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**CITY OF KELOWNA**  
**MEMORANDUM**

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**Date:** October 13, 2020  
**File No.:** Z20-0087  
**To:** Suburban and Rural Planning (BW)  
**From:** Development Engineering Manager (JK)  
**Subject:** 1788 Joe Riche Rd A1 to RU6

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**WORKS AND SERVICES REQUIREMENTS**

The City's Development Engineering Branch has the following comments and requirements with regard to this application to rezone the subject lot from A1 to RU6 to facilitate a future two lot subdivision. The Development Engineering Technician for this project is Sarah Kelly ([skelly@kelowna.ca](mailto:skelly@kelowna.ca)). The following Works and Services will be a requirement of this development.

**1. GENERAL**

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

**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.

- c) Provide an adequately sized domestic water and fire protection system complete with individual lot connections. The water system must be capable of supplying domestic and fire flow demands of the project in accordance with the Subdivision, Development & Servicing Bylaw. No. 7900. Provide water flow calculations for this development to confirm bylaw conformance. Ensure every building site is located at an elevation that ensures water pressure is within the bylaw pressure limits. Note: Private pumps are not acceptable for addressing marginal pressure.

### **3. SANITARY SEWER SYSTEM**

- a) Our records indicate that this property is currently serviced with a 100mm-diameter sanitary sewer service. The applicant's consulting mechanical engineer will determine the requirements of the proposed development and establish the service needs. Only one service will be permitted per lot. If required, the applicant will arrange for the removal and disconnection of the existing service and the installation of a new service at the applicants' cost.
- b) Arrange for individual lot connections before submission of the subdivision plan, including payment of connection fees (provide copy of receipt)

### **4. STORM DRAINAGE**

- a) The 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);
  - 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) 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) Joe Riche Road is designated a local road and will require upgrades along the full frontage including curb and gutter, irrigated landscaped boulevard, driveway let downs, drainage system including catch basin(s) and drywell, 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.

- b) Only the service upgrades must be completed at this time. The City wishes to defer the upgrades to Joe Riche Rd fronting this development. Therefore, cash-in-lieu of immediate construction is required, and the City will initiate the work later, on its own construction schedule. The cash-in-lieu amount is determined to be \$41,616 (\$1,200 x 34.68 meters of frontage) not including utility service cost.

## **6. POWER AND TELECOMMUNICATION SERVICES**

- a) It is the developer's responsibility to make servicing applications to the respective Power and Telecommunication utility companies 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.

## **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. Recommendations for items that should be included in a Restrictive Covenant.
  - vi. Recommendations for roof drains, perimeter drains and septic tank effluent on the site.
  - vii. Any items required in other sections of this document.
- c) If any blasting is proposed as part of this subdivision, a Soil Removal and Deposit Application must be made to the City for such works. The proposed blasting work is to comply with Amendment No. 1 to the Soil Removal and Deposit Regulation Bylaw No. 9612, specifically Section 6 PERMIT REQUIREMENTS – (k) and (g).
- d) Should any on-site retaining walls surpass the following limits, an Over Height Retaining Wall Permit will be required:
  - “Retaining walls on all lots, except those required as a condition of subdivision approval, must not exceed a height of 1.2 m measured from natural grade on the lower side, and must be constructed so that any retaining walls are spaced to provide a 1.2 m horizontal separation between tiers. The maximum number of tiers is two with a maximum total height of 2.4 m. Any multi-tier structure more

than 2 tiers must be designed and constructed under the direction of a qualified professional engineer.”

The design of all retaining walls is to conform with Engineer & Geoscientists British Columbia's *Professional Practice Guidelines for Retaining Wall Design*. Submission requirements for the Over Height Retaining Wall Permit include Engineer of Record documents (Appendix A of *Retaining Wall Design Guideline*) and any necessary independent reviews (as per EGBC's *Documented Independent Review of Structural Designs*).

- e) Any modified slopes having a finished slope greater than 2H:V1 (50%) and an elevation change greater than 1.2 m must be installed under the direction of a qualified professional engineer.
- f) Any exposed natural rock surface on a lot that has the potential for materials to displace causing a hazardous condition, must be reviewed by a qualified professional engineer with the appropriate and measures undertaken as prescribed by the engineer. For adequate Rockfall Protection adjacent to walls and rock cuts, please consider BC MoTI Supplement to TAC Geometric Design Guide 440, page 440-8, which outlines a ditch bottom width depending on wall height. Sidewalks and utilities should be kept out of this protection area. Additional ROW may be required.

Where walls are on the high side, the City's preference is that the walls remain setback and on private property. Where the walls hold up a public road, the City's preference is that additional dedication be provided, and the walls be owned by the City. Please design any geogrids or tie-backs so that they do not encroach into the required road ROW.

## **8. ROAD DEDICATION/SUBDIVISION REQUIREMENTS**

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

## **9. OTHER ENGINEERING COMMENTS**

- a) As per Bylaw 7900 Schedule 4 Section 4.6, only one driveway access (with a maximum width of 6.0 m) will be permitted per lot.

## **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 subdivision application commences, design drawings prepared by a professional engineer must be submitted to

the City's Works & Utilities 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.

## **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.
- c) Should it be determined that any Park-related work be included under the scope of the Servicing Agreement, the Development Engineering Branch reserves the right to require a performance security for these works. Note: The Development Engineering Branch's Engineering and Inspection Fee will not include the scope of any Parks-related work.

