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ATTACHMENT **B**

This forms part of application
OCP23-0001/Z23-0001

Planner Initials **WM**

City of **Kelowna**
DEVELOPMENT PLANNING



April 11, 2023

Mr. Theo Finseth
Partner
Placemark Design Studio Inc.
#300 – 2318 Oak Street
Vancouver BC V6H 4J1

Dear Theo

Re: Legacy Neighbourhood, Kelowna, BC – Opinion on Frost Road Extension

This letter is a response to the Developer / Consultant’s request to provide a rationale for the proposed direct funding contribution by Kettle Valley Holdings towards the Frost Road Extension. This funding is related to the development of the Legacy Neighbourhood in Kettle Valley, and is in addition to their contribution to the City’s Major Roads DCCs. This letter provides high level input using engineering judgment, supported by available information, as no data collection or detailed traffic analysis was undertaken.

The Legacy Neighbourhood consists of 99 homes and falls within Neighbourhood 1 of the Southwest Mission Sector (SWMS). The development cap for Neighbourhood 1 is 1,028 homes. The current build-out plan is 1,016 units, which is well within the projections for SWMS. In addition, the previously planned High School for the subject site will not be developed which will significantly reduce traffic into and out of the area.

Legacy Neighbourhood Trip Types and Distribution

Future peak hour traffic related to the Legacy Neighbourhood will be destined to and from places of work and well as to schools, shopping, recreational and personal business opportunities outside of the neighbourhood. Of these trip types, work related trips likely make up between 50% and 70% of all trips on the road network. For work, shopping, recreational and personal business trips, there are three main destinations: the main Kelowna downtown and waterfront area, the Airport/UBCO area and the Rutland/Costco area. The nearest High School is Okanagan Mission Secondary on Gordon Avenue. Most trips will therefore be to/from the north using Chute Lake Road and Lakeshore Road, or to/from the north-east using Gordon Drive and Swamp Road, or to/from the new South Perimeter Way.

Frost Road Extension

Future transportation networks for this area are planned as outlined in the 2040 Transportation Master Plan. The Frost Road Extension is part of this future road network and will provide a new connection from Killdeer Street to Chute Lake Road. Frost Road is planned as a collector road and is included in the City’s 10-year plan servicing plan and its associated DCC rates.

The implementation of the Frost Road Extension will provide a new and direct east-west connection between Chute Lake Road and Gordon Drive and is expected to change the current routing of the Legacy neighbourhood trips. This new link will provide an alternative route to Chute Lake Road for destinations in the north-east. As such, it will provide relief for north-south peak hour traffic on Lakeshore Drive and distribute traffic via multiple routes. It will also provide an additional route for emergency access.

The projected traffic on Frost Road is not fully known at this time. Publicly available data¹ show that in 2017 the existing peak hour two-way traffic on Chute Lake Road and Gordon Drive was in the order of 1,000 veh/h. It is estimated that the range of peak hour traffic on Frost Road would be up to about 30-50% of volumes on the arterial roads of Lakeshore Drive and Chute Lake Road/Gordon Drive. Therefore, it is estimated that the peak hour volumes on the Frost Road Extension, if constructed today, could range from 300 veh/h on the low side, to 500 veh/h on the high side.

Legacy Neighbourhood Contribution to Frost Road Extension

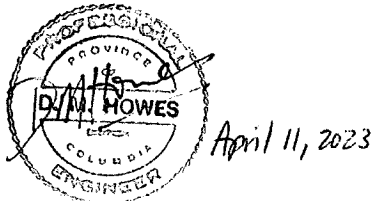
The forecast peak hour traffic to and from the Legacy Neighbourhood (99 residential units) is in the range of 50-70 vehicles per hour based on typical ITE² trip rates. This traffic is expected to distribute 70% to the north and 30% to the north-east. As such, site trips on Frost Road could be in the order of 15 to 20 vehicles in the peak hour which could result in an estimated range of 3% to 8% of the peak hour traffic on the Frost Road Extension.

The cost of construction for the Frost Road Extension is approximately \$3 million as per recent discussions with the City. The contribution proposed by Kettle Valley Holdings is \$240,000 which represents 8% of the road extension project.

The new Frost Road Extension will provide route options for the neighbourhood as a whole, provide relief for the north-south routes, help to distribute traffic, provide additional connections to new routes and provide an alternative emergency access.

In summary, the contribution to the extension of Frost Road will provide funding in excess of the likely impact of the development on this route but is considered appropriate as it will provide benefits to the larger Neighbourhood 1 in terms of accessibility and emergency access.

Respectfully submitted,



April 11, 2023

Donna Howes, P.Eng., FEC, PTOE

Director

Howes Technical Advantage Ltd.

Permit to Practice # 1000164

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¹ Report to Council, May 1, 2017, Southwest Mission Sector Transportation Update

² Institute of Transportation Engineers Trip Generation Manual, 11th edition