
CITY OF KELOWNA

MEMORANDUM

Date: ~~September 01, 2020~~ **October 5, 2022**
File No.: Z20-0066
To: Urban Planning Management (KB)
From: Development Engineering Manager (~~JK~~) (NC)
Subject: 605 Fraser Rd and 460 Leathead Rd RU1 to ~~RM3~~ **MF2**

The Development Engineering Branch's comments and requirements regarding this application to rezone the subject lots from RU1 – Large Lot Housing to ~~RM3 – Low Density Multiple Housing~~ **MF2 – Townhouse Housing** are as follows. The Development Technician for this application will be Sarah Kelly (skelly@kelowna.ca).

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 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 Development Engineering comments/requirements are subject to the review and requirements from the Ministry of Transportation and Infrastructure (MoTI).
- d) 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 lots are 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 (150 L/s for apartments/townhouses). 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.

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3. **SANITARY SEWER SYSTEM**

- a) Our records indicate that subject lots are currently serviced with a 100-mm diameter sanitary sewer service off Fraser Rd and a 100-mm service off Leathead Rd. The Applicant's Consulting Mechanical Engineer will determine the requirements of the proposed development and establish the service needs. Only ~~one~~ one service will be permitted for each legal lot. The applicant is to arrange for the removal and disconnection of the existing services and the installation of one new larger service (minimum diameter of 150 mm) at the applicant's cost.
- b) All new service connections are to be completed with an inspection chamber (c/w Brooks Box) as per SS-S7.

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) On-site detention systems are to be compliant with Bylaw 7900, Schedule 4, Section 3.11.1 *Detention Storage*.
- 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) Show details of dedications, rights-of-way, setbacks and non-disturbance areas on the lot Grading Plan.
- f) Register right of ways on private properties for all the storm water infrastructure carrying, conveying, detaining and/or retaining storm water that is generated from the public properties, public road right of ways, and golf course lands.
- g) Identify clearly on a contour map, or lot grading plan, all steep areas (>30 %). Provide cross sections for all steep areas at each property corner and at locations where there are significant changes in slope. Cross sections are to be perpendicular to the contour of the slope. Show the proposed property lines on the cross sections. Not all areas have a clear top of bank; and therefore, field reconnaissance by City staff and the applicant may be needed to verify a suitable location for property lines.
- h) If individual lot connections are required, ensure that payment of connection fees has been completed (please provide receipt).
- i) 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

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addressing buoyancy concerns. These design aspects must be reviewed and approved by the City Engineer.

- j) A complete storm drainage system is to be installed up to north end of the subject lot within Fraser Rd, c/w catch basins, leads, storm main, manholes, any required service connections, and connection to the existing storm main in Leathead Rd. Depending on the proposed design, a latecomer may be able to be registered for the drainage works.

5. ROAD IMPROVEMENTS

- a) The existing condition of the Active Transportation Corridor on Leathead Rd is to be maintained.
- b) A new east-west concrete wheelchair letdown as per City of Vancouver Standard Detail C8.3 is to be installed on the northeast corner of the Fraser-Leathead Rd intersection.
- c) The existing utility pole servicing 460 Leathead Rd is to be removed, with all new additional services being underground.
- d) Fraser Rd is to be fully urbanized to a modified SS-R5 with 1.5-m wide separated sidewalk 0.2 m from property line. The urbanization is to include storm drainage, curb and gutter, utility appurtenance adjustments, fillet paving, streetlights, boulevard landscaping and irrigation, and utility pole relocation (if necessary).

6. POWER AND TELECOMMUNICATION SERVICES

- a) Underground services will be required for all power and telecommunications to the proposed lot.
- b) As per comment 5.c), the existing utility pole servicing 460 Leathead Rd is to be removed.
- c) Streetlights must be installed on all roads. All streetlighting designs are to be approved by the Development Engineering Branch at the same time as other “issued for construction” drawings.
- d) Make servicing applications to the respective Power and Telecommunication utility companies. The utility companies are required to obtain the City’s approval before commencing construction.
- e) Re-locate existing poles and utilities, where necessary. Remove aerial trespass (es).
- f) If any road dedication affects lands encumbered by a Utility right-of-way (such as B.C. Gas, 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.

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.

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- 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) 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*).

- d) 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.

8. ROAD DEDICATION/SUBDIVISION REQUIREMENTS

- a) A 6.0-m radius corner rounding is to be dedicated on the southwest corner of 605 Fraser Rd.
- b) Lot consolidation will be a requirement of this development.

9. 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

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Engineer. On examination of design drawings, it may be determined that rights-of-way are required for current or future needs.

10. 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.

