

NO:

COUNCIL DATE: **September 9, 2013**

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **September 5, 2013**

FROM: **General Manager, Engineering**

FILE: **6520-20 (Fleetwood Enclave)**

SUBJECT: **Engineering Servicing Strategy and Related Financial Strategy for the Fleetwood Enclave Neighbourhood Concept Plan**

RECOMMENDATION

The Engineering Department recommends that Council:

1. Receive this report for information;
2. Approve the engineering servicing strategy and the related financial strategy as generally described in this report and as documented in the Appendices attached to this report related to the Infill Area Concept Plan for the Fleetwood Enclave Neighbourhood, all for the purpose of managing the provision of engineering services in support of development in this Area; and
3. Authorize staff to include in the Engineering Department's 10-Year (2012-2021) Servicing Plan the Development Cost Charge (DCC)-eligible transportation infrastructure services as documented in Appendix VII attached to this report.

INTENT

The purpose of this report is to provide an overview of the engineering servicing strategy and related financial strategy in support of development in the Infill Area Concept Plan for the Fleetwood Enclave Neighbourhood.

BACKGROUND

Council approved the Fleetwood Enclave Infill Area Concept Plan at its Regular meeting on March 11, 2013 (R049; 2013). Since that time, specific strategies for the provision of roads, water, sewer and drainage (i.e., a servicing strategy) have been developed for the Area.

DISCUSSION

A copy of the Fleetwood Enclave Area Servicing Strategy is attached as Appendix I to this report. The following sections of this report provide a brief synopsis of the strategy for each of the engineering services covered by the Strategy.

Water

The Plan Area is located within the servicing area of the Whalley Pump Station and is serviced by water distribution mains on 155 Street and 156 Street. The Whalley Pump Station and the existing distribution mains have sufficient capacity to meet the peak hour demand and fire flow requirements at build out of development in the Plan Area. As the Plan Area is developed, water mains will need to be extended to service new homes in the area. These mains will follow the local road network in the Area. A map that illustrates the proposed water main network in the Area is attached to this report as Appendix II.

No off-site water system improvements are necessary to service development in the Plan Area.

Sanitary Sewer

Properties fronting 156 Street in the Plan Area are connected to the City's sanitary sewer system, which has sufficient capacity to receive flows generated by the build out of development in the Plan Area. The properties fronting 155 Street in the Plan area are not currently connected to the City's sanitary sewer system but rather are currently serviced with private on-site septic systems. These properties when they are developed will be serviced by local sewers that will follow the local road network and that will connect to the existing sanitary sewer system within the Plan Area. A map that illustrates the proposed sanitary sewer network in the Plan Area is attached to this report as Appendix III.

No off-site sanitary sewer system improvements are necessary to service development in the Plan Area.

Stormwater

The Plan Area has three (3) stormwater catchment areas as illustrated in Appendix IV. There is no existing stormwater infrastructure in Catchment Area A. Catchment Area B is serviced with existing road-side grass ditches, and Catchment Area C is serviced by a storm sewer on 156 Street. Each of the catchment areas drains to the south to outfalls and ditches that ultimately convey flows downstream to Bear Creek or Surrey Lake to the south.

Local storm sewers will need to be constructed in each of these Catchment Areas that will follow the local road network and connect to the existing stormwater system within the Plan area.

A map that illustrates the proposed stormwater network is attached to this report as Appendix IV.

No off-site stormwater system improvements are necessary to service development in the Plan Area.

The existing storm sewer on 156 Street, south of 78A Avenue, has sufficient capacity to service planned future demands but may need to be lowered if new homes fronting 156 Street in this section are to have in-ground basements.

In alignment with the Sustainability objectives of the City's Sustainability Charter and the Official Community Plan (OCP) stormwater management-related sustainability measures will be required in new development in the Plan Area. Development in Plan Area will be required to provide 450 mm of absorbent topsoil on all landscaped areas for on-lot infiltration and on boulevards to allow for stormwater exfiltration along roads and on City lands such as parks and greenways.

Such infiltration measures have been successful in other NCPs, such as East Clayton and Morgan Heights.

Impacts on the Serpentine and Nicomekl Lowlands Flood Control Project

With the above-described on-site mitigation measures in place, stormwater generated by development in the Plan Area will not negatively impact the City's lowlands. This is in compliance with the Serpentine and Nicomekl Lowlands Flood Control Project that includes flood control standards based on the Agri-Food Regional Development Subsidiary Agreement (ARDSA) criteria.

Transportation

The proposed transportation infrastructure for the Plan Area includes a grid road system that takes into account efficient development of properties, environmental protection, and greenway connections. The transportation network for the Plan Area is based on the guiding principles contained in the City's Transportation Strategic Plan as listed below:

- Effective and efficient management of the road network;
- Travel choices;
- Safe, healthy communities;
- Successful local economies;
- Protection of the built and natural environments; and
- Transportation integration.

A map that illustrates the proposed road network to service build out of the Plan Area is attached to this report as Appendix V.

