



Corporate Report

NO: C016

COUNCIL DATE: September 12,

2005

COUNCIL IN COMMITTEE

TO: **Mayor &
Council** DATE: **August 10,
2005**

FROM: **General Manager,
Engineering** FILE: **6520-20
(NCP#1)**

SUBJECT: **Grandview Heights #1 Neighbourhood
Concept Plan (NCP), Engineering and
Financial Strategies**

RECOMMENDATION

1. That Council adopt the engineering servicing and financial strategies as outlined in this report and as specified in the Grandview Heights #1 NCP Servicing Report, as a means of managing engineering services for this neighbourhood.
2. That the DCC eligible infrastructure items for water, drainage, and transportation services in this report be added to the 10 year plan.
3. That the DCC eligible items for sanitary sewer be added to the 10 year plan in conjunction with a development works agreement for the financial shortfall.

INTENT

The purpose of this report is:

1. To provide Council with an overview of the engineering servicing and financial strategy for the Grandview Heights #1 Neighbourhood Concept Plan (NCP).
2. To provide Council with a brief of the comprehensive engineering servicing report as prepared by Aplin & Martin Consultants Ltd.

BACKGROUND

Council approved in principle the Proposed Land Use Concept Plan for the Grandview Heights #1 NCP Study Area on May 2nd, 2005. A number of engineering and financial issues were to be resolved as part of the Stage 2 Grandview Heights #1 NCP report. The Grandview Heights #1 NCP – Stage 2 has now been completed based on the Proposed Land Use Concept Plan.

DISCUSSION

An engineering servicing analysis and financial plan for the Grandview Heights #1 NCP has been completed. This full report which includes detailed engineering analysis, services layout and financial analysis, is available in the Engineering Department.

Only those works which could be added to the Development Cost Charge (DCC) program, such as major trunk sewer and water grid mains, major collector and arterial roads and major stormwater management infrastructure, are discussed in detail in the report. The report does not deal with localized site servicing as they are the requirements of individual developments and need to be done in conjunction with their application.

Sanitary Sewer

Most of the NCP area is currently serviced by septic field systems. The proposed Grandview Height Interceptor, running from 152 Street to 172 street along the 40 to 62 metre contours (north 28 Avenue), as shown in the attached Figure 1, will service areas south of the Interceptor up to the ridge south of 24 Avenue. An upgraded Morgan Creek Sanitary System will service the areas north of this Interceptor and west of 168 Street.

The design and acquisition of the right-of-way for the Phase One of the Interceptor, west of 160 Street has been initiated. The right-of-ways for the remaining sections of the Interceptor will be secured during the development application stage. The City is currently extending the Rosemary Height Pressure Sewer along Highway 99 from 36 Avenue as part of its overall sewer capacity upgrading works which will also provide for the necessary connection of the Interceptor at 32 Avenue.

The proponent for this NCP or the North Grandview Heights Amendment NCP proponents will be required to front end the construction of the Interceptor from 152 Street to 160 Street before development can proceed.

Water

The NCP area lies within two separate pressure zones. Water supply to the 142m pressure zone is currently provided from the existing Grandview Pump Station. While the station has sufficient capacity to service the existing properties, it does not have the capacity to service the proposed developments. A new Grandview Pump Station is currently under detailed design and is targeted to be constructed in 2006/2007 to provide water supply capacity for the overall South Surrey area including Campbell Heights. Once completed, the new pump station will be able to supply water to the proposed NCP. A 600mm feeder main along 24 Avenue is required to convey water from the reservoir to the NCP area. A network of major grid and local mains will be required. Water mains will be looped to provide fire flows and improve water quality as shown in Figure 2.

Water supply to the 110m pressure zone does not have sufficient capacity to service the proposed NCP. A new 600mm gravity feeder main along 24 Avenue and 160 Street is required to service the NCP and other areas.

Transportation

The major road network substantially exists within the NCP area to interim conditions. The reclassification of 160 St to Arterial Road status was endorsed during the Stage 1 Corporate Report. Funding for the upgrading of the major road network is provided for as part of this NCP's Infrastructure Financing. The proposed transportation network is shown in figure 3.

The road network for the NCP has been based on the principles of improved development sustainability. The NCP has proposed to generally utilize the City's neo-traditional road standards, modified where necessary to support sustainability principles. At the time of development, it may be considered to further modify these road standards to achieve further sustainability elements subject to the review and approval of all approving agencies. Additional cross-section review may be required to address 164 Street in consideration of preserving mature trees within the road allowance.

