



## CITY OF KELOWNA

## MEMORANDUM

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**Date:** October 13, 2022  
**File No.:** Z22-0058  
**To:** Planning and Development Officer (SS)  
**From:** Development Engineering Manager (NC)  
**Subject:** 645 Hemlock Rd RU1 to RU4

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The Development Engineering Branch has the following comments and requirements associated with this application to rezone the subject property from RU1 - Large Lot Housing to RU4 - Duplex Housing to facilitate two-dwelling housing on the property. The Development Technician for this file is Sarah Kelly ([skelly@kelowna.ca](mailto:skelly@kelowna.ca)).

**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. 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.

**2. DOMESTIC WATER AND FIRE PROTECTION**

- a. The subject lot is within the Black Mountain Irrigation District (BMID) water supply area. The Developer is required to make satisfactory arrangements with BMID for all water and fire protection-related issues. All charges for service connection(s) and upgrading costs, as well as any costs to decommission existing services, shall be the responsibility of the Developer.
- b. The Developer's consulting mechanical engineer will determine the fire protection requirements of this proposed development and establish hydrant requirements and service needs. All fire flow calculations approved by BMID are to be shared with the Development Engineering Branch upon submittal of off-site civil engineering drawings.

**3. SANITARY SEWER SYSTEM**

- a. Our records indicate that the subject lot is currently serviced with a 100-mm diameter sanitary sewer service. The Applicant's Consulting Mechanical Engineer will determine the requirements of the proposed development and establish the service needs.
- b. Only one service will be permitted for each legal lot. The existing service must be completed with installation of brooks box over the inspection chamber and (as per SS-S7 & SS-S9), at the applicants cost.

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

- a. This property is located within an area identified by the City of Kelowna as possibly suited for groundwater recharge. Service connection to the City Storm system may be required if site conditions do not provide for safe infiltration or dispersal of storm water on site. The safe use of infiltration is to be confirmed, at time of Building Permit, with submission of a geotechnical report provided by a Professional Engineer competent in the field of hydro-geotechnical engineering.
- b. At time of Building Permit, the Developer's consulting civil engineer must provide a stormwater management plan for the site, which meets all requirements of the Subdivision, Development, and Servicing Bylaw No. 7900. SWMP must include lot grading plan, minimum basement elevations (MBE), and onsite drainage systems.
- c. 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.

#### **5. ROAD IMPROVEMENTS & SITE ACCESS**

- a. Girard Rd must be upgraded to an urban standard (SS-R6) along the full frontage of the subject property including curb and gutter, sidewalk, driveway letdown, fillet paving, LED street lighting, landscaped and irrigated boulevard, storm drainage system, pavement removal and replacement and re-location or adjustment of utility appurtenances if required to accommodate the upgrading construction.
- b. Hemlock Rd has already been upgraded to an urban standard and no further improvements are required. Pavement/curb removal and replacement and re-location or adjustment of utility appurtenances may be necessary if required to accommodate any proposed construction.
- c. Existing driveway on Hemlock Rd must be removed and replaced with sidewalk, barrier curb and gutter, and boulevard landscaping.
- d. A concrete driveway letdown, as per SS-C7, will be required for new driveway off Hemlock and existing driveway off Girard Rd. Portion of existing driveway off Girard Rd within City ROW must be upgraded to a hard surface.
- e. Driveways must be a minimum of 7m from the lot corner nearest the intersection and are permitted a maximum width of 6m.
- f. All Landscape and Irrigation plans require design and inspection by a Qualified Professional registered with the BCSLA and the IIABC, are to be included as a line item in the estimate for the Servicing Agreement performance security. Landscape and irrigation plans require approval by the Development Engineering Branch at the same time as other "issued for construction" drawings.
- g. Streetlights must be installed on all public roads. All streetlighting plans are to include photometric calculations demonstrating Bylaw 7900 requirements are met and approval by the Development Engineering Branch at the same time as other "issued for construction" drawings.

## **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.
- b. If any road dedication or closure affects lands encumbered by a Utility right-of-way (such as Hydro, Telus, Gas, etc.) please obtain the approval of the utility. Any works required by the utility as a consequence of the road dedication or closure must be incorporated in the construction drawings submitted to the City's Development Manager. Re-locate existing poles and utilities, where necessary including within lanes. Remove aerial trespass(es).

## **7. GEOTECHNICAL STUDY**

- a. At the time of Building Permit application the applicant is required to provide a comprehensive geotechnical report, prepared by a Professional Engineer competent in the field of hydro-geotechnical engineering to address items below:
  - 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. Recommendations for items that should be included in a Restrictive Covenant.
  - vi. Recommendations for roof drains and perimeter drains.
  - vii. Recommendations for erosion and sedimentation controls for water and wind.
  - viii. Any items required in other sections of this document.
- b. Geotechnical reports must be submitted to the Planning and Development Services Department (Planning & Development Officer) for distribution to the Works & Utilities Department and Inspection Services Division prior to submission of Engineering drawings or application for subdivision approval.

**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.

## **8. 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 subdivision application commences, design drawings prepared by a professional engineer must be submitted to the City's Development Engineering Department. The design drawings must first be "Issued for Construction" by the City Engineer. On examination of design drawings, it may be determined that rights-of-way are required for current or future needs.

**9. SERVICING AGREEMENT FOR WORKS AND SERVICES**

- a. A Servicing Agreement is required for all offsite 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.

**10. CHARGES AND FEES**

- a. Development Cost Charges (DCC's) are payable.
- b. Fees per the "Development Application Fees Bylaw" include:
  - i. Survey Monument, Replacement Fee: \$1,200.00 (GST exempt) – only if disturbed.
  - ii. 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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