## **12. CHARGES, FEES, AND SECURITIES**

- a) Development Cost Charges (DCC's) are payable
- b) Fees per the "Development Application Fees Bylaw" include:
  - i) Survey Monument Fee: \$50.00 per newly created lot (GST exempt).
  - ii) Survey Monument, Replacement Fee: \$1,200.00 (GST exempt) – only if disturbed.
  - iii) A hydrant levy charge of \$250.00 per lot
  - iv) Engineering and Inspection Fee: 3.5% of construction value (plus GST).

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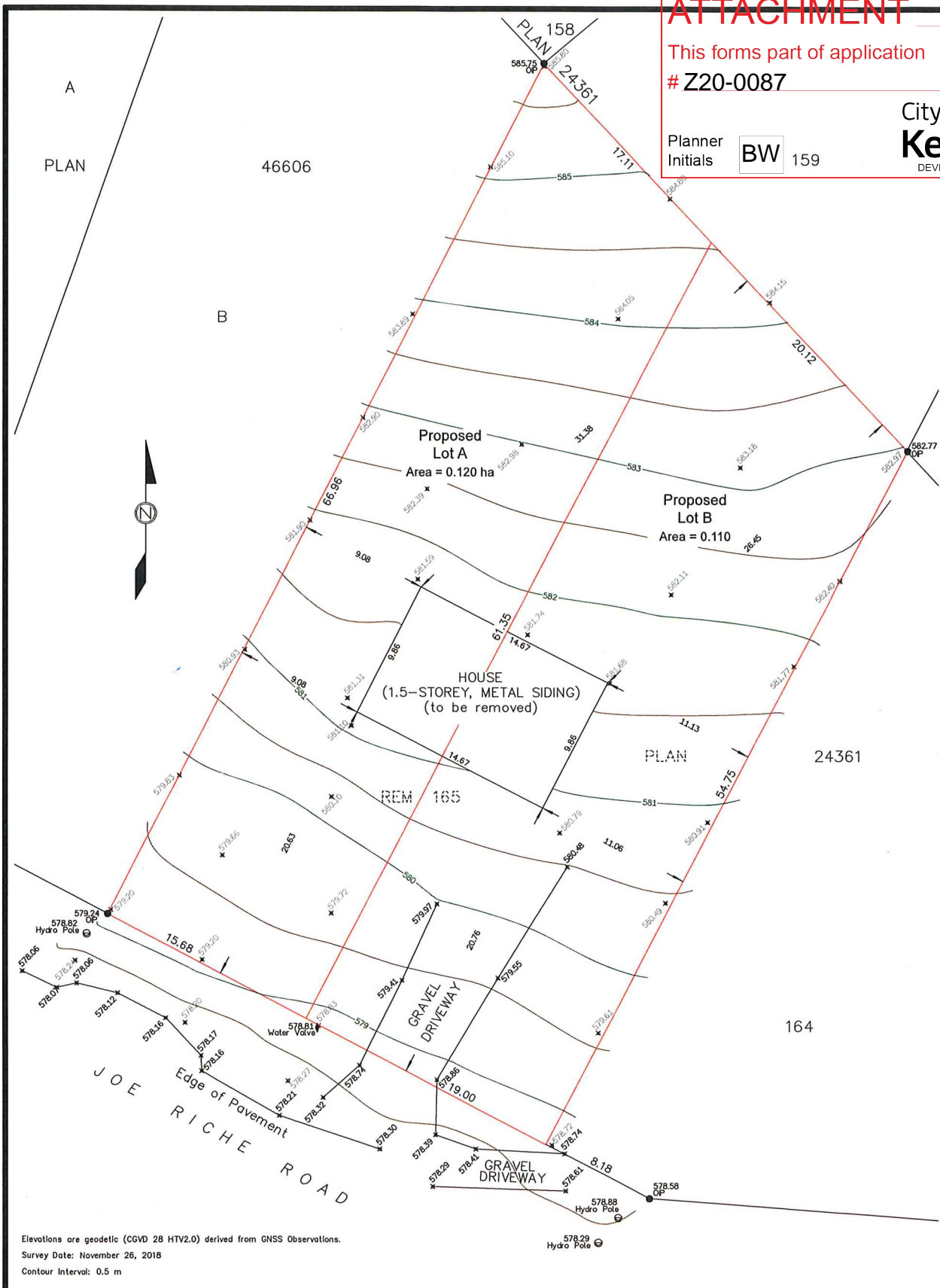
James Kay, P.Eng.  
Development Engineering Manager

SK



This forms part of application # Z20-0087

Planner Initials BW 159



Elevations are geodetic (CGVD 28 HTV2.0) derived from GNSS Observations.  
Survey Date: November 26, 2018  
Contour Interval: 0.5 m

TITLE: SKETCH PLAN SHOWING PROPOSED SUBDIVISION OF LOT 165, SECTION 18, TOWNSHIP 27, O.D.Y.D., PLAN 24361, EXCEPT PLAN KAP46606 (1788 JOE RICHE ROAD, KELOWNA)

DRAWN BY: RUNNALLS DENBY  
british columbia land surveyors  
259A Lawrence Avenue Kelowna, B.C. V1Y 6L2  
Phone: (250)763-7322 Fax: (250)763-4413 Email: neil@runnallsdenby.com

SCALE: 1:250 (11" x 17")  
DATE: September 16th, 2019  
DWG: 15377 P-SUB

CLIENT: SAM KHURANA

FILE No: 15377 REV. 0