



Regional District of Okanagan Similkameen
101 Martin Street
Penticton, British Columbia
V2A 5J9

October 31, 2022

Attention: RDOS Building Authority

CC: Parkland Enterprises, c/o Rene Doucette, Owners
Donalyn and Robert Hirtz, Owners
Marion Masson, CPHI(C) Interior Health Authority

Re: Lots 21 and 22, Plan KAP 3889, DL 211
4535 and 4545, Mill Road, Naramata, BC

To whom it may concern,

Oland Engineering Ltd was consulted by Mr. Rene Doucette to design on-site sewerage systems for the two subject lots. I visited the sites to discuss a proposed development and evaluate the options for on-site sewerage.

It was immediately clear from the initial site visit, that the many constraints on the property would present a challenge for developing an acceptable sewerage system for the site. I, along with experts in Hydrogeology have been able to design systems within proximity to surface water in the past. Our designs use a high level of pre-treatment as well as a permeable reactive layer of organic material under the effluent dispersal zone to reduce nutrient loading to the nearby lake or stream.

The constraints for both subject lots, pushes the boundaries to the extreme. The constraints include:

- A very small area for effluent dispersal and the construction of the treatment system.
- The lake setback will only be approximately 10m to the dispersal area as opposed to the typical 30 m setback required by the Health Regulation.
- The traveled portion of Mill Road borders the property line and, in one section, encroaches on the property, leaving the only dispersal system area vulnerable to traffic and road maintenance.
- The soils are not well suited for infiltration of effluent.
- The typical required setbacks to property lines, the lake and the building footprint cannot be met.

I have over 30 years of Engineering experience in the design and construction supervision of on-site sewerage systems. In doing so, I have the responsibility to design to protect human health and the environment. I am required to evaluate the risks of possibly creating a health or environmental hazard and must design systems accordingly.

To provide sewerage service to either of these lots, I strongly feel that a holding tank with a solid maintenance plan is by far the best solution to allow responsible development of these lots. I have successfully used holding tank designs throughout the Okanagan, including within RDOS for several properties in the Tulameen area. (Samples attached).

The process to acquire a permit from Interior Health includes proof of a pump and haul contract, a valid and responsible engineering design, rational as to why on-site effluent dispersal is not a viable option and an operating plan. (See attached).

These subject lots were recently purchased with the understanding that a cottage with plumbing could be constructed as the lots are zoned accordingly. I understand that RDOS has Bylaws that restrict the use of holding tanks. Passing a variance to allow a more responsible solution to effluent discharge, in this case, is the right thing to do in my professional opinion.

Onsite treatment and discharge of sewage effluent on these lots pose a very high risk of creating a health and/or environmental hazard. I want to use holding tanks for these lots because I believe it is the safest solution.

If you have any questions or require additional information, please contact the undersigned.

Sincerely yours,



C. Jeffrey Oland, P. Eng.

22-036

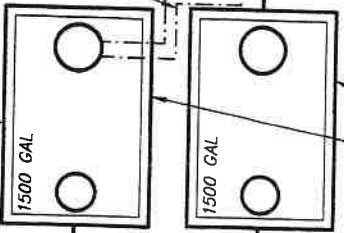
ON-SITE SEWERAGE SYSTEM FOR:
4545 Mill L Road, Naramata, BC

MILL ROAD

38mm CONDUITS FOR ALARM WIRING. 75% ALARM PANEL TO BE LOCATED WITHIN HOME, AND THE 90% PANEL TO BE LOCATED OUTSIDE ON HOME

21.3

1.0m



100mm (4") PVC

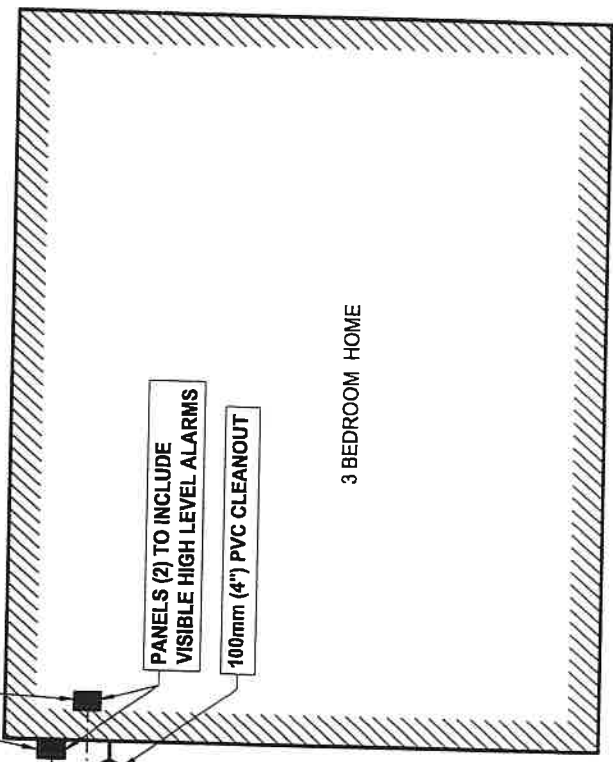
100mm (4") PVC CLEANOUT

13.7

2 x 6800L (1500 GAL) H2O RATED SINGLE-CHAMBERED SEPTIC TANKS c/w POLYLOK LIDS & CAST IRON FRAME & COVERS (H2O LOADING RATED). ACCESSIBLE OPENINGS TO SERVE AS PUMPOUT PORTS (SEE DETAIL PAGE)

