

# CITY OF KELOWNA

## Amendment No. 26 to Subdivision, Development and Servicing Bylaw No. 7900

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The Municipal Council of the City of Kelowna, in open meeting assembled, enacts that the Subdivision, Development and Servicing Bylaw No. 7900 be amended as follows:

1. THAT **Part 1 – Introduction, 4.0 Definitions** be amended by
  - 1.1. Deleting “Excess or Extended Services” in its entirety and replacing it with the following:

“Excess or Extended Services” means those Works and Services in respect of:

    - (a) a portion of a Highway system that will provide access to land other than the land being subdivided or developed; and
    - (b) a portion of a water, sewage or drainage system that will serve land other than the land being subdivided or developed.”
  - 1.2. Amending “Owner” by deleting “Sections 356 and 357 of the *Local Government Act*” and replacing with “Sections 228 and 229 of the *Community Charter*”.
2. THAT **Part 5 – Owner to Perform Work, 9.2 Drawing Approval** be amended by deleting “The Consulting Engineer must submit with the drawings a completed “construction drawing checklist”, in the form approved by the City.” and replacing with “The Consulting Engineer must complete and submit the Design Drawings in accordance with the Engineering Drawing Submission Requirements.”
3. THAT **Part 6 – Excess or Extended Services and Latecomers, 11.1 Information Requirements** be amended by deleting it in its entirety and replacing with

“11.1 Information Requirements. If the City requires the Owner to provide Excess or Extended Services, the Owner, in addition to providing the information set out in Part 2 of this bylaw, and prior to Constructing any Works and Services, must provide the City with such information, documents, and agreements as may be required by the City Engineer, including without limitation:

  - (a) Design Information for the Excess or Extended Services, including:
    - (i) Design Drawings of the Excess or Extended Services, including which lands are intended to be Benefiting Lands;
    - (ii) In the case of Excess Services, a written technical brief to inform the determination of the Excess Services portion of the Works and Services provided under Part 2 of this bylaw.
  - (b) the Consulting Engineer’s estimate of the Owner’s costs in connection with any such Excess or Extended Services, verified by the City Engineer. The Owner’s costs may include the following:
    - (i) the cost of the Owner’s interest in the land used for Excess or Extended Services if such interest was acquired by the Owner for the specific purpose of providing Excess or Extended Services;
    - (ii) the cost of Constructing the Excess or Extended Services; and
    - (iii) the cost of designing and inspecting the Excess or Extended Services, to a maximum of 10% of the cost referred to in Paragraph 11.1(b)(ii),but shall not include the Owner’s cost of connections or the Owner’s financing costs in connection with any such Excess or Extended Services.
  - (c) a draft Latecomer Agreement in the City’s standard form.”

4. THAT **Part 6 – Excess or Extended Services and Latecomers, 11.2 Latecomer Agreements** be amended by deleting it in its entirety and replacing with

“11.2 Latecomer Agreements. If the City determines that all or part of the costs referred to in Paragraph 11.1(b) are excessive and shall be paid for by the Owner, the City Engineer will:

- (a) determine:
  - (i) whether all or part of the costs of the Excess or Extended Services referred to in Paragraphs 11.1(b) must be paid for by the Owner;
  - (ii) which lands are Benefiting Lands;
  - (iii) which part of the Excess or Extended Services would benefit each of the Benefiting Lands; and
  - (iv) the Latecomer Charges that would apply to each of the Benefiting Lands.
- (b) prepare a Latecomer Agreement for execution by the Owner, which will set out, inter alia, the matters referred to in Paragraph 11.2(a), fix the rate of interest to be charged on Latecomer Charges accruing from the Date of Substantial Performance of the Works and Services until the Latecomer Charges are paid in accordance with Bylaw No. 6519-89, a bylaw to provide for an interest rate payable on Latecomer Charges; and fix the term of the Latecomer Agreement, which term shall be 1 day unless otherwise agreed to by the City and the Owner;
- (c) notify all potential Latecomers of the Latecomer Charges and interest thereon that would be payable upon a Latecomer connecting to or using Excess or Extended Services prior to the expiration of a Latecomer Agreement to which the Benefit Lands are subject; and
- (d) collect and remit to the Owner or his permitted assign, in accordance with the Latecomer Agreement, any Latecomer Charges collected by the City from a Latecomer.”

