

10.2 CITY OF BRAMPTON

To site grade, temporarily or permanently place, dump or remove any material, originating on the site or elsewhere, interfere with a wetland and alter a watercourse between Humberwest Parkway and Goreway Drive as part of the Cottrelle Boulevard extension, in the City of Brampton, Humber River Watershed, as located on property owned by the City of Brampton and the Toronto and Region Conservation Authority. The purpose is to construct Cottrelle Boulevard between Humberwest Parkway and Goreway Drive. This work has been divided into 4 separate permit applications (CFN 43232, 43233, 43234, 43235). This application (CFN 43233) covers the pre-loading (filling) requirements within the regulated area at the West Humber River, located west of Goreway Drive. The Redside Dace construction timing window will be applied to this work, unless otherwise specified in writing by the Ministry of the Environment, Conservation and Parks.

MAP LOCATION: Cottrelle Boulevard Extension (West Humber River)



The permit will be issued for the period of January 10, 2020 to January 9, 2022 in accordance with the following documents and plans which form part of this permit:

- **Sheet P1-ST1 - Cottrelle Boulevard, Construction Access, Staging; prepared by SNC Lavalin; dated March 2019; received April 22, 2019;**
- **Sheet P1-R2 - Cottrelle Boulevard, STA. 6+340 to STA. 6+740, Removals; prepared by SNC Lavalin; dated March 2019; received April 22, 2019;**
- **Sheet P1-NC3 - Cottrelle Boulevard, STA. 6+340 to STA. 6+600, 360m East to 620m East Humberwest Parkway, Phase 1 Pre-Grading; prepared by SNC Lavalin; dated March 2019; received April 22, 2019;**
- **Sheet P1-NC4 - Cottrelle Boulevard, STA. 6+600 to STA. 6+740, 620m East of Humberwest Parkway to Goreway Drive, Phase 1 Pre-Grading; prepared by SNC Lavalin; dated March 2019; received April 22, 2019;**
- **Sheet P1-T1 - Cottrelle Boulevard, Typical Cross Sections, Phase 1 Typical Details; prepared by SNC Lavalin; dated March 2019; received April 22, 2019;**
- **Sheet P1-T2 - Cottrelle Boulevard, Outlet Details, Phase 1 Typical Details; prepared by SNC Lavalin; dated March 2019; received April 22, 2019;**

Item 10.2

- **Sheet P1-T3 - Cottrelle Boulevard, Vernal Pool Protection Details, Phase 1 Typical Details; prepared by SNC Lavalin; dated March 2019; received April 22, 2019;**
- **Sheet P1-ESC2 - Cottrelle Boulevard, STA. 6+250 to STA. 6+500, Erosion and Sediment Control Phase 1: Pregrading; prepared by SNC Lavalin; dated March 2019; received April 22, 2019;**
- **Sheet P1-ESC3 - Cottrelle Boulevard, STA. 6+500 to STA. 6+740, Erosion and Sediment Control Phase 1: Pregrading; prepared by SNC Lavalin; dated March 2019; received April 22, 2019;**
- **Sheet P1-ESC4 - Cottrelle Boulevard, Erosion & Sediment Control, Project Site Access Road Plan and Restoration; prepared by SNC Lavalin; dated March 2019; received April 22, 2019;**
- **Sheet P1-ESC5 - Cottrelle Boulevard, Erosion and Sediment Control Phase 1: Pregrading; prepared by SNC Lavalin; dated March 2019; received April 22, 2019;**
- **Sheet P1-IMP1 - Cottrelle Boulevard, Instrumentation Plan Phase 1: Pregrading; prepared by SNC Lavalin; dated March 2019; received April 22, 2019;**
- **Sheet P1-CD1 - Cottrelle Boulevard, Channel Design, Plan; prepared by Matrix Solutions; dated March 2019; received April 22, 2019;**
- **Sheet P1-CD2 - Cottrelle Boulevard, Channel Design, Cross Sections and Typical; prepared by Matrix Solutions; dated March 2019; received April 22, 2019;**
- **Sheet P1-CD3 - Cottrelle Boulevard, Channel Design, Erosion and Sediment Controls; prepared by Matrix Solutions; dated March 2019; received April 22, 2019;**
- **Sheet P1-CD4 - Cottrelle Boulevard, Channel Design, Restoration Planting Plan; prepared by Matrix Solutions; dated March 2019; received April 22, 2019;**
- **Sheet P1-T03 - Cottrelle Boulevard, STA. 6+638 West Humber River Tributary B, Temporary Retaining Walls, Layout & Details Phase 1; prepared by SNC Lavalin; dated March 2019; received April 22, 2019;**
- **Sheet P1-T04 - Cottrelle Boulevard, STA. 6+068, 6+638 West Humber River Tributary A & B, Temporary Retaining Walls Layout & Details Phase 1; prepared by SNC Lavalin; dated March 2019; received April 22, 2019.**

RATIONALE

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

Proposal:

Cottrelle Boulevard currently terminates at Humberwest Parkway from the west and at Goreway Drive from the east. The purpose of this project is to construct a new segment of Cottrelle Boulevard between Humberwest Parkway and Goreway Drive (approximately 700 m). The new road will be constructed as a 4-lane urban cross section with a 30 m right-of-way including dedicated turning lanes, a sidewalk and a multi-use path.

