

# ATTACHMENT **A**

This forms part of application

# Z22-0077



City of  
**Kelowna**  
COMMUNITY PLANNING

Planner  
Initials

AC

**CITY OF KELOWNA**

## **MEMORANDUM**

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**Date:** December 22, 2022  
**File No.:** Z22-0077  
**To:** Community Planning and Development Manager (DS)  
**From:** Development Engineering Manager (NC)  
**Subject:** 654 Buck Rd RU1 → RU2 Rezoning

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The Development Engineering Branch has the following comments for this Rezoning application for the 654 Buck Rd project. The Development Engineering Technician for this project is Chris Pedersen (cpedersen@kelowna.ca). The following Works and Services will be a requirement of this development.

### **1. GENERAL**

- a. The following requirements are valid for two (2) years from the reference date of this memo, or until the application has been closed, whichever occurs first. The City of Kelowna reserves the rights to update/change some or all items in this memo once these time limits have been reached.
- b. This proposed development may require the installation of centralized mail delivery equipment. Please contact Arif Bhatia, Delivery Planning Officer, Canada Post Corporation, 530 Gaston Avenue, Kelowna, BC, V1Y 2K0, (250) 859-0198, arif.bhatia@canadapost.ca to obtain further information and to determine suitable location(s) within the development.
- c. The following requirements assume that this rezoning application will proceed concurrently with Subdivision application S22-0073. If the rezoning proceeds independently of subdivision, servicing requirements will need to be reassessed.
- d. There is a possibility of a high water table or surcharging of storm drains during major storm events. Non-basement buildings may be required. This should be considered in the design of the onsite system, lot grading, and minimum basement elevations.
- e. All City Trees must be protected as per Bylaw 8042 Schedule C – Tree Barrier and Installation Policy requirements. Removal of City Trees will require approval by the City's Urban Forestry Supervisor. Trees will require replacement, at a minimum two for one ratio, or payment of the City of Kelowna Equitable Compensation as defined in Section 8.2 of Bylaw 8042.

## **2. DOMESTIC WATER AND FIRE PROTECTION**

- a. The subject lot is located within the City of Kelowna water supply area.
- b. Our records indicate that this property is currently serviced with a 19-mm diameter water service off Buck Rd. Only one service will be permitted per legal lot and each lot must be serviced prior to Subdivision.
- c. The Applicant, at their cost, can choose to either engage an engineer and a contractor to design and construct the water services or can choose to have the services installed by City forces at the Applicant's expense. If the Applicant chooses to have the services installed by City forces, they will be required to sign a Third-Party Work Order and pre-pay for the cost of the water services. For estimate inquiries please contact the Development Engineering Technician assigned to the file.
- d. The Applicant's Consulting Engineer will determine the domestic water and fire protection requirements of this proposed development and establish hydrant requirements and service needs. The bylaw requirement for single detached residential is 60 L/s.
- e. The fronting water mains in the Buck Road neighborhood are 100-mm diameter asbestos concrete water mains. To improve fire flows to the subject property and the neighborhood, a hydrant is to be installed within 75m of the center of the Berk Court cul-de-sac and the 100-mm diameter water mains on Buck Road from Gordon Drive to the new hydrant are to be upsized to 200-mm diameter.
- f. The City has identified the required water system upgrades outlined in Item 2.3 as a potential Fireflow Upgrade Project and may submit this project for budget approval and installation in 2024. The Applicant can choose to wait for this potential future City-led project at the City's timeline, decision to proceed, and cost, or can choose to proceed immediately with the project at the Applicant's timeline and cost. Deferred revenue contributions may also be applicable.

