

Grandview Heights Area 4

Engineering Servicing, Transportation & Financial Analysis

Citizen's Advisory Committee
September 16, 2013

Summary

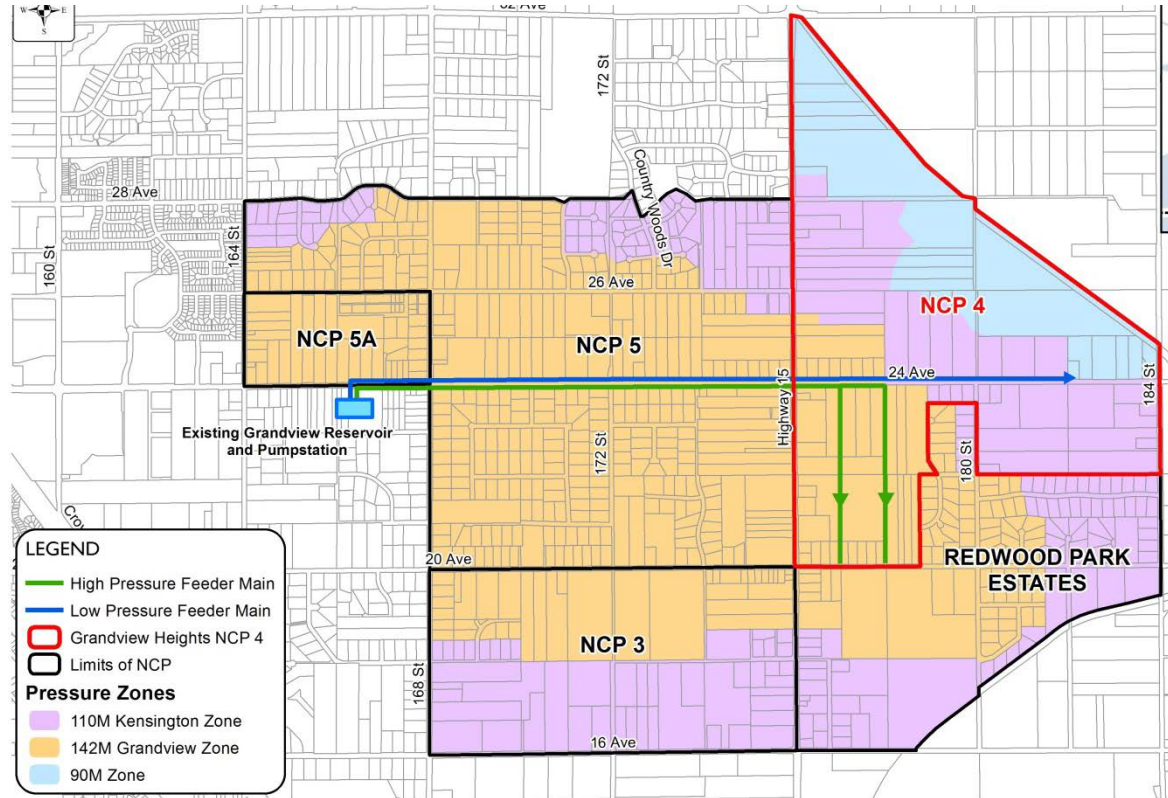
- Water Infrastructure
- Sanitary Sewer Infrastructure
- Stormwater Management
- Road Network
- Financial Analysis

Water Infrastructure

- Limited water infrastructure exists in the NCP area.
- New water supply points, distribution mains and feeder mains are required to service the NCP area.
- Due to the topography, three pressure zones are required:
 - 90m low pressure zone;
 - 110m medium pressure zone; and
 - 142m high pressure zone.

