Street and London Street, including update to rapid flashing beacons and relocation of poles to improve accessibility.

London Street (Greenway)

- 12.4. Reconstruction of London Street frontage complete with new curb and gutter, trees, landscaping (including drainage and irrigation), street lighting (including pedestrian level lighting), signage, underground electrical and telecommunication servicing London Street shall be reconstructed up to road centerline based on the following minimums:
- Reconstruction of the existing road structure shall be based on the analysis of a Benkelman Beam Test, or other approved method, carried out on the existing road which is to be upgraded. If the test results are proven satisfactory, the minimum requirement shall be a mill and overlay.
 - 2.0m boulevard complete with street lighting, trees and irrigation
 - 2.0m sidewalk clear of obstructions

Lane

- 12.5. Construction of a full lane complete with new pavement, roll over curb and gutter (north side) and drainage for storm water runoff collection for the frontage of the development.

Vehicular Site Access

- 12.6. All vehicle access requirement shall meet City Bylaws specifications and accessed from the lane.

UNDERGROUND UTILITIES

Sanitary

- 12.7. Provision of an adequate single sanitary sewer service connection for each lot complete with a manhole or inspection chamber at property line. Size and location to be determined by the developer's consulting engineer and approved by the City. Existing infrastructure which is undersized or not capable of handling the post development flows shall be upgraded at the developer's expense.

Storm

- 12.8. Provision of an adequate single storm sewer service connection for each lot complete with a manhole or inspection chamber at property line. Size and location to be determined by the developer's consulting engineer and approved by the City. Existing infrastructure which is undersized or not capable of handling the post development flows shall be upgraded at the developer's expense.

Water

- 12.9. Provision of an adequate single water service connection for each lot satisfying the fire and domestic demands complete with a suitable water meter with backflow protection. Size and location to be determined by the developer's consulting engineer and approved by the City. Existing infrastructure which is undersized or not capable of handling the post development water demands must be upgraded at the developer's expense.

Electrical, Telecommunication and Gas

- 12.10. All costs associated with the design and conversion of the existing overhead electrical and telecommunication utilities on the roadways adjacent to the site with an underground system for the development. Please contact Marc Rutishauser in the City Electrical Operations Department at (604) 527-4533 for electrical servicing details. Contact Telus and Shaw directly for telecommunication servicing details.
- 12.11. City communication conduit shall be provided in accordance with the City's intelligent City Design requirements as it pertains to the Fiber Optic Network and Street Lighting Design. Please contact Phil Kotyk, Fiber Network Operations Manager at (604) 527-4641 for City communication servicing details.
- 12.12. All costs associated with the design and construction of gas servicing for the development. Please contact Fortis BC directly for servicing details.
- 12.13. All third party utility construction drawings shall include the Civil Design Drawings base plan and must be submitted to the City's Engineering Services Division for review and approval. The developer's consulting engineering shall ensure that the design of all third party utilities, including New Westminster Electrical, have been coordinated with the Civil Design Drawings. Coordination of the drawings must be completed prior to issuance of the Works and Services Agreement.

STREET LIGHTING

- 12.14. Roadway lighting for all street frontages shall be provided and upgraded for safety and to produce accurate and comfortable night time visibility using energy efficient lighting such as LED. Design of roadway lighting shall be in accordance with the City of New Westminster Design Criteria Section 6 and the MMCD (Platinum Edition) Design Guidelines Section 6.0 Roadway Lighting (for LED).

BOULEVARD TREES

- 12.15. The boulevards shall be prepared for boulevard trees complete with a 900mm, New Westminster Planting Blend or approved equal, growing medium for the full width of the boulevard, including drainage and irrigation. Boulevard landscaping and irrigation shall be provided in suitable locations to the satisfaction of the Parks Department. If adequate soil volume is not achievable, provision shall be made for soil cell technology or any other approved method to achieve the specified soil volume. For further information, please contact Jeff Case, Arboriculture Technician at (604) 636-4319 or jcase@newwestcity.ca.
 - 12.16. Boulevard trees will be selected, purchased, installed and maintained by the Parks Department.
13. The preparation of detailed design drawings by a qualified Professional Engineer for the off-site works and services to the satisfaction of the City and in accordance with the City's Design Criteria, Supplemental Specification and Detail Drawings, and Master Municipal Construction Documents. The engineering design drawings for the proposed works may include the following plans:

- Road works

- Storm drainage collection facilities
- Sanitary sewer collection facilities
- Water distribution facilities
- Street lighting
- Street trees, landscaping
- Topographical and lot grading plans
- Erosion and sediment control plans
- Electrical power supply and distribution facilities
- Telecommunication facilities
- Gas facilities

14. Under the Works and Services Agreement with the City the developer must address the following requirements:

- 14.1. Employment and retention of a Professional Engineer to prepare and seal the design drawings; to provide a Resident Engineer for inspection of all design and construction related problems; to prepare, certify and seal “As-Constructed” drawings, including landscape & irrigation drawings and to certify that all materials supplied and works performed conform to City standards as contained within the Subdivision and Development Control Bylaw and/or the Master Municipal Construction Documents.
- 14.2. The developer will be required to post a security deposit for 120% of the estimated construction cost of the offsite servicing works including GST. The security deposit shall be in the form of an Irrevocable Letter of Credit or cash deposit. The security deposit will be reduced once the off-site works are completed to the satisfaction of the City less a 10% holdback. Upon issuance of a Certificate of Completion by the City, the 10% security deposit will be held for a two year maintenance period.

15. The following payments and deposits shall be paid at the time of execution of the Works and Services Agreement:

- 15.1. Payment to cover the cost of preparing the Works and Services Agreement, currently **\$1,870.00** plus tax.
- 15.2. Payment of **four percent (4%)** of the estimated construction costs to cover engineering and administrative costs incurred by the City.
- 15.3. Under the Works and Services Agreement the developer will be required to pay a deposit **\$5000.00** to cover any charges for emergency works and signage.
- 15.4. Payment of a flat fee in the amount of **\$670.00** per tree for the selected, purchased, installed, and maintained by the Parks Department.
- 15.5. Signing of a latecomer waiver clause.

16. Submission of any easement or right of way documents required by the City in relation to the proposed development.

17. The following charges shall be paid at the time of Building Permit Issuance:

- 17.1. Payment of applicable Greater Vancouver Sewerage & Drainage District (GVS&DD) Development Cost Charges in accordance with Bylaw 187, 1996 and amendments.
- 17.2. Payment of applicable New Westminster Development Cost Charges in accordance with Bylaw 7311, 2009 and amendments.
- 17.3. Payment of applicable School Site Acquisition charges in accordance with School District #40 Capital Bylaw No. 2008-1.
- 17.4. Payment of applicable Regional Transportation Development Cost Charges in accordance with Bylaw No. 124-2018.

Should you have any further questions, please contact the undersigned at 604-527-4633 or rchang@newwestcity.ca.

Regards,



Roger Chang, ASCT
Engineering Technologist

Attached.

cc J. Lowrie, Director of Engineering Services
E. Wat, Manager Infrastructure Planning
C. Dobrescu, Utilities and Special Projects Engineer
G. Otieno, Infrastructure Engineer
L. Leblanc, Manager Transportation
C. Edwards, Transportation Planner
E. Mashig, Manager, Park Horticulture & Open Space Planning
M. Rutishauser, Acting Manager, Electrical Engineering Design & Planning
J. Krevs, Senior Plan Reviewer