



August 30, 2021

Lakeview Community Partners Limited
4900 Palladium Way, Suite 105
Burlington, Ontario
L7M 0W7

Attn: Mr. Fabio Mazzocco

Re: MRK-00243747-A0 Remedial Action Plan, Rev. 02
985 Hydro Road, Mississauga, Ontario

Dear Sir:

EXP Services Inc. (EXP) is pleased to provide Lakeview Community Partners (LCPL) with this Remedial Action Plan (RAP) to address soil and groundwater impacts that have been identified at 985 Hydro Road, Mississauga, Ontario (herein referred to as the "site").

The site is situated south of Lakeshore Road East along the shoreline of Lake Ontario, comprising approximately 159 acres. The site operated as the Lakeview Coal Generating Station, a coal-fired power plant, from the late 1950s until 2005. The site is currently undergoing re-development for mixed residential, parkland, institutional, commercial and community property uses. Given the complexity of site contamination (discussed in Section 1 below) and intended site development, the site has been split up into eight (8) Record of Site Condition (RSC) Areas. Depending on the Area, portions of or the entire Area will be conveyed to the City of Mississauga (City) under the Municipal Lands Agreement (MLA) for a total of 67.1 acres in addition to all parkland and roadways within each subject Area. For the purpose of this document, the footprint of the site comprising of conveyances under the MLA is referred to as "Dedication Lands" (see Figure 1A superimposed on most recent development plan and Area and Figure 1B superimposed with development Blocks) whereas the remaining parkland, natural heritage system (NHS) and road network are referred to as "Conveyance Lands". It is noted that the Conveyance Lands are subject to change as the Master Development Plan has yet to be finalized. A general description of the Dedication Lands and Conveyance Lands relative to each RSC Area is outlined below:

Area 1A: This Area is to be re-developed for mixed residential, commercial and parkland use. A small portion of this Area, along the border with Area 1B, forms part of the Dedication Lands. Furthermore, several Blocks will be conveyed to the City for use as parkland in addition to a large road network. The northeastern most corner of this Area will be conveyed for parkland and NHS.

Area 1B: This Area is to be re-developed for parkland use and forms part of the Primary Phase Park Development. The entire Area is subject to conveyance.

Area 2: This Area is to be re-developed for mixed residential/community/institutional/commercial use. A portion of this Area forms the Dedication Lands with a sports field (cultural hub) along with institutional buildings. The road network within the Area forms part of the Conveyance Lands along with small parkland parcels.

Area 3: This Area is to be re-developed for mixed residential/commercial purposes with two small portions which form part of the Dedication Lands. In addition to the Dedication Lands, the road network and several other parkland blocks present within this Area will also be conveyed to the City.

Area 4: This Area will be conveyed to the City of Mississauga in its entirety and forms part of the Dedication lands. The Area is to undergo mixed institutional/commercial re-development and may also serve as the potential location of the District Energy/Vacuum Waste Terminal.

Area 5A: This Area will be conveyed to the City of Mississauga in its entirety and forms part of the Dedication lands. The Area is to be re-developed as a cultural (community) hub and also includes mixed use buildings and parkland. The parkland is to be developed in stages between 2024-2026, the cultural hub is to be completed between 2026-2027, the mixed-use buildings are to be completed between 2028-2029.

Area 5B: This Area will be conveyed to the City of Mississauga in its entirety and forms part of the Dedication lands. The Area forms part of the Secondary Phase Park Development which is to be completed between 2023-2024.

Area 6: This Area is to be mostly developed for mixed residential, institutional, parkland (Serson Creek corridor) and commercial use with a small portion to the south of the Area being conveyed to the City of Mississauga. The portion that forms part of the Dedication Lands is to be re-developed for mixed institutional and parkland use (Serson Creek corridor). The portion of the Serson Creek corridor north of the Dedication Lands forms part of the Conveyance Lands (NHS).

A survey plan (66R-30223), for the entire site, is attached as Appendix A; however, the survey does not show the Dedication Lands (embedded in the RSC Areas). The footprint of the Dedication Lands and Conveyance Lands (superimposed onto the RSC Areas) is shown on Figures 1A and 1B, as indicated above.