The NCP includes a comprehensive traffic calming plan and road pattern that will support traffic management best practices. In addition, the neighbourhood design promotes bicycle and pedestrian circulation in keeping with the planning vision.

Drainage

This NCP drains to four creeks: Morgan Creek, Wills Brook, April Creek, and a minor creek. These drain to

the lowlands of Old Logging Ditch a tributary to the Nicomekl River. The current study will address the impacts associated with increased densities on both the creek systems and the lowlands.

The individuals development with this NCP will use a combination of source controls including but not limited to infiltration gardens, rainwater detention, supplemental topsoil, and permeable pavement, along with diversion systems to control increases in storm runoff flows and total volume. These measures will reduce the erosion in the tributary creeks and control the potential for lowland flooding.

Improvements to the Old Logging Ditch lowland drainage system proposed in the Old Logging Ditch Functional Plan are adequate to deal with the proposed land use changes. Some of the key components of infrastructure are shown in figure 4 and will need to be completed before development may proceed. These will be highlighted to proponents through the application process.

Parkland Acquisition

In keeping with its Parks Recreation and Culture Master Plan the City provides parkland on a population basis for the different park types. At present in Surrey parkland is categorized into five different types including: neighbourhood parks, community parks, city parks, nature preservation and linkages and urban forest. Community Parks and City Parks are provided on a community and citywide basis. It is anticipated that approximately \$15,000,000 is required to meet the overall parkland acquisition requirements of the Morgan Heights Neighbourhood Concept Plan (including both local and citywide parks). Development cost charges from this NCP will be utilized not only to acquire the neighbourhood parks shown in the land use concept plan but also to acquire community and city scale parks and nature preservation and linkages in adjacent locations. Land values change with market fluctuations so actual acquisition values will vary.

Development Phasing

The NCP report identifies that the area is anticipated to develop in three (3) phases over a projected timeframe of nine years.

The first phase will be dependent upon the construction of the following major infrastructure before development can occur.

- The first phase of Grandview Heights Interceptor Sanitary Sewer Trunk from approximately 32 Avenue and 152 Street to 28 Avenue and 160 Street.
- A low-pressure water main from the proposed Grandview Heights Reservoir along 24 Avenue to 160 Street and then north on 160 Street to 28 Avenue.
- Trunk storm sewer works north of this NCP on 160 Street and 32 Avenue including improvements to the lowland drainage system.

The construction of the above major works and services will allow the other phases to proceed and in turn finance subsequent phases of servicing as the market demands allow.

Financing

A comprehensive financial analysis is included in the NCP Amendment engineering report. The details of all the necessary DCC infrastructure have been identified and the costs are included.

The following table summarizes the projected DCC revenues and construction costs for each engineering service. The revenues are based on the current DCC by-law. Growth projections are based on the densities proposed in the NCP Amendment document for a total of 2343 units

Projected DCC Revenues and Expenditures at Buildout

Services	Projected DCC Revenue	Projected DCC Expenditures	Surplus/ (shortfall)
Water	1,754,400	943,200	811,200
Sanitary Sewer	1,873,200	3,218,900	(1,345,700)
Storm Sewer	3,372,200	3,160,300	211,900
Major Collector	2,110,800	617,800	1,493,000
Arterials	8,377,600	1,666,500	6,711,100
Park Acquisition	15,331,700	15,000,000	331,700

As shown in the table above, although there are surpluses for certain services, funding for sanitary sewer servicing has a significant shortfall in this NCP. Surpluses for roads and water are used to provide infrastructure to offset the impacts of growth external to the NCP area. Using the surplus in one service area to offset the shortfall in another is not consistent with Surrey's current DCC by-law as each service area has its own separate accounts and is funded on a City wide basis.

The shortfall in sanitary sewer servicing can be dealt with by applying an area specific charge in addition to the current DCC or by putting the burden of covering the shortfall on the first developer. The proposed charge would vary from land use to land use based on anticipated demand on the sewer system (this approach was used in developing the various DCC rates for each land use). The proposed charge would be equivalent to approximately \$740 for a single family home. A possible mechanism to create the area charge would be a development work agreement which has been used by developers successfully in other NCPs.

CONCLUSION

The infrastructure proposed in this report will support the land use proposed in the North Grandview Amendment Neighbourhood Concept Plan. The financial strategy proposed is in accordance with Council's policy respecting the developer-pay principle and requiring each NCP to be financially self-sufficient.

Paul Ham, P. Eng.
General Manager, Engineering

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