Work will be conducted in 2 Phases. This application covers Phase 1 which involves pre-loading (filling) within the regulated area located at the West Humber River, west of Goreway Drive. Pre-loading will take approximately 2 years with the height of the fill being placed above the final road elevations to allow for settlement of material prior to final grading for the ultimate road in Phase 2. The purpose of pre-loading is to limit the settlement of the road after paving. It is expected that the site will be raised by approximately 6 m in this location. A temporary Retained Soil System (RSS) wall will be constructed in Phase 1 on both the east and west sides of the watercourse and will be removed in Phase 2 where the permanent bridge structure will be built.

Item 10.2

In addition, the watercourse will need to be protected and stabilized on the upstream end where the future bridge will be constructed to ensure the channel is stabilized in-place, as the proposed bridge footprint will conflict with the current channel. Channel treatments will incorporate natural elements to stabilize and enhance the existing habitat. Woody debris will be provided along the east bank which will be embedded into the channel to redirect flow to the west. This treatment is also expected to stabilize the current eroded bank and promote migration away from the location of the northeast corner of the future bridge abutment.

Buried stone will be placed and extended along the northwest segment of the channel near the future bridge abutment to prevent outflanking and promote migration towards the centre of the creek. Sheet piling will be installed along the west bank of the watercourse as part of the permanent construction works for the future bridge to ensure flows are deflected at the bridge. Finally, the downstream west bank will be reconstructed away from the future bridge abutment using buried stone and a compacted clay material, which is expected to work with the existing native materials and provide additional resistance to erosive forces. The bank will be re-vegetated and will transition into the existing bank form.

A vernal pool is also located within this TRCA regulated area and is approximately 5 m from expected grading. Given its proximity to the new road and proposed grades, a low berm will be constructed along the south side of the road ditch to prevent the vernal pool from draining into the ditch, to isolate the pool and ensure the observed overflow elevations of the pool are maintained.

A portion of the storm sewer system will be installed in this stage, but will not be operational as the catch basins will be too high to receive runoff and will need to be constructed at the future ultimate road elevations. During this interim condition stormwater will be redirected to a temporary drainage system that will run along ditches to temporary settling basins.

The City of Brampton will be using an existing temporary access road constructed through TRCA land off Goreway Drive, located south of the proposed Cottrelle Boulevard extension to access the central portion of their work area. This access road was originally constructed by the Region of Peel to facilitate their watermain construction within the same valley several years ago. In anticipation of the future Cottrelle Boulevard construction, the temporary access road was left in place and will be removed, once construction of the road has been completed.

This work was previously reviewed through the Municipal Class Environmental Assessment process.

Control of Flooding:

It is expected that there will be a maximum increase of 0.32 m at the West Humber River tributary, however, the impacts will be confined to the valley system which is owned by the City of Brampton. No impacts to private properties from the proposed increase are expected. Under ultimate road conditions, Cottrelle Boulevard will be able to convey the Regional flows without overtopping.

Pollution:

Standard erosion and sediment control measures, including filter bags, check dams, coffer dams, double row silt fencing, temporary sediment traps and erosion control blankets will be implemented prior to construction and maintained for the duration of construction through Phase 1.

Item 10.2

Dynamic Beaches:

Not applicable.

Erosion:

Risks to the future bridge and RSS wall at the West Humber River have been mitigated through the design, including the installation of sheet piling to prevent undercutting or outflanking of the wall.

Conservation of Land:

The Redside Dace construction timing window of July 1 to September 15 will be applied to work in work in this area, unless otherwise specified in writing by the Ministry of the Environment, Conservation and Parks.

Plantings

The stream restoration and stabilization work will result in the planting of 111 shrubs.

The remainder of the vegetation removals will be addressed through restoration plans and compensation requirements as part of the final road construction in Phase 2 (CFNs 43234, 43235).

Policy Guidelines:

This proposal complies with Section 8.7 Interference with Wetlands, Section 8.8 Interference with a Watercourse and 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: 43233 - Application #: 0925/09/BRAM

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