To support the intended re-development within the Dedication Lands, it is required that an RSC be filed with the Ministry of the Environment, Conservation and Parks (MECP) for each RSC Area. Site background information and Area specific remediation approaches are further discussed in Sections 1 and 2 below. It should be noted that the discussion below is specific to each RSC Area and is not further subdivided relative to the Dedication and Conveyance Lands. This approach has been discussed and endorsed by the City. As such, any Area specific reference to contamination, remediation approach and/or risk management measures (RMM) is applied to the entire Area (inclusive of the Dedication and Conveyance Lands). As part of this approach, the most sensitive proposed land use was applied to the entire Area for determination of appropriate MECP Site Condition Standards (SCS).

1. Background

Over sixty (60) environmental investigations (Phase One Environmental Site Assessments [ESAs], Phase Two ESAs, remediation programs, and risk assessments (RAs)) have been undertaken at the site from 1992 to present. Various consulting firms have been involved in the execution of these programs as follows: MacViro Consultants Inc., Golder Associates Ltd., AGRA Earth and Environmental, Pinchin Environmental Ltd., Conestoga-Rovers & Associates, O'Connor Associates Environmental Inc., Geo-Terre Ltd, etc. As of 2017, EXP, has been retained to conduct due diligence ESAs in support of property acquisition and is currently providing services in support of RSC filings at the Areas noted above. An overview of the site operations and associated areas of potential concern (APEC), is provided below.

During site operation as a Coal Generating Station, coal was delivered to the western pier by ship and unloaded into a hopper from which conveyor systems transported the coal where it was stockpiled in the "Coal Yard", located on the eastern portion of the site. Coal was crushed and then transported by conveyor to hopper bins located beside the Powerhouse. The Powerhouse contained eight (8) coal-fired generating units; each unit fueled by two (2) underground storage tanks (USTs) containing ignition oil (No. 2 fuel oil). The generating units delivered power to the transformers which in turn delivered power to the Switchyard.

The Switchyard reportedly contained six (6) sets of oil-containing circuit breakers, transmission line support towers, two (2) mineral insulating oil aboveground storage tanks (ASTs), and extensive electrical buswork.

Several remediation programs were conducted as areas of the facility were decommissioned and demolished between 2006 and 2008. Throughout 2018/2019, contractors were working to remove buried concrete foundations from the former buildings in preparation for site redevelopment.

Potentially contaminating activities (PCAs) considered to result in APECs were identified based on the historical operations at the site and at surrounding industrial properties to the north of the site. Forty-three (43) PCAs, considered to contribute to APECs, were identified on-Site. Eight (8) PCAs, considered to contribute to APECs, were identified off-site. Tables (1 to 8) have been provided for those APECs present on RSC Areas that contain the Dedication lands. The aforementioned PCAs are presented in Figure 2; for additional details related to individual Area APECs and their location, see EXP's Phase One ESA (EXP, 2020A), provided under separate cover.

Table 1: Area 1A – Areas of Potential Environmental Concern

APEC	Location of APEC on Phase One Property	PCA	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground water, soil and/or sediment)
A	Entire Area 1A	S1: (21) Explosives and Firing Range	On-site	PAHs Metals As, Sb, Se	Soil
B1	Northeast portion of Area 1A	S2: (46) Rail Yards Tracks and Spurs	On-site	PAHs Metals As, Sb, Se	Soil
B2	Southeast portion of Area 1A				
C1	North portion of Area 1A	S3A: (30) Importation of Fill Material of Unknown Quality	On-site	PHCs PAHs Metals As, Sb, Se PCBs	Soil
C2	Northeast portion of Area 1A, within footprint of former Powerhouse building	S3B: (30) Importation of Fill Material of Unknown Quality	On-site	PHCs PAHs Metals As, Sb, Se	Soil
D	Southeast portion of Area 1A	S6: (Other) Coal Yard	On-site	PHCs BTEX PAHs Metals As, Sb, Se B-HWS	Soil and Groundwater
E	West-central portion of Area 1A, on the west side of the former switchyard	S10: (Other) PCB Storage Compound	On-site	PCBs	Soil