Walking & Cycling

The proposed road network provides for walking and cycling throughout the Area. Roads with unique cross sections are planned for adjacent to Fleetwood Park and the Eaglequest (Coyote Creek) Golf Course. All other roads in the Area are designed to provide sidewalks on both sides, separated from traffic by boulevards that will accommodate street trees. The walking and cycling network in the Plan area will be complemented by the continuation of Surrey Lake Greenway on 156 Street, which connects to both the Fleetwood Greenway and the southern end of the Guildford Greenway. All of the local roads will be bike-friendly. The 156 Street collector road will have on-street bicycle lanes. The network of pathways and the infrastructure within the public road system will provide good routes for walking and cycling within the Plan Area and to and from adjacent communities.

A map that illustrates the proposed walking and cycling plan for the Plan Area is attached to this report as Appendix VI.

Transit

While at this time there are no plans to bring transit service into the Plan Area, 156 Street and the possible future 76 Avenue will be designed to accommodate transit service. Development in the Plan Area will have walking access to the transit services provided on 152 Street through Surrey Lake Park.

General Purpose Traffic / Vehicles

The road network for the Plan Area is designed to provide route options and circulation for all modes within the Plan area. It will distribute traffic volumes relatively evenly across the streets in the neighbourhood to minimize potential traffic impacts on any particular street.

On-street parking will be provided for on both sides of most of the streets within the Plan Area. Unique cross sections have been developed for the streets adjacent to Fleetwood Park and to complement the planned wildlife corridor along 77 Avenue.

Integration with Adjacent Transportation Networks

The Plan Area currently has limited transportation access and connectivity with the neighbouring communities. It is bordered by the Eaglequest Golf Course to the west, Fleetwood Park to the east and agricultural land to the south. Access to development in the Plan Area will be by way of 156 Street, which connects with 82 and 84 Avenues further to the north. In the future an extension of 76 Avenue from the Plan Area to 152 Street has been identified should redevelopment of the golf course occur.

Off-Site Transportation Improvements

A traffic analysis was completed to determine the impact to the external road network related to build out of development in the Plan Area. The study concluded that network improvements were attributable to broader background traffic growth and not development in the Plan Area.

In 2014 roundabouts are expected to be constructed at the intersection of 82 Avenue and 156 Street and at the intersection of 82 Avenue and 160 Street. These would be constructed regardless of the level of development in the Plan Area.

Financial Analysis

A comprehensive financial analysis was completed in support of the above-described engineering servicing strategy. The following table provides a summary of the Development Cost Charge (DCC) revenues that are expected to be generated from development in the Plan Area and the construction costs for the infrastructure projects that are necessary to service build out development in the Plan Area.

Services	Estimated DCC Revenues	DCC-Eligible Costs Attributable to the Plan Area	DCC Revenues Available to Projects Outside the Plan Area
Stormwater	\$950,000	\$0	\$950,000
Water	\$450,000	\$0	\$450,000
Sanitary Sewer	\$590,000	\$0	\$590,000
Non-arterial roads	\$610,000	\$360,000	\$250,000
Arterial Roads	\$2,800,000	\$686,000	\$2,114,000

The estimated DCC revenues are based on the DCC rates that came into effect on March 15, 2013, and include the related DCC municipal assist factor for each utility.

Appendix VII attached to this report lists the transportation infrastructure projects within this NCP that are eligible to be included in the 10-Year Servicing Plan and their DCC-eligible cost component. As the DCC revenues expected to be collected from development within the Plan Area can support the funding of these projects, it is recommended that these projects as listed in Appendix VII be included in the 10-Year (2012-2021) Servicing Plan.

CONCLUSION

The engineering infrastructure as described in this report will support the build-out of development proposed in the Plan Area. The financial strategy as proposed is consistent with the “development-pay” principle, which requires each Neighbourhood Concept Plan to be financially self-sufficient.

Based on the above discussion, the Engineering Department recommends that Council:

- Approve the engineering servicing strategy and the related financial strategy as generally described in this report and as documented in the Appendices attached to this report related to the Infill Area Concept Plan for the Fleetwood Enclave Neighbourhood, all for the purpose of managing the provision of engineering services in support of development in this Area; and
- Authorize staff to include in the Engineering Department’s 10-Year (2012-2021) Servicing Plan the Development Cost Charge (DCC)-eligible transportation infrastructure services as documented in Appendix VII attached to this report.

Vincent Lalonde, P.Eng.
General Manager, Engineering

LCH/JA/brb

Appendix I - Servicing Strategy
Appendix II - Map of Proposed Water Network
Appendix III - Map of Proposed Sanitary Sewer Network
Appendix IV - Map of Proposed Stormwater Network
Appendix V - Map of Proposed Road Network
Appendix VI - Map of Proposed Walking and Cycling Network
Appendix VII- 10 Year Servicing Plan Projects

10 Year Servicing Plan Projects

The projects listed in the following tables are proposed to be included into the 10-Year Servicing Plan.

Transportation – Arterial Roads

Project	Project Cost	Growth Cost Component (DCC)
152 Street / 82 Avenue: Install a new westbound right turn lane within the existing right-of-way	\$150,000	\$150,000
152 Street / 84 Avenue: Widen 84 Avenue to accommodate dedicated westbound and eastbound through lanes on the approaches to 152 Street	\$520,000	\$520,000
152 Street / 84 Avenue: Lengthen the westbound left turn storage lane to 75m	\$16,000	\$16,000

Transportation – Non-Arterial Roads

Project	Project Cost	Growth Cost Component (DCC)
156 Street: 76A Avenue to 80 Avenue: Upgrade 156 Street to collector status	\$2,500,000	\$360,000