

Rezoning FILE: 3360-22 2022-01

DATE: Feb 2, 2024

CIVIC ADDRESS: 43837, 43873 Lougheed Highway

CURRENT ZONE: R-3

PROPOSED ZONE: CD

In accordance with the Fraser Valley Regional District Subdivision and Development Servicing Bylaw No. 1319-2015, the Developer shall provide the following works and services prior to having the zoning amendment bylaw approved. These requirements are with respect to sanitary sewer servicing only and are meant to be high-level. All proposed works shall undergo detailed technical review prior to acceptance. Please note that the FVRD reserves the right to add additional requirements to this letter if necessary.

WASTEWATER TREATMENT PLANT DESIGN POPULATION:

The Wastewater Treatment Plant (WWTP) shall be designed to ultimately service the proposed development on 43837, 43873 Lougheed Highway (Harrison Rise), Sq'ewlets First Nation (SFN) as well as the existing Lake Errock Community. The WWTP may be phased as follows:

- Phase 1 includes the entire Harrison Rise development and the current SFN community.
- Phase 2 future SFN Development (SFN Economic Development)
- Phase 3 existing Lake Errock Community

The Applicant has proposed to complete the design flow calculation is based on the BC Standard Practice Manual (SPM) which is considered being the standard practice in BC for onsite municipal treatment plant design. The proposed Maximum Daily Flow to Average Daily Flow peaking factor is 2. The FVRD has reviewed this approach and considers it acceptable for this application.

MUNICIPAL WASTEWATER REGULATION REGISTRATION:

The Applicant shall complete an Environmental Impact Study (EIS) in support of the registration of the WWTP under the Municipal Wastewater Regulation (MWR). It is anticipated that the MWR registration will require the WWTP to produce a Class A effluent as well as meet the reliability category II. MWR redundancy requirements must be met at each phase of development. Prior to adoption of the zoning amendment bylaw the MWR registration must be in place.

WASTEWATER TREATMENT PLANT:

HEADWORKS

The Headworks shall include mechanical screening and grit removal. Screenings and grit are to be disposed of at a landfill. Processes that create/rely on the need to pump and haul primary septage/sludge are not acceptable. The Headworks shall be initially sized and built to service the ultimate design population.

PRIMARY/SECONDARY TREATMENT

Sequencing Batch Reactors (SBRs) are the FVRD's preferred treatment process as they are robust, simple to operate and are a technology that is successfully employed at other FVRD WWTPs. Either a true batch or continuous flow SBR is acceptable. While the detailed design shall consider the ultimate design population, only the Phase 1 SBR process mechanical equipment is required to be installed at this time. The required concrete tankage (SBR tanks and equalization tank) must be designed and built for the ultimate design population.

TERTIARY FILTRATION

SBR effluent quality will not reliably meet Class A requirements for total suspended solids and turbidity. Therefore, effluent tertiary filtration will be required after the SBR. While the detailed design shall consider the ultimate design population, only the Phase 1 tertiary filtration process mechanical equipment is required to be installed at this time.

DISINFECTION

While the detailed design shall consider the ultimate design population, only the Phase 1 disinfection process mechanical equipment is required to be installed at this time.

SOLIDS HANDLING

The FVRD requires a solids handling facility at either the WWTP to be built to service the Harrison Rise development or the Harrison Mills Neighbourhood. There are no facilities available locally that will accept Waste Activated Sludge, however, there are local options available for the disposal of Class B biosolids. Therefore, sludge stabilization and dewatering that produces a Class B biosolid is required. Whichever development proceeds first (Harrison Rise or Harrison Mills) shall be required to design and construct the solid handling facilities with the other development to pay a latecomer fee for the excess capacity built for their benefit. While the detailed design shall consider the ultimate design population, only the Phase 1 sludge digestion and dewatering process mechanical equipment is required to be installed at this time. The required concrete tankage for sludge digestion must be designed and built for the ultimate design population.

ODOUR CONTROL

The WWTP shall be equipped with an odour control system capable of reducing odour at the property line to less than 5 OU/m³ based on a one hour averaging period with 98.5 percentile compliance.

BUILDING

With the exception of the SBR and Digester Tanks, all other mechanical processes shall be housed inside the WWTP Building. The structure shall be built from pre cast or cast in place concrete or concrete masonry units. The building shall be designed and built to service the ultimate design population.

ELECTRICAL POWER AND CONTROLS

The electrical service and backup power supply shall be designed and built to service the ultimate design population. The WWTP's process equipment's PLC shall be integrated with the FVRD's SCADA system. The headworks/screening facility shall be provided with ventilation to reduce the room classification to Class 1 zone 2. All other spaces shall be designed and ventilated to be unclassified spaces.

RAPID INFILTRATION BASINS

Treated effluent shall be disposed of into Rapid Infiltration Basins (RIBs). Only the Phase 1 RIBs are required at this time, however, the site shall be graded and prepped for the RIBs required for the ultimate design population.

SANITARY SEWER COLLECTION SYSTEM REQUIREMENTS:

The applicant shall be responsible to design and construct a sanitary sewer connection to SFN.

Additionally, the applicant shall provide a sanitary servicing plan for the future connection of the existing Lake Errock Community. The applicant must demonstrate the feasibility of this plan by confirming the ground conditions at the proposed crossing locations of the Lougheed Highway and CP Railway Line.

LATECOMERS:

As a benefit to the Lake Errock Community, the Applicant shall waive its right to impose latecomer fees on all of the above works, with the exception of the solids handling facilities (sludge digestion and dewatering). Costs for excess solids handling capacity may be recovered from the development under the Harrison Mills Neighbourhood Plan.

SERVICE AREA FINANCIAL SUSTAINABILITY:

The sanitary sewer servicing for this development requires the creation of the local service area for the provision of sewage collection, treatment and disposal. This local service area must be proven to be financially sustainable. This analysis should consider annual operating costs as well as asset renewal costs and should be evaluated from the time the service area is established through to its build out.

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