APEC	Location of APEC on Phase One Property	PCA	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground water, soil and/or sediment)
F	South portion of Area 1A, within former switchyard	S11: (40) Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	On-site	OCPs Metals As, Sb, Se	Soil
G1	East-central portion of Area 1A, near the guard house	S15: (28) Gasoline and Associated Products Storage in Fixed Tanks	Off-site	PHCs BTEX	Soil and Groundwater
G2	Central portion of Area 1A, northeast of former switchyard	S24: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX	Soil and Groundwater
G3	South-central portion of Area 1A, within former switchyard	S25: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX PCBs	Soil and Groundwater
G4	South-central portion of Area 1A, within former switchyard	S26: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX PCBs	Soil and Groundwater
H1	North boundary of Area 1A	S37: (34) Metal Fabrication	Off-site	VOCs	Groundwater
H2		S38: (51) Solvent, Manufacturing, Processing and Bulk Storage	Off-site	VOCs	Groundwater
H3		S39: (51) Solvent, Manufacturing, Processing and Bulk Storage	Off-site	VOCs	Groundwater
H4		S40: (34) Metal Fabrication	Off-site	VOCs Metals As, Sb, Se	Groundwater
H5		S41: (Other) Foundry	Off-site	VOCs Metals As, Sb, Se	Groundwater
H6		S42: (34) Metal Fabrication	Off-site	VOCs Metals As, Sb, Se	Groundwater
I	Eastern portion of Area 1A	S5: (Other) Bottom Ash Storage and Bottom Ash Pelletizing Plant	On-site	PAHs Metals As, Sb, Se B-HWS	Soil

¹PCA name and number as listed in Table 2 of Schedule D of Ontario Regulation (O. Reg.) 153/04. Where the activity is not listed, it is identified as "other".

PHCs = petroleum hydrocarbons; VOCs = volatile organic compounds; BTEX = benzene, toluene, ethylbenzene, and xylenes;

PAHs = polycyclic aromatic hydrocarbons; As, Se, Sb = arsenic, selenium, antimony; B-HWS = hot water soluble boron;
PCBs = polychlorinated biphenyls; and, OCPs = organochlorine pesticides.

Table 2: Area 1B - Areas of Potential Environmental Concern

APEC	Location of APEC on Phase One Property	PCA	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground water, soil and/or sediment)
A	Entire Area 1B	S4B: (30) Importation of Fill Material of Unknown Quality	On-site	PHCs PAHs Metals As, Sb, Se B-HWS	Soil
B	North-central portion of Area 1B	S12B: (55) Transformer Manufacturing, Processing and Use	On-site	PHCs PCBs	Soil

¹PCA name and number as listed in Table 2 of Schedule D of O. Reg. 153/04. Where the activity is not listed, it is identified as "other".

PHCs = petroleum hydrocarbons

PAHs = polycyclic aromatic hydrocarbons

As, Se, Sb = arsenic, selenium, antimony

B-HWS = hot water soluble boron

PCBs = polychlorinated biphenyls

Table 3: Area 2 – Areas of Potential Environmental Concern

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One property	Potentially Contaminating Activity ¹	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
A	Entire Area 2	S1: (21) Explosives and Firing Range	On-site	PAHs Metals As, Sb, Se	Soil
B	Northwest portion of Area 2	S2: (46) Rail Yards Tracks and Spurs	On-site	PAHs Metals As, Sb, Se	Soil
C	Northeast portion of Area 2	S5: (Other) Bottom Ash Storage and Bottom Ash Pelletizing Plant	On-site	PAHs Metals As, Sb, Se B-HWS	Soil
D	Majority of Area 2, within the footprint of the former coal yard	S6: (Other) Coal Yard	On-site	PHCs BTEX PAHs Metals As, Sb, Se B-HWS	Soil
E1	Northeast portion of Area 2, north of former coal yard	S16: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX Metals	Soil and Groundwater

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One property	Potentially Contaminating Activity ¹	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
E2	Northeast portion of Area 2, north of former coal yard	S17: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX PAHs	Soil and Groundwater
F	North portion of Area 2	S3B: (30) Importation of Fill Material of Unknown Quality	On-site	PHCs PAHs Metals As, Sb, Se	Soil

¹PCA name and number as listed in Table 2 of Schedule D of O. Reg. 153/04. Where the activity is not listed, it is identified as "other".