## **3. SANITARY SEWER SYSTEM**

- a. The subject property is located within the City of Kelowna sewer service area.
- b. Our records indicate that this property is currently serviced with a 100-mm diameter sanitary sewer service off Berk Ct. Only one service will be permitted for each legal lot and each lot must be serviced prior to Subdivision.
- c. Service connections are to be completed with an inspection chamber (c/w Brooks Box) as per SS-S7 and may not be extended at an angle that exceeds 45° from perpendicular to the main. Connection from mains within rear yard right-of-ways will not be permitted. Existing sanitary services are to have inspection chambers added if they do not already exist.
- d. The Applicant, at their cost, can choose to either engage an engineer and a contractor to design and construct the sanitary services or can choose to have the services installed by City forces at the Applicant's expense. If the Applicant chooses to have the services installed by City forces, they will be required to sign a Third-Party Work Order and pre-pay for the cost of the sanitary services.

#### 4. **STORM DRAINAGE**

- a. The subject property is located within the City of Kelowna drainage service area. The City Engineer may permit use of individual ground water disposal systems, where soils are suitable. For on-site disposal of drainage water, a hydrogeotechnical report will be required complete with a design for the disposal method (i.e. trench drain / rock pit). The Lot Grading Plan must show the design and location of these systems for each lot.
- b. Provide the following drawings:
  - i. A detailed Lot Grading Plan (indicate on the Lot Grading Plan any slopes that are steeper than 30% and areas that have greater than 1.0 m of fill), grading directly to a natural drainage path must include adequate erosion control and water quality improvement measures;
  - ii. A detailed Stormwater Management Plan for this subdivision; and,
  - iii. An Erosion and Sediment Control Plan is to be prepared by a Professional Engineer proficient in the field of erosion and sediment control. The plan is to be prepared as per section 3.14 of Schedule 4 of Bylaw 7900. If a line item for ESC is not included in the Engineer's cost estimate for off-site work, then an additional 3% will be added to the performance security based on the total off-site construction estimate.
- c. On-site detention systems are to be compliant with Bylaw 7900, Schedule 4, Section 3.10.6 *Detention Storage*.
- d. As per Bylaw 7900, Schedule 4, Section 3.1.3 *Climate Change*, the capacity of storm works will include an additional 15 percent (15%) upward adjustment applied to the rainfall intensity curve stage (IDF) in Section 3.7.2.
- e. Show details of dedications, rights-of-way, setbacks and non-disturbance areas on the Lot Grading Plan.
- f. Register right of ways on private properties for all the storm water infrastructure carrying, conveying, detaining and/or retaining storm water that is generated from the public properties and public road right of ways.
- g. If individual lot connections are required, ensure that payment of connection fees has been completed (please provide receipt).
- h. Where structures are designed or constructed below the proven high groundwater table, permanent groundwater pumping will not be permitted to discharge to the storm system. Intermittent pumping of groundwater for structures within seasonal range of the groundwater table may be permitted with some conditions. The City will approve designs that include provisions for eliminating groundwater penetration into the structure, while addressing buoyancy concerns. These design aspects must be reviewed and approved by the City Engineer.

## 5. ROAD IMPROVEMENTS

- a. Frontage improvements for Buck Rd and Berk Ct have been secured through deferred revenue DF503 and DF504 in 2008. No frontage improvements are required as part of this development application, but any utility construction and surface restoration works will need to meet the Suburban Local Road classification.

## 6. POWER AND TELECOMMUNICATION SERVICES

- a. All proposed distribution and service connections are to be installed underground. It is the developer's responsibility to make a servicing application with the respective electric power, telephone and cable transmission companies to arrange for these services, which would be at the applicant's cost. The utility companies are required to obtain the City's approval before commencing construction.
- b. Re-locate existing poles and utilities where necessary. Remove aerial trespass(es).
- c. Before making application for approval of your subdivision plan, please make arrangements with Fortis BC for the pre-payment of applicable charges.

