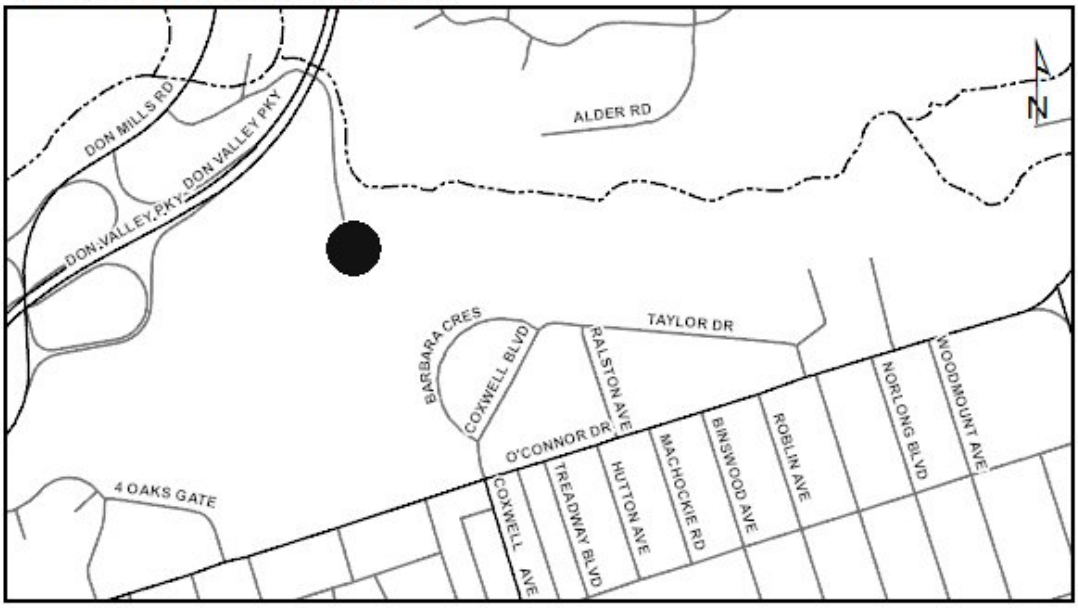
**CITY OF TORONTO (TORONTO AND EAST YORK COMMUNITY COUNCIL AREA)**

**11.5 CITY OF TORONTO**

To construct, reconstruct, erect or place a building or structure, site grade and temporarily or permanently place, dump or remove any material, originating on the site or elsewhere on (Taylor Creek Park - near Don Mills Road and the Don Valley Parkway), in the City of Toronto (Toronto and East York Community Council Area), Don River Watershed as located on the property owned by Hydro One Networks and TRCA (easement agreement). The purpose is to implement the first stage of the Don River and Central Waterfront project which involves the construction of a twenty three (23.4) m diameter stormwater shaft in Coxwell Ravine Park, just east of the Don Valley Parkway in the City of Toronto. This shaft is one of five shafts proposed as part of a comprehensive program to greatly reduce combined sewer overflows (CSOs) flowing into the Don River. The shaft will be constructed from the ground surface to connect to the 6.3m diameter tunnel approximately fifty one (51) meters below ground surface. The warm water construction timing window of July 1 to March 31 will apply to this proposal.

**MAP LOCATION:** Coxwell Ravine Park, Toronto




The permit will be issued for the period of November 9, 2018 to November 8, 2020 in accordance with the following documents and plans which form part of this permit:

- **Letter of Undertaking to provide outstanding information to the satisfaction of TRCA staff; dated October 18, 2018 prepared by Caroline Kaars Sijpesteijn to Renee Afoom-Boateng, on behalf of the City of Toronto, received by TRCA on October 18, 2018.**

**RATIONALE**

The application was reviewed by staff on the basis of the following information:

Proposal:

The City of Toronto is embarking on a comprehensive program to construct a new wet weather flow system to greatly reduce combined sewer overflows (CSOs) currently flowing into the Don

River which will eventually help improve the water quality of the Don River and Inner Harbor. The intent of the program is to provide an optimized solution that ultimately delist the Don River and Inner Harbor as an Area of Concern under the Canada-United States Great Lakes Water Quality Agreement as well as improve the dry weather flow (DWF) sewer system's efficiency and security.

The City completed an Environmental Assessment (EA) in 2012 to identify solutions for improvements that were built upon the results of the City's 2003 Wet Weather Flow Master Plan (WWFMP). TRCA was involved in the EA review and provided technical comments on the preferred solutions which included the Lower Don Tunnel/Coxwell Tunnel; Taylor Massey Creek Tunnel, Inner Harbor Tunnel, several underground storage tanks; upgrades to North Toronto Treatment Plant, a new treatment facility south of the existing Ashbridges Bay Treatment Plant and a new pumping station at Ashbridges Grove Park. Due to funding allocations, the City is proposing to implement the preferred solution in five stages, and over a 25-year time frame; and this proposal is part of the first phase of project implementation. The first phase of project implementation include approximately 10.4 kilometer long tunnel which will be approximately 6.3m diameter wide within the bedrock; starting from Shaft IHES 2 (b) south of the Lake Shore Boulevard East, to the Coxwell Shaft CX 1 (a) located at the Coxwell Ravine Park. A tail tunnel connection will be built from Shaft IHES 2 (b) to the new pumping station (IPS) at the Ashbridges Bay Treatment Plant and another connection from CX 1(a) to the existing Coxwell Sanitary Trunk Sewer shaft at the Coxwell Ravine Park.

