Schedule F

March 30, 2017

Servicing of South Urban Expansion Annexation Executive Summaries

Water Executive Summary

In 2016 the City of Brandon retained Alliance Engineering Services Inc. (AESI) to conduct a water system capacity analysis for development within Southwest Brandon. The model prepared by AESI took into consideration existing demands along with new developments proposed for Southwest Brandon over the next 30 years. Utilizing Bentley WaterCAD and GIS contour data provided by the City, AESI concluded that by increasing pressure supplied by the existing pumping stations, to the levels they were originally designed for, there is sufficient capacity in the existing distribution network to support the proposed development within the urban expansion area which includes the proposed development within the annexation property.

Water service connection for the proposed commercial development shall be to the existing 300mm watermain that runs along Patricia Avenue (see figure below).

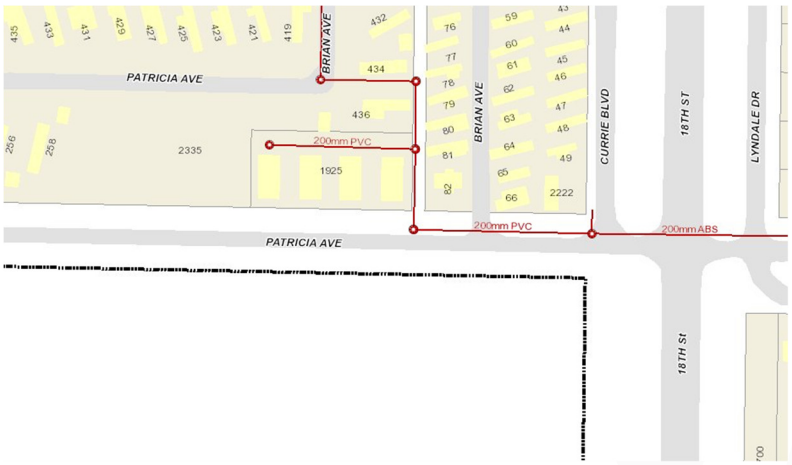
Executive Summary
Wastewater (Sanitary) Servicing

In 2013 the City of Brandon retained AECOM to conduct a wastewater system analysis for the South End Lift Station. In 2016 the City of Brandon retained AECOM to conduct a wastewater system analysis for Southwest Brandon. The 2016 AECOM analysis took into consideration existing wastewater flows along with new development flows proposed for Southwest Brandon over the next 30 years. Through the information provided from these studies it has been determined that there are both interim and ultimate servicing solutions for the proposed development within the annexation land.

Wastewater servicing Southwest Brandon can only be accomplished through investment into infrastructure. Initially, construction of a new lift station at 34th Street and Patricia Avenue and a new forcemain running from there to the South End Lift Station via Patricia Avenue and 1st Street is required (Stage 1). As development progresses and the South End Lift Station ceases to have any further capacity, a new lift station at 1st Street and Patricia Avenue will be constructed and the forcemain along Patricia Avenue will be extended east from 1st street along Highway 110 to the Municipal Pre-Treatment Facility (Stage 2).

These long term investments in infrastructure are ultimately tied to development of the area and the rate at which it occurs. Based on current projections, Stage 1 falls within the 2 to 10 year capital budget.

Regarding the proposed development within the annexation property, Engineering has examined options available for servicing of the commercial component only. Based on present growth, it would be premature to proceed with Stage 1 of the wastewater servicing improvement as there is insufficient flow discharged from the development to make a lift station viable. An interim solution would be for this development to connect to the 200mm domestic sewer that currently exists adjacent to the property (see the figure below). This interim solution solely allows for retail commercial development contributing a maximum of 2.1 L/s Peak Design Inflow.



In order to accommodate the interim wastewater servicing, it is required that the domestic sewer along Maryland Avenue between Tracey Street and 9th Street be upgraded at a cost of approximately $420,000. These required upgrades were identified in the AECOM South End Lift Station study. As there are other benefitting properties from this upgrade, VBJ's approximate allocation of the capital cost will be $50,000.

This improvement only relates to the construction of the commercial component of the development. Any further development within the catchment area of the proposed forcemain (which the annexation land falls within), particularly if it is residential, leisure commercial or other development that may produce high wastewater flows, would initiate the Stage 1 upgrade, estimated cost of $7,053,500, and further contributions. At the time of Stage 1 forcemain construction, the wastewater service for the existing commercial development would be required to disconnect from the 200 mm domestic sewer and reconnect to the forcemain at the owners expense. The developer will then be responsible for their proportionate share of the capital cost of Stage 1.