



Staff Report to Council

DATE: Monday, January 16, 2023

DEPARTMENT: Engineering

SUBJECT: Luxton Road Stormwater Improvement Storm DCC Project

BACKGROUND:

In 2020, a portion of the Luxton Road drainage ditch (also known as Firehall Creek and then south of Lippincott Road as Bilston Creek) had a partial bank collapse. This resulted in a large tree coming down which in turn knocked over hydro wires and blocked the road. As a result, staff undertook a detailed investigation of the length of the Luxton Road drainage ditch/creek system from Marwood south to the South Vancouver Island Rangers location. Staff worked toward a design to provide more resilience to this system to prevent future bank failures from occurring. In 2021, the development at the corner of Luxton Road and Sooke Road, and now bounded by the Chidlow Connector Road, installed several large concrete culverts for driveway access which allowed the banks at those locations to be well stabilized.

In 2022, staff had budgeted to stabilize the road edge side only of the drainage ditch from Marwood south to approximately Finney Road. However, when the project went to tender in the late Spring of 2022, there were no bidders for the project.

The purpose of this report is to seek Council approval to tender this work again, but in January/February of 2023 well in advance of when the project would occur in the summer of 2023. Staff believe tendering much earlier in the year should result in the City getting bids on the project this time around.

COMMENTARY:

The project scope includes, the drainage ditch being rehabilitated and supported by a sandbag style wall (Flex MSE or mechanically stabilized earth wall) that allows vegetation to grow on its face. It will be important that vegetation be appropriate to the site conditions, and not grow so much as to block the flow of water in the ditch.

The bags are filled with gravel and high quality organic material and are closed up prior to installing them. A photo of a typical MSE installation is shown below.



Typical MSE Installation

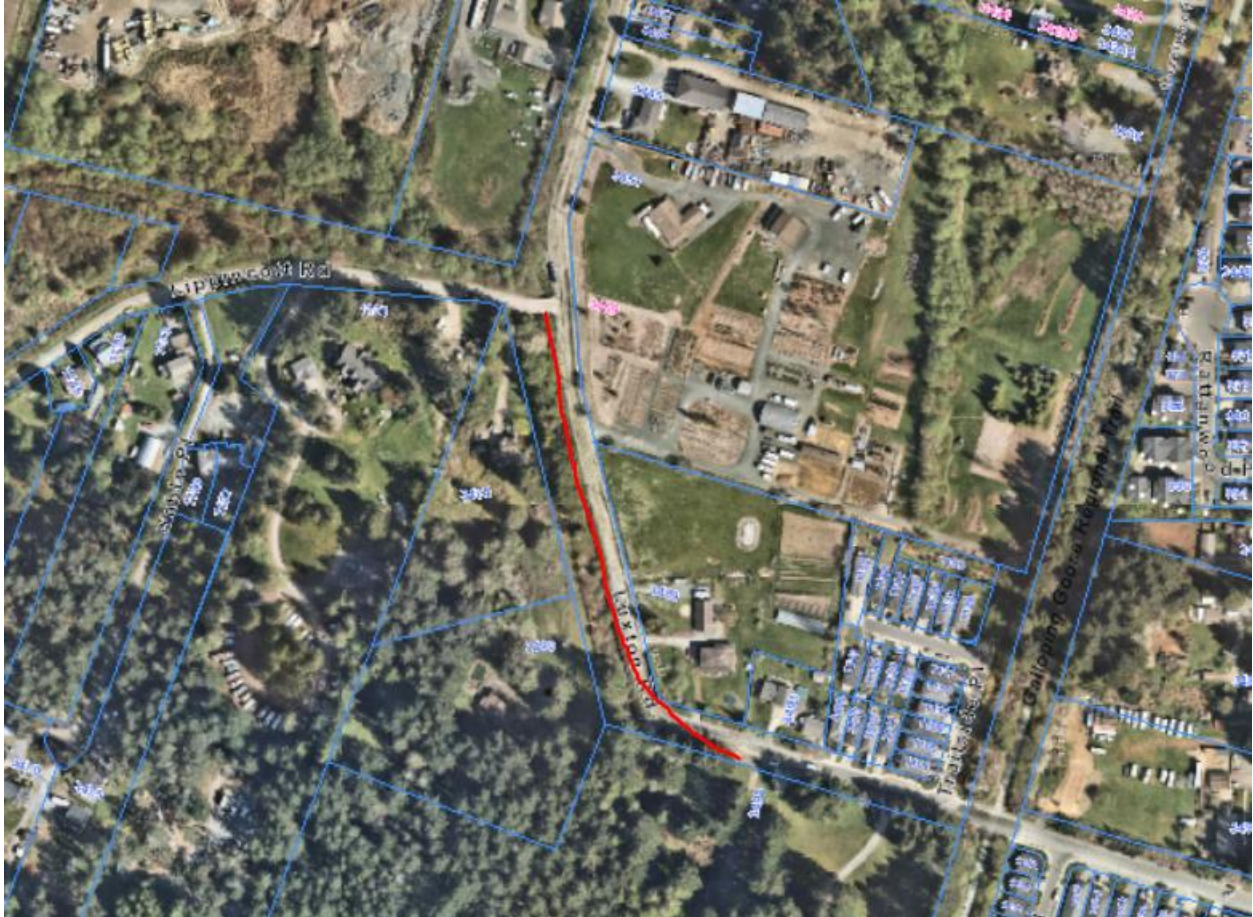
The original project, tendered in 2022, was slated for Marwood Road south to Finney Road. This area was chosen since it is the beginning of the upstream area of the Creek. Starting at the upstream end was intended to rehabilitate and improve capacity upstream to downstream in a series of projects over several years based on available budget.