11. CHARGES, FEES, AND SECURITIES

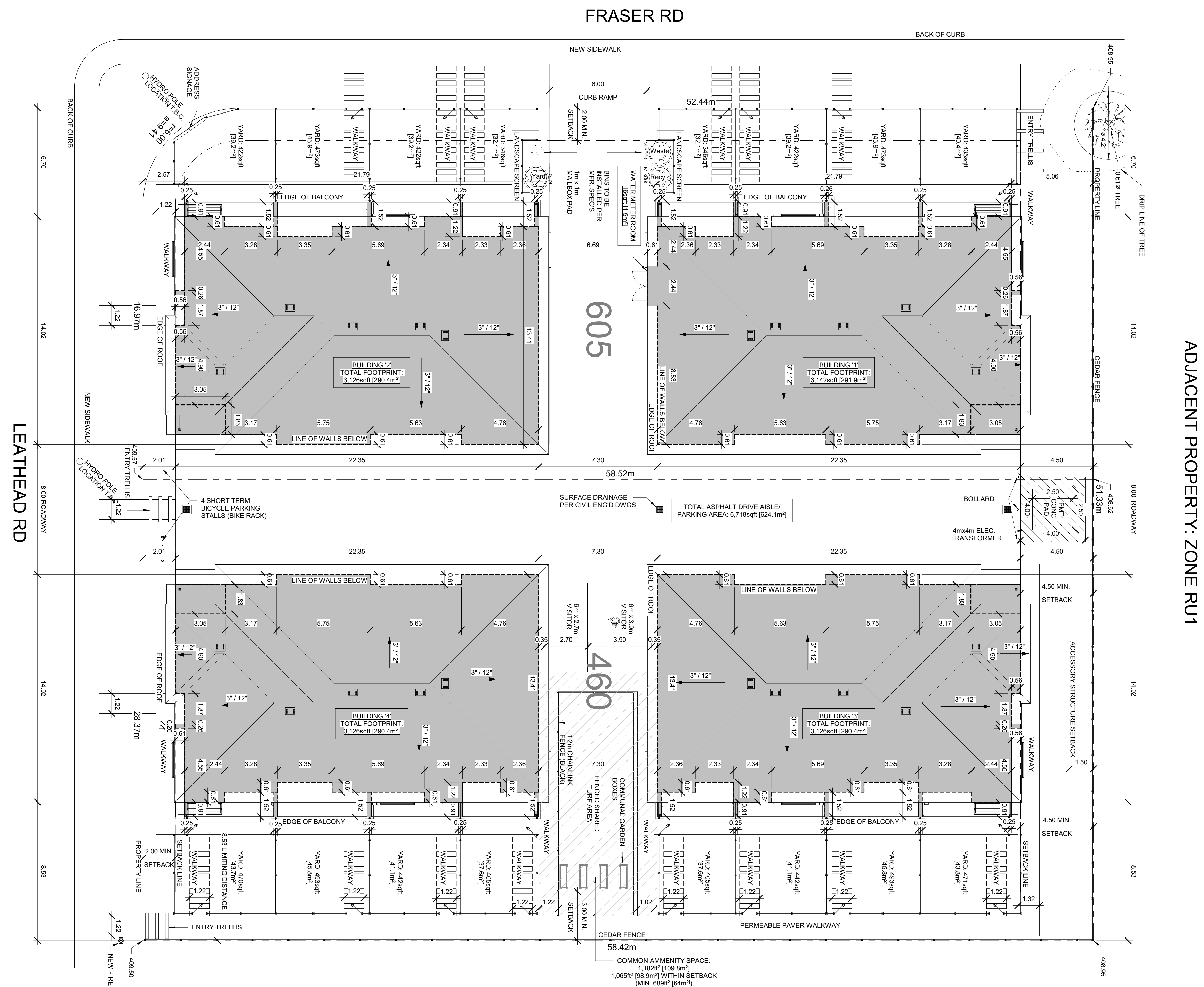
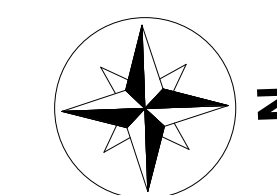
- a) Development Cost Charges (DCC's) are payable.
- b) Fees per the "Development Application Fees Bylaw" include:
 - i) Street/Traffic Sign Fees: at cost (to be determined after design).
 - ii) Survey Monument Fee: \$50.00 per newly created lot (GST exempt).
 - iii) Survey Monument, Replacement Fee: \$1,200.00 (GST exempt) – only if disturbed.
 - iv) Engineering and Inspection Fee: 3.5% of construction value (plus GST).
- c) Approved payment methods for Performance Security:
 - i) Personal Cheques < \$5,000
 - ii) Certified Cheque and Bank Draft > \$5,000
 - iii) Minimum Letter of Credit value is \$50,000