The CX-1 shaft proposed is approximately 23.4m wide and will be constructed from the existing ground surface to approximately 51m below existing grades using a Tunnel Boring Machine (TBM). Currently, this site consists of a parking lot, manicured area, area of matured park trees and a dog off leash park on the east side; adjacent to the Taylor Massey Creek. The construction limits will be the narrow band of area along the western edge of the parking lot, away form the forested slope, extending southwards to the southern edge of the Hydro One power lines, and naturalized area. The shaft will be constructed with secant pile walls through the overburden and Bedrock Surface Fracture Zone and into the more competent bedrock below the BSFZ. Since the tunnel will be constructed mostly in bedrock material, inflows into the shafts are generally expected to be low to negligible where the secant piles will be present. Any groundwater inflows associated with this shaft construction will be addressed using pumps sumps at the base of the shaft excavation. Groundwater removed from the tunnel shafts will be transferred to the sanitary sewers, at a discharge point following environmental controls (the use of settlement tanks to reduce sedimentation and to treat the discharge to meet city standards). At CX-1, the shaft will be connected to the existing Coxwell Sanitary Trunk Sewer by a 30.85m long three (3) meter wide pipe to be installed approximately 5.6m below the ground surface. The City will be providing a 10m buffer from the Taylor Massey Creek to protect riparian vegetation. Approximately 6 trees and some shrubbery will be impacted by the construction staging, and vegetation to remain will be protected in line with the City of Toronto Tree Protection Policy and Specifications for Construction near trees.

As part of the site preparation, the contractor will overlay the entire staging area and access road (10m wide) with geotextile and a minimum of 300mm depth of 50mm crusher run limestone in-line with Ontario Provincial Standard specification for all the areas within the construction compound. The staging area will contain dewatering treatment equipment, construction crane pad for crane, trailers, working and parking areas. The entire staging area will be secured by a site hoarding fence and double swing gates at the access point. Once the shaft is constructed, it will connect to the tunnel and will consist of a stair access hatch, ventilation shaft and chamber. The air ventilation chamber will be approximately 3.4 meters above the ground level to ensure it

is above the regional flood elevations, with a protective access hatch. The surface of the CX- 1 shaft will be buried approximately 0.5m below the restored site surface grades. with the only surface feature visible being the air ventilation chamber which will be approximately 0.3 m above the Regional Flood Elevation of the Don River. All site staging materials will be removed and the parking lot asphalt will be replaced to the existing post-construction conditions or better. The manicured area will be restored with top soil and seeded with “Early Succession Wet Meadow Mix”. Tree planting will completed in line with the approved site restoration plan. Construction is proposed to commence in 2018 for sixty (60) months (till 2022).

This project is related to TRCA Permit No. C180724/CITY OF TORONTO (CFN 54144), and TRCA Permit No. C180843/CITY OF TORONTO (CFN 54141) that were approved by the TRCA Executive Board on July 6. and September 7, 2018 respectively to allow for the construction of similar shafts at the Keating Rail Yard and the Bloor Viaduct area in Toronto

Control of Flooding:
Although the project site is located within the Don River flood plain, the proposed works are not anticipated to impact flooding, flood storage or conveyance of flood waters. As a precautionary measure and upon TRCA request, the City construction contractor will implement a flood contingency plan during the construction period to ensure the protection of life and property as well as to allow for flood water conveyance. Once construction is complete, all construction equipment and staging materials will be removed from the site, then the construction site grades and other surfaces will be restored and seeded to its original condition or better.

Pollution:
Erosion and sediment control measures including, rock check dams, sedimentation traps (2) , mud mats, sedimentation ditches, silt fences, catch basin protection will be installed prior to construction and maintained for the entire duration of construction. These measures will be implemented to prevent the release of construction generated sediments into Taylor Massey Creek. Erosion and sediment control measures have been provided in accordance with the Greater Golden Horseshoe Area Conservation Authorities Erosion and Sediment Control Guidelines for Urban Construction (2006).

Conservation of Land:
The warm water construction timing window of July 1 to March 31 will apply to this proposal.

Dynamic Beaches:
The proposal will not have any implications to dynamic beaches.

Erosion:
There are no impacts identified to slope stability or erosion as a result of these works.

Conservation of Land:
The warm water construction timing window of July 1 to March 31 will apply to this proposal

*Plantings*
The City of Toronto Tree Protection Policy and Specifications for Construction near trees will be adhered to during the construction period. Approximately 6 trees and some shrubbery will be removed to prepare the site for construction. These trees will be replaced in line with the City of Toronto Tree removals ratio of 3:1; approximately 41 trees will be replanted around the shaft (west side) and in areas that are not used for parking or active recreational uses due to site constraints. The cost of the remaining

vegetation will be provided to the City Urban Forestry staff (cash in lieu) to be used for future watershed wide restoration activities. Additional plantings will occur as part of a comprehensive habitat improvement plan in an area adjacent to the North Toronto Treatment Plant further upstream of the site.

Policy Guidelines:
This proposal complies with Section 8.9, Infrastructure Policies of the Living City Policies for Planning and Development in the Watersheds of the Toronto and Region Conservation Authority.

**CFN: 54142 - Application #: 0603/15/TOR**
**Report Prepared by: Renee Afoom-Boateng 5714 rafoom-boateng@trca.on.ca**
**For information contact: Renee Afoom-Boateng 5714 rafoom-boateng@trca.on.ca**
**Date: October 26, 2018**