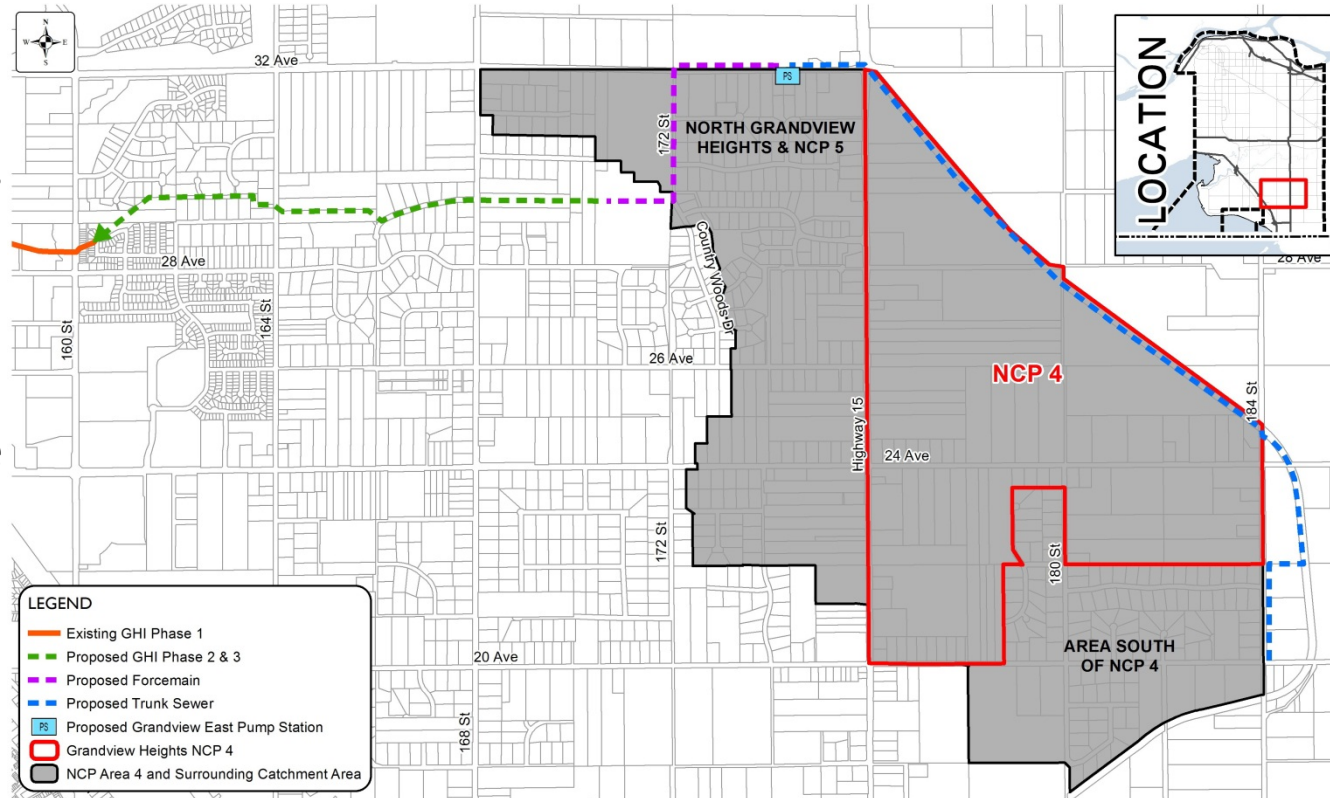
Water Infrastructure

- New feeder mains are required for the 142m and 110m pressure zones.
- **142m Zone** is supplied by Grandview Pump Station and Grandview Reservoir
- **110m Zone** is supplied by the Grandview Reservoir
- **90m Zone** is supplied by the 110m Zone via PRVs.