PHCs = petroleum hydrocarbons

BTEX = benzene, toluene, ethylbenzene, and xylenes

PAHs = polycyclic aromatic hydrocarbons

As, Se, Sb = arsenic, selenium, antimony

B-HWS = hot water soluble boron

Table 4: Area 3 - Areas of Potential Environmental Concern

APEC	Location of APEC on Phase One Property	PCA	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
A	Entire Area 3	S1: (21) Explosives and Firing Range	On-site	PAHs Metals As, Sb, Se	Soil
B	North-central portion of Area 3	S2: (46) Rail Yards, Tracks and Spurs	On-site	PAHs Metals As, Sb, Se	Soil
C1	Central portion of Area 3	S4A: (30) Importation of Fill Material of Unknown Quality	On-site	PHCs PAHs Metals As, Sb, Se B-HWS EC SAR PCBs	Soil
C2	South portion of Area 3	S4B: (30) Importation of Fill Material of Unknown Quality	On-site	PHCs PAHs Metals As, Sb, Se PCBs OCPs	Soil
D	East portion of Area 3	S6: (Other) Coal Yard	On-site	PHCs BTEX PAHs Metals As, Sb, Se B-HWS	Soil

APEC	Location of APEC on Phase One Property	PCA	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground water, soil and/or sediment)
E	South portion of Area 3	S9A: (Other) Coal Storage in Hopper Rooms	On-site	PAHs Metals As, Sb, Se	Soil
F	South portion of Area 3	S9B: (18) Electricity Generation, Transformation and Power Stations	On-site	PHCs PAHs	Soil and Groundwater
G	North portion of Area 3	S12A: (55) Transformer Manufacturing and Power Stations	On-site	PHCs PCBs	Soil and Groundwater
H	Southwest portion of Area 3	S13: (Other) Ash Settling Ponds	On-site	PAHs Metals As, Sb, Se	Soil and Groundwater
I1	Southeast portion of Area 3	S18: (28) Gasoline and Associated Products Storage in Fixed Tanks	Off-site	PHCs BTEX	Soil and Groundwater
I2		S19: (28) Gasoline and Associated Products Storage in Fixed Tanks	Off-site	PHCs BTEX	Soil and Groundwater
I3		S20: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX	Soil and Groundwater
I4		S21: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX PAHs	Soil and Groundwater
I5		S22: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX PAHs	Soil and Groundwater
I6		S23: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX	Soil and Groundwater
I7	South-central portion of Area 3	S27: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX	Soil and Groundwater
I8	South-central portion of Area 3	S28: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX	Soil and Groundwater
I9	South-central portion of Area 3	S29: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX	Soil and Groundwater
I10	South-central portion of Area 3	S30: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX	Soil and Groundwater
I11	South-central portion of Area 3	S31: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX	Soil and Groundwater
I12	South-central portion of Area 3	S32: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX	Soil and Groundwater
I13	South-central portion of Area 3	S33: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX	Soil and Groundwater

APEC	Location of APEC on Phase One Property	PCA	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground water, soil and/or sediment)
I14	North-central portion of Area 3	S34: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX PAHs	Soil and Groundwater
I15	North-central portion of Area 3	S35: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX PAHs PCBs	Soil and Groundwater
J	East portion of Area 3	S47: (30) Importation of Fill Material of Unknown Quality	On-site	PHCs PAHs Metals As, Sb, Se	Soil

¹PCA name and number as listed in Table 2 of Schedule D of O. Reg. 153/04. Where the activity is not listed, it is identified as "other".

PHCs = petroleum hydrocarbons

BTEX = benzene, toluene, ethylbenzene, and xylenes

PAHs = polycyclic aromatic hydrocarbons

As, Se, Sb = arsenic, selenium, antimony

B-HWS = hot water soluble boron

PCBs = polychlorinated biphenyls

Table 5: Area 4 - Areas of Potential Environmental Concern

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One property	Potentially Contaminating Activity ¹	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
A	Entire Area 4	S1: (21) Explosives and Firing Range	On-site	PAHs Metals As, Sb, Se	Soil
B	Entire Area 4, within the footprint of the former coal yard	S6: (Other) Coal Yard	On-site	PHCs BTEX PAHs Metals As, Sb, Se B-HWS	Soil
C	Southern portion of Area 4	S7: (Other) Fly Ash Storage	On-site	PAHs Metals As, Sb, Se	Soil
D	Southeastern portion of Area 4	S4B: (30) Importation of Fill Material of Unknown Quality	On-site	PAHs Metals As, Sb, Se	Soil

¹PCA name and number as listed in Table 2 of Schedule D of O. Reg. 153/04. Where the activity is not listed, it is identified as "other".

