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**CITY OF KELOWNA**

**MEMORANDUM**

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**Date:** April 12, 2016

**File No.:** Z16-0006

**To:** Urban Planning Management (RR)

**From:** Development Engineering Manager (SM)

**Subject:** 894 Stremel Road Lot 11 Plan 3236 Zone: RU1 to C10

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The Development Engineering Department has the following comments and requirements associated with this application. The road and utility upgrading requirements outlined in this report will be a requirement of this development.

These are Development Engineering comments/requirements and are subject to the review and requirements from the Ministry of Transportation (MOTI) Infrastructure Branch.

The Development Engineering Technologist for this project is Jason Ough

**1. General**

- a) These are Development Engineering comments/requirements and are subject to the review and requirements from the Ministry of Transportation (MOTI) Infrastructure Branch.
- b) This proposed subdivision may require the installation of centralized mail delivery equipment. Please contact Rick Ould, Delivery Planning Officer, Canada Post Corporation, 530 Gaston Avenue, Kelowna, BC, V1Y 2K0 (250-763-3558 ext. 2008) to obtain further information and to determine suitable location(s) within the development.
- c) The 2030 OCP identifies a linear park project that must be included in the development plan. This public corridor will follow Francis Brook through the subject property.
- d) Where there is a possibility of a high water table or surcharging of storm drains during major storm events, non-basement homes may be required. This must be determined by the engineer and detailed on the Lot Grading Plan required in the drainage section.

**2. Geotechnical Report**

Provide a comprehensive 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.**

- (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) Suitability of on-site disposal of storm water and sanitary waste, including effects upon adjoining lands.
- (vi) Recommendations for items that should be included in a Restrictive Covenant.
- (vii) Any items required in other sections of this document.
- (viii) Recommendations for erosion and sedimentation controls for water and wind.
- (ix) Recommendations for roof drains and perimeter drains.
- (x) Recommendations for construction of detention or infiltration ponds if applicable.

### **3. Domestic Water and Fire Protection**

- a) The property is located within Black Mountain Irrigation District (BMID) service area. The water system must be capable of supplying domestic and fire flow demands of the project in accordance with the Subdivision, Development & Servicing Bylaw. The developer is responsible, if necessary, to arrange with BMID staff for any service improvements and the decommissioning of existing services.
- b) Boulevard landscape irrigation system, must be integrated with the on-site irrigation system.

### **4. Sanitary Sewer**

The developer's consulting mechanical engineer will determine the development requirements of the proposed development and establish the service needs. The existing lot is serviced with a 150mm diameter sanitary service. Only one service per lot will be permitted for this development. If required, the applicant will arrange for the removal and disconnection of the existing service and the installation of one new larger service at the applicants cost.

## **5. Storm Drainage**

The developer must engage a consulting civil engineer to provide a storm water management plan for the site, which meets the requirements of the Subdivision, Development and Servicing Bylaw No. 7900. The storm water management plan must also include provision of lot grading plan, minimum basement elevation (MBE), if applicable, and provision of a storm drainage service for the development and / or recommendations for onsite drainage containment and disposal systems.

## **6. Road Improvements and Dedication**

- (a) Property frontage on Finns Road must be upgraded to a full urban standard (SS-R5).  
Design will include separate sidewalk, landscaped boulevard complete with street trees, curb and gutter, piped storm drainage system, fillet pavement, boulevard grading street lights, and adjustment and/or re-location of existing utility appurtenances, if required, to accommodate this construction.
- (b) Property frontage on Stremel Road must be upgraded to a full urban standard (SS-R5).  
Design will include separate sidewalk, landscaped boulevard complete with street trees, curb and gutter, piped storm drainage system, fillet pavement, boulevard grading street lights, and adjustment and/or re-location of existing utility appurtenances, if required, to accommodate this construction.
- (c) The estimated cost of required road improvement works, for bonding purpose, must be determined based upon a design provided by the developer to be reviewed by the City of Kelowna and MOTI.

## **7. Electric Power and Telecommunication Services**

The electrical and telecommunication services to this building must be installed in an underground duct system, and the building must be connected by an underground service. 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.

## **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 Agreements 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. 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 (such as Terasen, etc.) 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. Development Permit and Site Related Issues**

- (a) Access and Manoeuvrability
  - (i) An SU-9 standard size vehicle must be able to manoeuvre onto and off the site without requiring a reverse movement onto public roadways. If the development plan intends to accommodate larger vehicles movements should also be illustrated on the site plan.
  - (ii) Perimeter access must comply with the BC Building Code. Fire Truck access designs and proposed hydrant locations will be reviewed by the Fire Protection Officer.

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Steve Muenz, P. Eng.  
Development Engineering Manager

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