5. THAT **Schedule 1 - Works and Services Requirements, Table 2: Road Requirements (Refer to Standard Drawings)** be amended by

5.1. Deleting Note 4 in its entirety and replacing it with “4. Where a Rapid Transit or Frequent Transit Network is identified on OCP Map 13.2 – Transit Overlay up to 3 m of additional ROW may be required on Local, Collector, and Minor Arterial roads and up to 6 m of additional ROW may be required on Major Arterial roads.”

5.2. Adding the following new Note 5: “5. Where OCP Maps 13.2, 13.3, 13.4, and 13.5 overlays are present, consult with City Engineer for design requirements.”

6. THAT **Schedule 4 – Design Standards, 1.1 General** be amended by deleting it in its entirety and replacing it with the following:

“1.1 General These guidelines are not intended to be a substitute for sound engineering knowledge and experience. Water distribution system designs should be prepared under the direction of a design professional who has the appropriate experience and is registered with Engineers and Geoscientists British Columbia.

Water for Kelowna is provided by the City of Kelowna Water Utility and three other water purveyors:

- Black Mountain Irrigation District
- Glenmore Ellison Improvement District
- Rutland Water Works District

These design standards apply to the City of Kelowna Water Utility with the following exceptions:

- Section 1.5 Fire Flows is applicable to Subdivision or Development within the City.
- The location of all water infrastructure within City Rights-of-Ways shall be in accordance with these standards and those in Section 0.4 Utility Rights-of-Ways.
- The design of community water systems should be consistent with the most current edition of the [Design Guidelines for Drinking Water systems in British Columbia](#), published by the BC Ministry of Health.

While these design standards are in general conformance with the other three major water purveyors, individual purveyor’s requirements may differ in some instances; it is the responsibility of the Consulting Engineer to confirm with the applicable water purveyor regarding their specific requirements.”

7. THAT **Schedule 4 – Design Standards, Section 1.3 Per Capita Demand** be amended by adding the following after the existing text:

“For calculating residential design population for the determination of Design Flow (see Section 1.6), the number of dwelling units is to be based on the maximum permissible number of units allowed under the Zoning Bylaw for the lots being serviced by the proposed water system, including the potential for multiple units, secondary suites, or carriage houses. Use Multi-Family per capita demand for ground-oriented infill housing.

For assessing adequate water quality (i.e, water age, chlorine residual, etc.), the anticipated number of dwelling units based on the intent of the proposed development should be used to estimate an expected interim and ultimate average day demand. The number of dwelling units may require adjustment based on expected occupancy conditions within phased developments to ensure adequate water quality is maintained for initial users and at full build-out.”

8. THAT **Schedule 4 – Design Standards, Section 1.5 Fire Flows** be amended by deleting it in its entirety and replacing it with the following:

**“1.5 Fire Flows**

Available Fire Flow is defined as the minimum flow of water able to be reliably delivered to a node of a community water system for firefighting purposes for a defined minimum duration at a minimum pressure of 140 kPa (20 psi) and a maximum velocity of 4 m/s during a period of Maximum Day Demand on the water system. Available Fire Flow is allocated for public and private use in accordance with Council Policy No. 383 Water Supply Level of Service for the City of Kelowna water supply area.

Required Fire Flow is defined and calculated in accordance with the current edition of “Water Supply for Public Fire Protection,” published by Fire Underwriters Survey (FUS). Needed Fire Flow calculated in accordance with the current edition of “Guide for Determination of Needed Fire Flow,” published by Insurance Services Office (ISO) is considered an acceptable alternative method for determining Required Fire Flow for the purposes of this section.

The design of proposed system required to deliver fire flow must be informed by hydraulic information from water model results provided by the City or other water purveyor.