## 7. GEOTECHNICAL STUDY

- a. Provide a geotechnical report prepared by a Professional Engineer competent in the field of hydro-geotechnical engineering to address the items below: **NOTE: The City is relying on the Geotechnical Engineer's report to prevent any damage to property and/or injury to persons from occurring as a result of problems with soil slippage or soil instability related to this proposed subdivision.**
- b. The Geotechnical reports must be submitted to the Development Services Department (Subdivision Approving officer) for distribution to the Development Engineering Branch and Inspection Services Division prior to submission of Engineering drawings or application for subdivision approval.
  - i. Area ground water characteristics, including any springs and overland surface drainage courses traversing the property. Identify any monitoring required.
  - ii. Site suitability for development.
  - iii. Site soil characteristics (i.e. fill areas, sulphate content, unsuitable soils such as organic material, etc.).
  - iv. Any special requirements for construction of roads, utilities and building structures.
  - v. Slope stability, rock fall hazard and slippage including the effects of drainage on the site.
  - vi. Top of bank assessment and location including recommendations for property line locations, building setbacks, and ground water disposal locations.
  - vii. Recommendations for items that should be included in a Restrictive Covenant.
  - viii. Recommendations for erosion and sedimentation controls for water and wind.
  - ix. Any items required in other sections of this document.
  - x. Recommendations for roof drains and perimeter drains on the site.

**8. ROAD DEDICATION/SUBDIVISION REQUIREMENTS**

- a. Approximately 0.4m dedication along the entire frontage of Buck Rd is required to achieve a half-ROW width of 16.0m.
- b. Provide a 6.0m radius road dedication at the corner of Buck Rd and Berk Ct.

**9. DEVELOPMENT PERMIT AND SITE-RELATED ISSUES**

- a. The multiple existing driveways must be removed. Only one driveway is permitted per legal lot with a maximum width of 6.0m.

**10. OTHER ENGINEERING COMMENTS**

- a. Provide all necessary Statutory Rights-of-Way for any utility corridors required, including those on proposed or existing City lands.
- b. If any road dedication affects lands encumbered by a Utility right-of-way, please obtain the approval of the utility prior to application for final subdivision approval. Any works required by the utility as a consequence of the road dedication must be incorporated in the construction drawings submitted to the City's Development Manager.

**11. DESIGN AND CONSTRUCTION**

- a. Design, construction supervision and inspection of all off-site civil works and site servicing must be performed by a Consulting Civil Engineer and all such work is subject to the approval of the City Engineer. Drawings must conform to City standards and requirements.
- b. Engineering drawing submissions are to be in accordance with the City's "Engineering Drawing Submission Requirements" Policy. Please note the number of sets and drawings required for submissions.
- c. Quality Control and Assurance Plans must be provided in accordance with the Subdivision, Development & Servicing Bylaw No. 7900 (refer to Part 5 and Schedule 3).
- d. A "Consulting Engineering Confirmation Letter" (City document "C") must be completed prior to submission of any designs.
- e. Before any construction related to the requirements of this application commences, design drawings prepared by a professional engineer must be submitted to the City's Development Services department. The design drawings must first be "Issued for Construction" by the City Engineer. On examination of design drawings, it may be determined that right-of-ways are required for current or future needs.

**12. SERVICING AGREEMENTS FOR WORKS AND SERVICES**

- a. A Servicing Agreement is required for all works and services on City lands in accordance with the Subdivision, Development & Servicing Bylaw No. 7900. The applicant's Engineer, prior to preparation of Servicing Agreements, must provide adequate drawings and estimates for the required works. The Servicing Agreement must be in the form as described in Schedule 2 of the bylaw.
- b. Part 3, "Security for Works and Services", of the Bylaw, describes the Bonding and Insurance requirements of the Owner. The liability limit is not to be less than \$5,000,000 and the City is to be named on the insurance policy as an additional insured.

**13. CHARGES, FEES, AND SECURITIES**

- a. Development Cost Charges (DCC's) are payable.
- b. Fees per the "Development Application Fees Bylaw" include:
  - i. Street/Traffic Sign Fees: at cost (to be determined after design).
  - ii. Survey Monument Fee: \$50.00 per newly created lot (GST exempt).
  - iii. Survey Monument, Replacement Fee: \$1,200.00 (GST exempt) – only if disturbed.
  - iv. Engineering and Inspection Fee: 3.5% of construction value (plus GST).



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Nelson Chapman, P.Eng.  
Development Engineering Manager

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