PANELS (2) TO INCLUDE VISIBLE HIGH LEVEL ALARMS

100mm (4") PVC CLEANOUT



3 BEDROOM HOME

13.7

LOT 21



LOT 22

LOT 23

20.6

RETAINING WALL

OKANAGAN LAKE



1 SITE PLAN
SCALE: 1:100



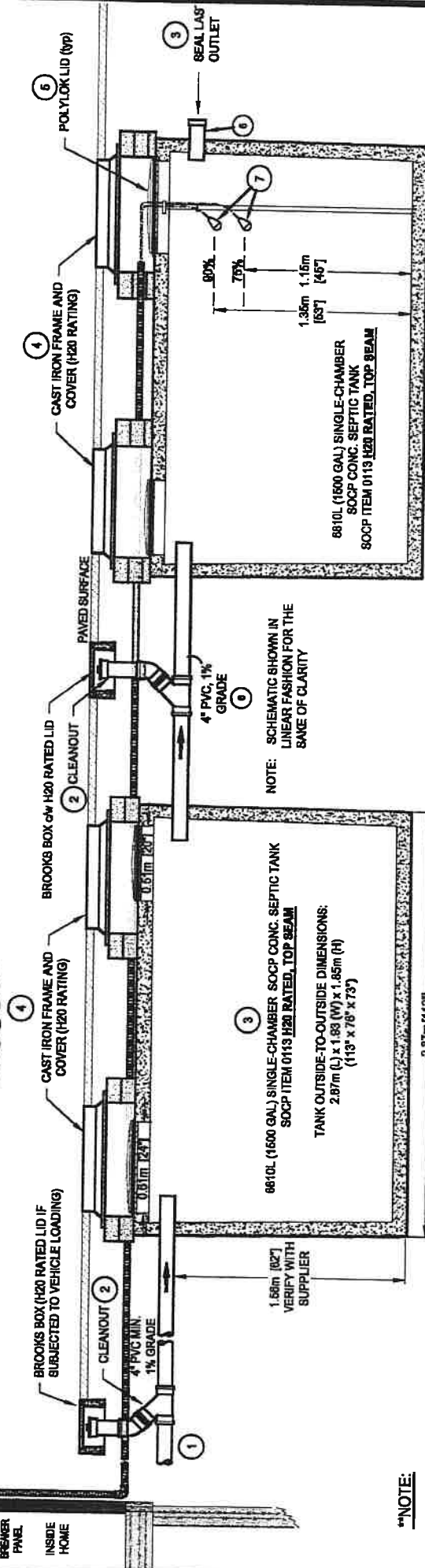
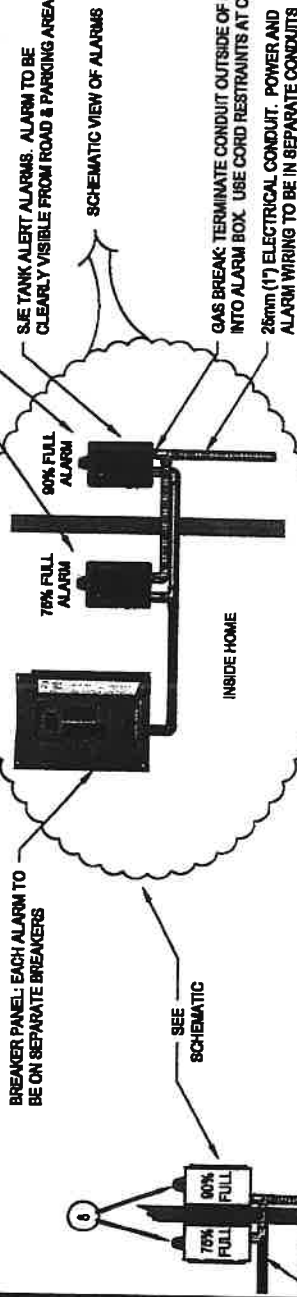
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Aug. 10 2022



C. JEFFREY OLAND, P.ENG.

22-069-Hirtz-SITE PLAN

**ON-SITE WERAGE SYSTEM FOR:
4545 MILL ROAD, NARAMATA, BC**



1 HOLDING TANKS DETAIL
SCALE: 1:40

MATERIALS LIST

1. COMPACT ALL BACKFILL AROUND TANK AND UNDER PIPE IN MAX. 300mm LIFTS
2. SCHEMATIC SHOWN IN LINEAR FASHION FOR CLARITY
1. 100mm (4") ABS OR PVC SEWER OUTLET AS SPECIFIED BY THE B.C. PLUMBING CODE MIN. 1% GRADE, MAX. 45° BENDS BED AND COMPACT UNDER ALL PIPING
2. 2 x 100mm (4") CLEANOUTS. HOUSE WITH BROOKS UTILITY BOXES, c/w (H20 RATED LIDS)
3. 2 x 6810L (1500 IMP. GAL.) SINGLE-CHAMBERED CUSTOM H-20 LOAD RATED SEPTIC TANKS (SOCP PRECAST ITEM 113 SHOWN)
4. 4 x C.I. FRAME AND COVERS, c/w LIDS WITH 0.8m (24") OPENINGS, PLUS GRADE RINGS TO BRING TO PAVED SURFACE ELEVATION
5. 2 x 51cm (20") & 2 x 60cm (24") POLYLOK LIDS
6. ~7m OF 100mm (4") PVC TO CONNECT TANKS AND CLEANOUTS. AT FINAL TANK OUTLET, SEAL PIPE TO PREVENT LEAKAGE
7. 2 x SJE SINGLE MASTER FLOATS c/w 15" CORDS
8. 2 x SJE RHOMBUS TANK ALERTS TO DETECT 76% & 90% FILL LEVELS. (TAXT-01H OR AS RECOMMENDED BY SUPPLIER). EXTERNAL ALERT TO BE SUITABLE FOR OUTSIDE MOUNTING

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22-069-Hirtz-DETAIL