**1.5.1 Subdivision Requirements**

- a) The Available Fire Flow in a proposed or existing system servicing a new subdivision is subject to the following minimum requirements based on the general land use and associated building type to be serviced:

**Table 1.5.1 Minimum Available Fire Flow by Building Type @ 140 kPa (20 psi)**

<b>Building Type or Zone Category</b>	<b>Minimum Fire Flow</b>	<b>Minimum Duration</b>
Simple Residential (Part 9) <sup>1</sup>	60 L/s	1.5 hrs
Complex Residential (Part 3) <sup>1</sup>	150 L/s	2.0 hrs
Commercial & Mixed Use	150 L/s	2.0 hrs
Institutional	150 L/s	2.0 hrs
Industrial	225 L/s	3.0 hrs

<sup>1</sup> Residential Part 9 and Part 3 Buildings are as defined in the [BC Building Code](#).

- b) The Available Fire Flow of a proposed system must be sufficient to meet the calculated Required Fire Flow of the theoretical highest demand building type allowable under the Zoning Bylaw for all proposed lots within the service area.
- c) Where the Available Fire Flow of an existing system is insufficient to meet the Required Fire Flow of the theoretical highest demand building type allowable under the Zoning Bylaw for a proposed lot, the

existing system must be upgraded to provide an Available Fire Flow exceeding the anticipated maximum Required Fire Flow.

- d) Where a proposed lot has a calculated anticipated Required Fire Flow greater than the Available Fire Flow from an existing water system and where, in the opinion of the City Engineer, increasing the Available Fire Flow of a supply or distribution system is not viable and the overall fire risk of the neighbourhood is low, the Approving Officer may issue Subdivision Approval if both of the following are satisfied:
- i. All projections and exterior walls located within 5.0 m of a property line on all proposed lots are covenanted to be constructed to meet the technical requirements for non-combustible cladding and unvented soffits under the BC Building Code; and
  - ii. The Minimum Available Fire Flow corresponding to the proposed building type as outlined in Table 1.5.1 is provided to all proposed lots.

#### 1.5.2 Development Requirements

- a) All new buildings to be serviced by a community water system shall be provided with an adequate water supply for firefighting.
  - b) Adequate water supply for firefighting must be provided to the subject property at all stages of building construction as required by the [City of Kelowna Fire and Life Safety Bylaw No. 10760](#) and the [BC Fire Code](#).
    - i. Where a Fire Safety Plan in accordance with the BC Fire Code relies on a community water system for public fire protection, adequate water supply for firefighting shall be determined in accordance with Section 1.5.2.d) or as otherwise determined by the Fire Chief and City Engineer or representative from the applicable water purveyor.
  - c) Buildings that are sprinklered throughout with a sprinkler system or have a standpipe system conforming to the requirements of the BC Building Code are deemed to have adequate water supply for firefighting.
  - d) Non-Sprinklered Buildings serviced by a community water system with an Available Fire Flow exceeding the subject building's calculated Required Fire Flow are deemed to have adequate water supply for firefighting, provided that adequate hydrant coverage is available in accordance with Section 1.15 Hydrants.
  - e) Where a non-sprinklered building has a calculated Required Fire Flow greater than the Available Fire Flow from an existing water system,
    - i. the building must be modified to reduce its Required Fire Flow below the Available Fire Flow, or
    - ii. the existing system must be upgraded to provide an Available Fire Flow exceeding the Required Fire Flow.
  - f) Where a non-sprinklered building has a calculated Required Fire Flow greater than the Available Fire Flow from an existing water system and where, in the opinion of the City Engineer, increasing the Available Fire Flow of a supply or distribution system is not viable and the overall fire risk of the neighbourhood is low, the Building Official may issue a Building Permit if both of the following are satisfied:
    - i. All projections and exterior walls located within 5.0 m of a property line on all proposed lots are constructed to meet the technical requirements for non-combustible cladding and unvented soffits under the BC Building Code; and
    - ii. The Minimum Available Fire Flow corresponding to the proposed building type as outlined in Table 1.5.1 is provided to all proposed buildings."
9. THAT **Schedule 4 – Design Standards, Section 1.9 Minimum Pipe Diameter** be amended by deleting "\* For looped distribution mains with lengths less than 500 m in residential subdivisions, the diameter can be reduced to 150 mm, providing that fire flow requirements can be met."