~~James Kay, P.Eng.~~ Nelson Chapman, P.Eng.
Development Engineering Manager

~~JKH~~SK

Issue Schedule		
Issue Number	Description	Date (dd.mm.yy)
16	Development Permit	25.05.22
17	Revised Layouts	13.06.22
18	Revised Site	22.06.22
19	Revised Plans	28.06.22
20	Coordination	13.06.22
21	BP	03.08.22

ATTACHMENT B
This forms part of application
Z20-0066
Planner Initials **KB**
City of Kelowna
DEVELOPMENT PLANNING



ADJACENT PROPERTY: ZONE RU1

1 SITE PLAN
1" = 10'-0"

- BUILDING NOTES**
GENERAL ZONING AND SITE INFORMATION
- CIVIC ADDRESS: 605 FRASER RD & 460 LEATHHEAD RD
 - LEGAL: PLAN 12434, LOTS 1 & 2
 - AUTHORITY: CITY OF KELOWNA
 - EXISTING ZONE: RU1
 - PROPOSED ZONE: MF2
- ZONING RESTRICTIONS**
- MAXIMUM SITE COVERAGE: 55%
 - MAXIMUM SITE COVERAGE: 80% INCL. IMPERMEABLE SURFACES
 - MAXIMUM BASE DENSITY: 1.0FAR
 - OPTIONAL DENSITY BONUS: +0.15FAR*
+0.30FAR*
- SETBACKS & SIZE RESTRICTIONS**
- FRONT YARD & FLANKING SIDE YARD SETBACK: FOR GROUND-ORIENTED HOUSING: 2.0m**
 - REAR YARD SETBACK: 4.5m
 - SIDE YARD SETBACK: 3.0m
 - MAX. BASE HEIGHT: 11.0m (3 STOREYS)
 - MIN SEPARATION BETWEEN BUILDINGS: 3m
 - MIN. PRIVATE OPEN SPACE PER DWELLING: 25m²
 - MIN. COMMON AREA (NOT WITHIN SETBACKS): 4.0m² PER DWELLING UNIT (64.0m²)

NOTES:
* REFER TO ZONING BYLAW NO. 12375 SECTION 13.6 FOOTNOTES
** REFER TO ZONING BYLAW NO. 12375 SECTION 13.5 FOOTNOTES

AREA CALCULATIONS

- 605 FRASER RD LOT AREA:	14,400sqft [1,337.8m²]
- 460 LEATHHEAD RD LOT AREA:	17,895sqft [1,662.8m²]
- TOTAL LOT AREA:	32,295sqft [3,000.4m²]
- MAXIMUM BUILDING SITE COVERAGE:	17,763sqft [1,650.2m²] (55%)
- MAXIMUM SITE COVERAGE (INCL. IMPERMEABLE SURFACES):	25,837sqft [2,400.3m²] (80%)
- TOTAL BUILDING COVERAGE:	12,520sqft [1,163.1m²] (38.8%)
- TOTAL IMPERMEABLE SURFACES:	6,718sqft [624.1m²] (20.8%)
- TOTAL SITE COVERAGE:	19,238sqft [1,787.3m²] (59.6%)
- MAXIMUM TOTAL NET FLOOR AREA:	32,296sqft [3,000.4m²] (1.00 FAR)
- PROPOSED TOTAL NET FLOOR AREA:	25,376sqft [2,357.5m²] (0.79 FAR)
TOTAL FLOOR AREAS PER UNIT TYPE:	UNIT 1: 1,250sqft [116.1m²] UNIT 2: 1,701sqft [158.0m²] UNIT 3: 1,701sqft [158.0m²] UNIT 4: 1,692sqft [157.2m²]

ADJACENT PROPERTY: ZONE P2

SHEET NOTES:
- LANDSCAPING NOT SHOWN, REFER TO LANDSCAPE ARCHITECT'S DWGS.
- ALL WALKWAYS TO BE PERMEABLE PAVERS
- T/O ENTRY SLAB-ON-GRADE= 100'-0" (GEO. PER GEO ENG'S DWGS.)
- ALL LOT DIMENSIONS & GEODEDIC ELEVATIONS TO BE CONFIRMED BY A SURVEYOR PRIOR TO CONSTRUCTION

Symbolic Construction Group
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Surrey, BC V3W 1E6
P:604-599-6886
C:604-763-7068
605fraser@gmail.com

'Oakland by Symbolic'
Multi-Residential Development
605 Fraser Rd &
460 Leathhead Rd
Kelowna, BC

SITE PLAN

SCALE:
AS NOTED

DRAWN BY: BV
CHECKED BY: BV

DATE: 03.08.22
PROJECT: 2020-009

A1.2