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## CITY OF KELOWNA

# MEMORANDUM

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**Date:** June 15, 2023  
**File No.:** HRA22-0001 R1  
**To:** Urban Planning Management (BC)  
**From:** Development Engineering Manager (NC)  
**Subject:** 1175-1177 Ellis St Heritage Revitalization

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The Development Engineering Branch has the following comments and requirements associated with this Heritage Revitalization Agreement to develop three commercial buildings located along the perimeter of the subject property, which surrounds the restored and heritage designated CN Train Station building. All requirements will be applicable at time of Building Permit. The Development Engineering Technician for this project will be 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 right to update/change some or all items in this memo once these time limits have been reached.
- b. This property is located within an area identified by the City of Kelowna as possibly suited for groundwater recharge, increasing the site coverage will require consideration of increased storage capacity for onsite drainage system.

**2. Domestic Water and Fire Protection**

- a. The subject lot is located within the City of Kelowna water supply area. The existing lot is serviced with a 150mm diameter water service. Only one service is permitted per legal lot. If necessary to service new commercial buildings, the Applicant, will arrange for the removal of the existing service and replacement with one larger, metered, service.
- b. The Bylaw requirement for minimum available fireflow to commercial lots is 150 L/s. If it is determined that upgrades to any existing water distribution system must be made to achieve the necessary fire flows, the applicant must upgrade the existing system at their cost. Please contact the development technician for this file to arrange for formal modelling analysis to be completed.
- c. The Developer's Consulting Engineer will determine the domestic and fire protection requirements of this proposed development and establish hydrant requirements and service needs. The applicant must demonstrate that both the calculated FUS fireflow demand and the internal building sprinkler demand of the proposed development does not exceed 150 L/s.

### 3. Sanitary Sewer System

- a. City records indicate that the subject lot is currently serviced with a 150mm 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 for each legal lot.

### 4. Storm Drainage

- a. The property is located within an area identified by the City of Kelowna as possibly suited for groundwater recharge. For consideration of on-site disposal of drainage water, safe use of infiltration is to be confirmed with submission of a geotechnical report provided by a Professional Engineer competent in the field of hydro-geotechnical engineering. The Lot Grading Plan must show the design and location of this system.
- 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 Stormwater Management Plan for the localized area of the site being developed; 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 3.11.1 Detention Storage. SWMP is required to address increase in the site coverage and resulting increased storage capacity necessary for onsite drainage system.
- 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, and applied to the rainfall intensity curve stage (IDF) in Section 3.7.2.
- e. City records indicate that the subject lot is currently serviced with a 150mm diameter storm service. The Applicant's Consulting Engineer will determine the requirements of the proposed development and establish the service needs. Only one service will be permitted for each legal lot.
- f. 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. Relocation of existing driveway access off St Paul St will require removal of existing concrete letdown, depressed curb, and driveway asphalt. New driveway location must be formalized with a concrete letdown, maximum 6m in width. Boulevard to be restored with landscape and irrigation which meets requirements of Bylaw 7900, Schedule 4.

- b. Public sidewalk on Ellis St to remain as concrete sidewalk to match City standard details, replacement with stamped concrete to match onsite Train Station crossings not permitted.
- c. 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.

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

- a. The electrical and telecommunication services to this building/property 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.
- b. Provide all necessary Statutory Rights-of-Way for any utility corridors as required.

## **7. Geotechnical Report**

- a. 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.

- b. The Geotechnical report must be submitted 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 and perimeter drains.
  - vii. Recommendations for erosion and sedimentation controls for water and wind.
  - viii. Any items required in other sections of this document.

## **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 (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. 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 offsite construction value (plus GST).

  
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Nelson Chapman P.Eng.  
Development Engineering Manager

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