10. THAT **Schedule 4 – Design Standards, Section 1.15 Hydrants** be amended by deleting in its entirety and replacing it with the following:

“1.15 Hydrants

Fire hydrants shall be spaced in accordance with "Water Supply for Public Fire Protection - A Guide to Recommended Practice" (latest edition), published by Fire Underwriters Survey, subject to the following minimum spacing, as measured along road centreline:

- Not more than 150 m apart in rural single family residential or agricultural areas;
- Not more than 120 m apart in suburban, urban, or infill residential areas;
- Not more than 100 m apart in high density residential, commercial, industrial, or institutional areas.

Fire hydrants should be located in general at street intersections and as follows:

- Hydrant locations as per BC Building Code for all buildings.
- 1.0 m back from curb or 0.5 m back of sidewalk to centre line of hydrant.
- Minimum 1.0 m clear of any other utility structure in all directions.
- Minimum 3.0 m clear in direct line with hose connections.
- At property lines in mid-block locations.
- SRW required where open cut excavation to base of hydrant assembly extends into private property.
- Bollards or concrete barriers for hydrant protection may be required at the City Engineer’s discretion.

Hydrants shall not be located on sidewalks. Where this is not possible and with approval from the City Engineer, a minimum distance of 1.0 m must be maintained between the centre line of hydrant and the back of curb.

On arterial highways with, or designated to be constructed with, a raised median, fire hydrants shall be installed on both sides of the highway with each side treated exclusively for spacing requirements”.

11. THAT **Schedule 4 – Design Standards, Section 1.21 Service Connections** be amended by deleting the following:

“Service connection size should be calculated on the basis of the designated land use including sprinkler systems and/or on-site hydrants, where applicable. The minimum size is outlined in 1.9 - Minimum Pipe Diameter.”

and replacing with

“Service connection size should align with the [BC Plumbing Code](#) for proposed Developments, or be calculated on the basis of the designated land use including sprinkler systems or on-site hydrants, where applicable in the case of Subdivision. The minimum size is outlined in Section 1.9 - Minimum Pipe Diameter. Standard permitted sizes and materials are provided in the Approved Products List.”

12. THAT **Schedule 4 – Design Standards, Section 1.23.2 Reservoir Capacity** be amended by adding the following after the existing text:

“Fire Storage shall be the greater of:

- 1,080 cubic meters,
- the volume as determined in accordance with the Fire Underwriters Survey guide for the theoretical highest demand building type allowable under the Zoning Bylaw for all lots within the reservoir service area, and
- the minimum volume outlined in Table 1.5.1 for the highest future land use or building type within the reservoir service area.”

13. THAT **Schedule 4 – Design Standards, Section 2.2 Per Capita Flow** be amended by adding the following after the existing text: “For calculating design population density in order to determine ADWF, the number of dwelling units is to be based on the maximum permissible number of units allowed under the Zoning Bylaw for the lots being serviced, including the potential for multiple units, secondary suites, or carriage houses.”

14. THAT **Schedule 4 – Design Standards, Section 2.10 Minimum Pipe Diameter** be amended by deleting “except for the upstream section where future extension is not possible, in which case 150 mm is acceptable provided it has a grade of 1% or greater.”

15. THAT **Schedule 4 – Design Standards, Section 2.16.1 Size** be amended by deleting “Minimum pipe size is 100 mm diameter for residential services and 150 mm for all other services.” and replacing with the following:
  - “Service connection size should align with the BC Plumbing Code for proposed Developments.
  - Minimum pipe size is 100 mm diameter for residential services servicing up to 4 units and 150 mm for all other services.
  - Standard permitted sizes are provided in the Approved Products List.”
16. THAT **Schedule 4 – Design Standards, Table 4.3.1: Road Cross Section Summary** be amended by adding the following after the existing text in Note 2: “Where a Rapid Transit or Frequent Transit Network is identified on OCP Map 13.2 – Transit Overlay up to 3.0 m of additional ROW may be required on Local, Collector, and Minor Arterial roads and up to 6.0 m of additional ROW may be required on Major Arterial roads.”
17. THAT the term “Building Inspector” be deleted and replaced with “Building Official” throughout the bylaw.
18. This bylaw may be cited as "Bylaw No. 12624, being Amendment No. 26 to Subdivision, Development and Servicing Bylaw No. 7900."
19. This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first, second and third time by the Municipal Council this

Adopted by the Municipal Council of the City of Kelowna this

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Mayor

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City Clerk