Sanitary Sewer Infrastructure

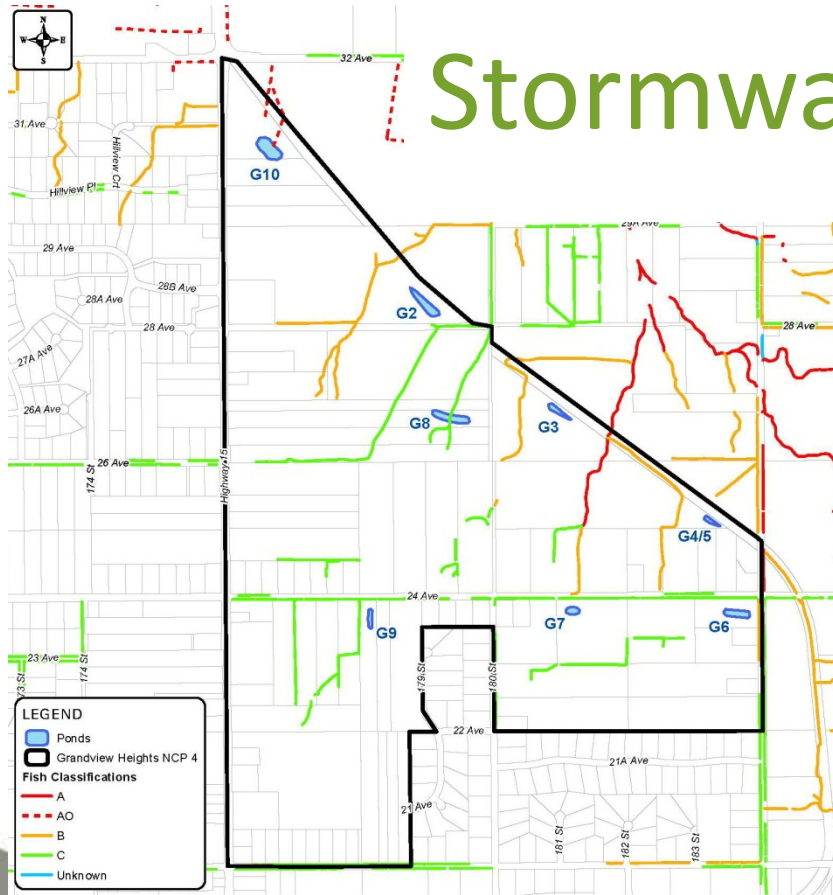
- No sanitary sewer infrastructure exists in the NCP area.
- A network of gravity sewers, a force main and pump station is required to service the NCP area.



Stormwater Management

- NCP area is currently serviced by a rural/agricultural system comprised of open ditches and culverts.
- System conveys stormwater to the Nicomekl River lowlands.
- A servicing plan has been developed to:
 - Protect downstream lands from prolonged flooding;
 - Protect receiving watercourses from erosion;
 - Maintain base flows in creeks;
 - Maintain water quality in creeks, ditches and storm systems;
 - Safely convey runoff to large river systems; and
 - Protect the natural environment adjacent to watercourses.

Stormwater Management



- The primary measures to satisfy the stormwater objectives developed for the NCP area is through 8 stormwater management ponds.
- To mitigate the increase in impervious surface runoff, infiltration measures are required, such as:
 - pervious pavement;
 - absorbent lawns; and
 - vegetated buffer strips.
- To help maintain water quality, the follow BMPs are recommended:
 - Inlet sumps;
 - oil-water separators; and
 - water quality swales.

Road Network

- Well-connected grid street network.
- 200m x 100m blocks promote walking and cycling within the NCP.
- Full movement access to NCP from Hwy 15 and 24 Avenue.
- Special street types:

