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# CITY OF KELOWNA

## MEMORANDUM

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**Date:** November 3, 2022  
**File No.:** Z22-0065  
**To:** Community Planning & Development Manager (DS)  
**From:** Development Engineering Manager (NC)  
**Subject:** 4346 Turner Rd



Rezoning RU1 to RU2c

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The Development Engineering Branch has the following comments for this rezoning application for the 4346 Turner Road rezoning RU1 to RU2c project. This purpose of the rezoning application is for a carriage house initially, with a future subdivision anticipated afterwards. The Development Engineering Technician for this project is Chris Pedersen ([cpedersen@kelowna.ca](mailto:cpedersen@kelowna.ca)).

This memo has been written to identify requirements both for the initial zoning and carriage house, as well as the future subdivision. Items prepended with "*At future subdivision.*" are for future subdivision and are subject to change at time of future subdivision application, while all other items are for both the initial zoning and carriage house and the future subdivision.

### 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](mailto:arif.bhatia@canadapost.ca) to obtain further information and to determine suitable location(s) within the development.
- c. There is a possibility of a high water table or surcharging of storm drains during major storm events. This should be considered in the design of the onsite system.
- d. 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. *At future subdivision:* Our records indicate that this property is currently serviced with a 19-mm diameter water service off Turner Rd. Only one service will be permitted per legal lot and each lot must be serviced prior to Subdivision.
- c. The City of Kelowna has planned a watermain upgrade project on Hazell Road that will provide a fire hydrant at the intersection of Turner Road and Hazell Road. If this project is not completed prior to adoption of this rezoning application, the Applicant's Consulting Mechanical Engineer must determine the domestic water and fire protection requirements of this proposed development as outlined in Section 2.d and any required upgrades must be completed prior to adoption of this rezoning application.
- d. *At future subdivision:* The Applicant's Consulting Mechanical 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 family residential is 60 L/s. If it is determined that upgrades to any other existing water distribution system must be made to achieve the required fire flows, additional bonding will be required.
- e. The Applicant's Licensed Residential Builder or Consulting Civil Engineer will determine the domestic water requirements of this development. If the existing service is determined to be too small and needs to be replaced, the Applicant, at their cost, will arrange for the removal of the existing service and the installation of one new larger metered water service.
- f. 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.

## 3. SANITARY SEWER SYSTEM

- a. The subject property is located within the City of Kelowna sewer service area.
- b. *At future subdivision:* Our records indicate that this property is currently serviced with a 100-mm diameter sanitary sewer service off Turner Rd. 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. *At future subdivision:* 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. *At future subdivision:* On-site detention systems are to be compliant with Bylaw 7900, Schedule 4, Section 3.10.6 *Detention Storage*.
- d. *At future subdivision:* 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. *At future subdivision:* Show details of dedications, rights-of-way, setbacks and non-disturbance areas on the lot Grading Plan.
- f. *At future subdivision:* 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, public road right of ways, and golf course lands.
- g. *At future subdivision:* Identify clearly on a contour map, or lot grading plan, all steep areas (>30 %). Provide cross sections for all steep areas at each property corner and at locations where there are significant changes in slope. Cross sections are to be perpendicular to the contour of the slope. Show the proposed property lines on the cross sections. Not all areas have a clear top of bank; and therefore, field reconnaissance by City staff and the applicant may be needed to verify a suitable location for property lines.
- h. *At future subdivision:* If individual lot connections are required, ensure that payment of connection fees has been completed (please provide receipt).
- i. 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. 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. *At future subdivision:* Turner Rd must be upgraded to an urban standard along the full frontage of the subject property. Required upgrades must include curb and gutter, storm drainage system, LED street lighting, pavement removal and replacement and re-location or adjustment of utility appurtenances if required to accommodate the upgrading construction. A one-time cash payment in lieu of construction must be collected from the applicant for future construction by the City. The cash-in-lieu amount is determined to be **\$42,462.69**, not including utility servicing cost.

## 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. *At future subdivision:* 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. *At future subdivision:* 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. *At future subdivision:* 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 and septic tank effluent on the site.
  - vi. Identify slopes greater than 30%.
  - vii. Top of bank assessment and location including recommendations for property line locations, septic field locations, building setbacks, and ground water disposal locations.
  - viii. Recommendations for items that should be included in a Restrictive Covenant.
  - ix. Any special requirements that the proposed development should undertake so that it will not impact the banks(s). The report must consider erosion and structural requirements.
  - x. Recommendations for erosion and sedimentation controls for water and wind.
  - xi. Any items required in other sections of this document.

xii. Recommendations for roof drains, perimeter drains and septic tank effluent on the site.

**8. 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.

**9. OTHER ENGINEERING COMMENTS**

- a. Provide all necessary Statutory Rights-of-Way for any utility corridors required, including those on proposed or existing City lands.

**10. 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.

**11. 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.

**12. 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. Fire Hydrant Levy: \$250.00 per newly created lot (GST exempt).
  - v. Engineering and Inspection Fee: 3.5% of construction value (plus GST). *At future subdivision:* \$1435.66 total for this development for Turner Road improvements. Additional fees will apply if the applicant chooses to use their own engineer and contractor to install the utility servicing.



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Nelson Chapman, P.Eng.  
Development Engineering Manager

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