Since BEEDIE has now installed several new concrete culverts in the upstream area, the culverts have reduced the vulnerability in the upstream area between Englewood and Marwood Avenues; therefore, staff are suggesting that the 2023 project concentrate on the area from Lippincott Road south to the Ranger's Station, which was the area that failed in 2020.

The project will focus on the road edge side of the ditch/creek to retain the City's road. As outlined above the focus area is the former area that failed and was temporarily shored up when it was discovered.

The project focus area is shown below.

Project Focus Area: Lippincott Road to the Ranger Station at 3498 Luxton Road.



A Qualified Environmental Professional and a Geotechnical Engineering firm will be involved in the permitting requirements, detailed design, and construction of this project.

The project must be completed in the Fish Work window which is generally July 15th to September 15th in this region.

FINANCIAL IMPLICATIONS:

The Luxton Road Stormwater Improvement project is included in the Storm Development Cost Charges (DCCs) program. Staff propose to do approximately \$500,000 of work in 2023 to spread the costs over several years as necessary based on ditch conditions. The value of the project is the approximate amount of funding in the current Stormwater DCC reserves.

LEGAL IMPLICATIONS:

All work will take place within City owned road right of way.

OPTIONS:

Option 1

THAT Council direct staff to tender the Luxton Road Stormwater Improvement Storm DCC Project in January/February 2023 and approve the inclusion of the project in the 2023-2027 Five Year Financial Plan to be funded by Stormwater DCCs.

OR Option 2

THAT Council not direct staff to tender the Luxton Road Stormwater Improvement Storm DCC Project at this time.

SUBMITTED BY: Michelle Mahovlich, P.Eng, P.Geo, Director of Engineering and Public Works

Concurrence: Donna Petrie, Senior Manager of Business Development and Events

Concurrence: Will Ying-udomrat, Manager of Legislative Services

Concurrence: Matthew Baldwin, MCIP, RPP, Director of Planning and Subdivision

Concurrence: Kevin Bowbyes, ASCT, Deputy Director Engineering Public Works

Concurrence: Michael Dillabaugh, CPA, CA, Director of Finance

Concurrence: Marie Watmough, Deputy Director of Corporate Services

Concurrence: Braden Hutchins, Director of Corporate Services

Concurrence: Darren Kiedyk, Chief Administrative Officer