CHAPTER 12: SERVICING INFRASTRUCTURE SUMMARY

This chapter provides a summary of the Servicing Infrastructure analysis for the Avenue Study. The full Servicing Infrastructure Report is included in the Appendices.

This Avenue Study includes a high-level hydraulic analysis of the local municipal servicing infrastructure, and characterizes the constraints and opportunities to improve servicing infrastructure through the application of development guidelines and best management practices.

This chapter characterizes the constraints and opportunities with respect to the local municipal sewer systems resulting from that growth, within the context of applicable development guidelines and best management practices. An assessment of the existing condition of the local municipal sewer infrastructure was also prepared in support of the Avenue Study (refer to the Municipal Servicing Existing Conditions Report, by WSP, dated 2017 in the Appendices).

The Study boundary lies within Pressure District 2 of the municipal watermain distribution system currently being analyzed by others; an assessment of the existing and future performance of the watermain network in the Study Area is detailed in the Water Distribution Study for Pressure District 1, 1W, and 2 issued in 2017.

There are three Basement Flooding Protection Program (BFPP) Study Areas which intersect with the Study boundary for the Bloor West Village Avenue Study; the Environmental Assessment (EA) for Study Area 5 is complete and improvements currently underway, while the EAs for Study Areas 49 and 44 are due to begin in 2018. The dynamic and calibrated hydraulic models delivered by the aforementioned EA processes, in conjunction with the Water Distribution Study, will provide a better representation of the actual response of the local municipal infrastructure. It is recommended that the corridor improvements for Bloor West Village are coordinated with the infrastructure improvements identified in these reports.

There are four storm sewer catchment areas comprising 120 ha which straddle the Study boundary, discharging to the Humber River, Wendigo Pond, and Spring Creek. The local storm sewer system is operating at capacity under the City's design storm event though performance improvements are expected as a result of continued adoption of the Mandatory Downspout Disconnection By-Law, compliance with the Toronto Green Development Standards including the Wet Weather Flow Management Guidelines and the Green Roof By-law, and the introduction of green infrastructure and low impact development (LID) solutions provided for in the Toronto Green Street Technical Guidelines.

LID strategies appropriate for a public right-of-way may include bioretention facilities, green gutters, subsurface soil volumes, permeable pavements, and underground infiltration facilities. A detailed analysis of the subsurface conditions would be required to support some of these solutions. No specific improvements to the local municipal storm sewer system are recommended as a result of this analysis, though as a result of the corridor reconstruction and the introduction of LID solutions numerous relocations (street lights, catch basins, utilities) will be required.

The sanitary sewer system comprises three catchment areas and drains a modest 8.9 ha by comparison, discharging to three existing pumping stations. Under dry weather flow conditions the analysis indicates the sanitary sewer system is operating without surcharging, and the anticipated population growth and development within the Study boundary will be managed by the existing network with no adverse impacts. As such, no specific improvements to the local municipal sanitary system are recommended as a result of this analysis.

The majority of wastewater sewage in the Study Area is currently captured by an extensive combined sewer catchment area spanning 199 ha and including both fully and partially combined sewers. The performance of this existing system was determined by a static hydraulic model the parameters for which are specified by the City of Toronto. During 2 year storm events the combined sewer system predominantly operates without surcharging with notable exceptions in fully combined areas where surcharging does occur; the densification contemplated by this Avenue Study would result in an 8 L/s (0.3%) increase to the wastewater component of the combined sewer flows. MOECC Procedure F-5-5 requires no net increase in combined sewer overflows on a system wide basis; future developments will have to demonstrate compliance in order to secure their design approvals. In order to comply with this procedure it is recommended that a maximum allowable release rate at the outfall of the municipal combined sewer system be established and a flow restrictor be implemented through the BFPP EA studies which would serve as the basis for future development applications.

It is also recommended that a dedicated storm sewer system within Bloor Street West between Clendenan Avenue and Keele Street be constructed as a part of planned corridor improvements as this segment is currently serviced by a fully combined sewer. The future preliminary design for the recommended dedicated storm sewer within the Bloor Street West right-of-way would have to consider any potential impacts to High Park snd its water systems.

Continued expansion of the local storm sewer system within areas currently serviced by fully combined sewers will improve the performance of the legacy municipal combined sewer system. The performance of the local combined sewers is generally not expected to be adversely impacted as a result of the anticipated population growth projected for the Study Area. As such, no specific improvements to the local municipal combined sewer are recommended as a result of this analysis; however, the reconstruction of the Bloor Street West corridor would benefit from an informed assessment of deficiencies identified through the BFPP EA processes.