Commercial High Street

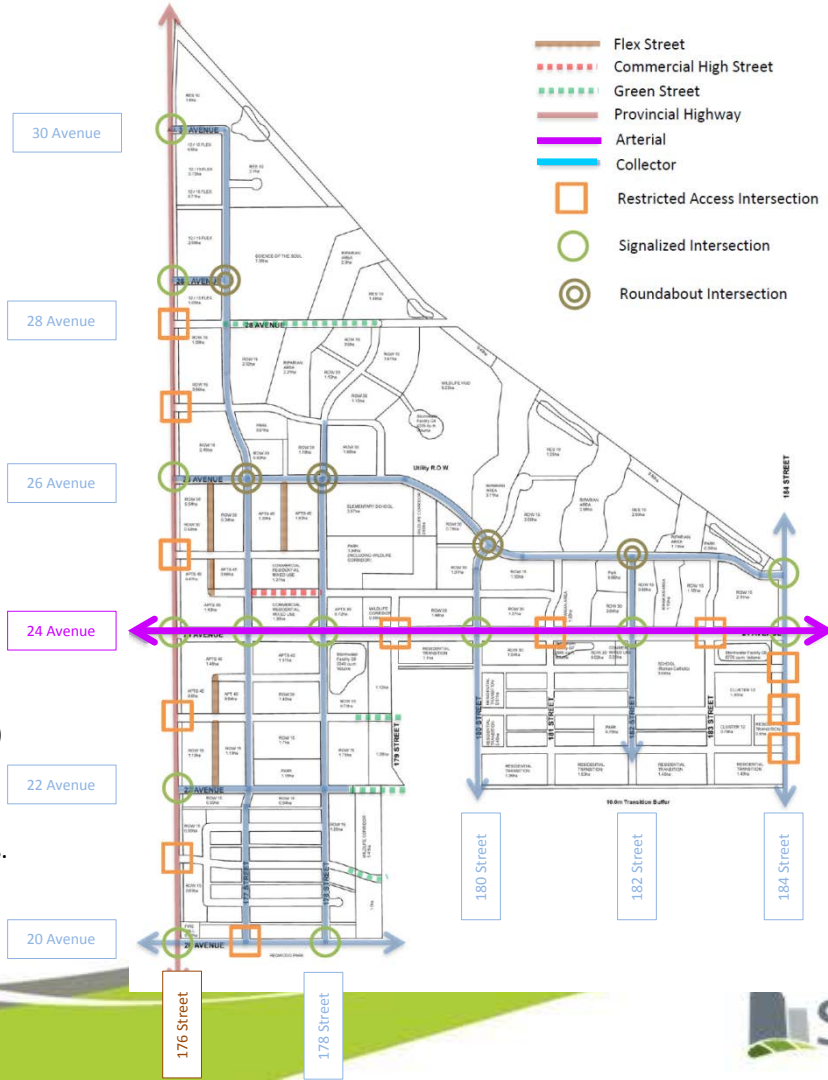
Angled parking and expanded boulevards for commercial area.

Green Streets

Reduced road right-of-way (no parking and/or bike lanes) at wildlife corridor or fish-bearing channels.

Flex Streets

Slightly reduced road right-of-way in higher density areas.



Financial Analysis

Service	Estimated DCC Revenues	DCC-Eligible Costs Attributable to the NCP	DCC Surplus/Shortfall
Sanitary Sewer	\$7,790,000	\$22,260,000	-\$14,470,000
Water	\$31,060,000	\$13,770,000	\$17,290,000
Drainage	\$6,790,000	\$36,240,000	-\$29,450,000
Non-Arterial Roads	\$7,660,000	\$4,160,000	\$3,500,000
Arterial Roads	\$32,800,000	\$48,850,000	-\$16,050,000

Financial Analysis

Land Use	Existing DCC Rate	Proposed Area Specific DCC Rate	Proposed as a % of Existing
SF (RF, RF-12, RFC)	\$27,053 / lot	\$48,147 / lot	178%
SF small lot (RF-9, RF-SD)	\$23,511 / lot	\$38,959 / lot	166%
RM-10, RM-15 & RM-30	\$15.73 /sq. ft.	\$24,55 / sq. ft.	156%
RM-45 & RM-70	\$17.31 /sq. ft.	\$25.55 / sq. ft.	148%
Commercial (ground floor)	\$9.37 / sq. ft.	\$20.69 / sq. ft.	221%

Financial Analysis

- The servicing requirements for the area result in a significant funding shortfall based on current City wide DCC rates.
- There are two common approaches available to address this shortfall.
 - Development Works Agreements. In this approach, developers undertaking works initiate a levy through a petition process to recover the funding shortfall on the infrastructure they install; and
 - Area Specific DCCs. In this approach, the City revises its DCC rates for this area thereby eliminating the need for developers to initiate a levy.
- Staff will be making recommendations on a preferred approach as part of the Stage 2 process.