PHCs = petroleum hydrocarbons

BTEX = benzene, toluene, ethylbenzene, and xylenes

PAHs = polycyclic aromatic hydrocarbons

As, Se, Sb = arsenic, selenium, antimony

B-HWS = hot water soluble boron

Table 6: Area 5A - Areas of Potential Environmental Concern

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One property	Potentially Contaminating Activity ¹	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
A	Northeast portion of the site	S1: (21) Explosives and Firing Range	On-site	PAHs Metals As, Sb, Se	Soil
B	Northeast portion of Area 5A	S6: (Other) Coal Yard	On-site	PHCs BTEX PAHs Metals As, Sb, Se B-HWS	Soil
C	Eastern portion of Area 5A	S7: (Other) Fly Ash Storage	On-site	PAHs Metals As, Sb, Se	Soil
D	Eastern portion of Area 5A	S8: (Other) Former Acid Pond, Stormwater Run-off Pond	On-site	PHCs PAHs Metals As, Sb, Se	Soil and Groundwater
E1	South-central portion of Area 5A	S9C: (18) Electricity Generation, Transformation and Power Stations	On-site	PHCs BTEX	Soil and Groundwater
E2	South-central portion of Area 5A	S9B: (18) Electricity Generation, Transformation and Power Stations	Off-site	PHCs	Groundwater
E3	South-central portion of Area 5A	S27: (28) Gasoline and Associated Products Storage in Fixed Tanks	Off-site	PHCs BTEX	Groundwater
		S28: (28) Gasoline and Associated Products Storage in Fixed Tanks	Off-site	PHCs BTEX	Groundwater
		S29: (28) Gasoline and Associated Products Storage in Fixed Tanks	Off-site	PHCs BTEX	Groundwater
		S30: (28) Gasoline and Associated Products Storage in Fixed Tanks	Off-site	PHCs BTEX	Groundwater
		S31: (28) Gasoline and Associated Products Storage in Fixed Tanks	Off-site	PHCs BTEX	Groundwater
		S32: (28) Gasoline and Associated Products Storage in Fixed Tanks	Off-site	PHCs BTEX	Groundwater
		S33: (28) Gasoline and Associated Products Storage in Fixed Tanks	Off-site	PHCs BTEX	Groundwater
		S13: (Other) Ash Settling Ponds	On-site	PAHs Metals As, Sb, Se	Soil and Groundwater

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One property	Potentially Contaminating Activity ¹	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
G	Southern portion of Area 5A	S4B: (30) Importation of Fill Material of Unknown Quality	On-site	PHCs PAHs Metals As, Sb, Se	Soil
H1	Northeast portion of Area 5A	S18: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX	Soil and Groundwater
H2		S19: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX	Soil and Groundwater
H3		S20: (28) Gasoline and Associated Products Storage in Fixed Tanks	Off-site	PHCs BTEX	Groundwater
H4		S21: (28) Gasoline and Associated Products Storage in Fixed Tanks	Off-site	PHCs BTEX PAHs	Groundwater
H5		S22: (28) Gasoline and Associated Products Storage in Fixed Tanks	Off-site	PHCs BTEX PAHs	Groundwater
H6		S23: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX	Groundwater
H7	Central portion of Area 5A	S36: (28) Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs BTEX	Soil and Groundwater
I	Eastern portion of Area 5A	S47: (30) Importation of Fill Material of Unknown Quality	On-site	PHCs PAHs Metals As, Sb, Se	Soil

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PHCs = petroleum hydrocarbons

BTEX = benzene, toluene, ethylbenzene, xylenes

PAHs = polycyclic aromatic hydrocarbons

As, Se, Sb = arsenic, selenium, antimony

B-HWS = hot water soluble boron

Table 7: Area 5B - Areas of Potential Environmental Concern

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One property	Potentially Contaminating Activity ¹	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
A	Entire Area 5B	S4B: (30) Importation of Fill Material of Unknown Quality	On-site	PHCs BTEX PAHs Metals As, Sb, Se OCPs PCBs	Soil

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One property	Potentially Contaminating Activity ¹	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
B1	North portion of Area 5B	S12C: (55) Transformer Manufacturing, Processing and Use	On-site	PHCs PCBs	Soil
B2	Central portion of Area 5B	S12D: (55) Transformer Manufacturing, Processing and Use	On-site	PHCs PCBs	Soil
C	West portion of Area 5B	S13: (Other) Ash Settling Pond	Off-site	PAHs Metals As, Sb, Se	Soil ²
D	South portion of Area 5B	S14: (Other) Coal Unloading Area	On-site	PAHs Metals As, Sb, Se	Soil

¹PCA name and number as listed in Table 2 of Schedule D of O. Reg. 153/04. Where the activity is not listed, it is identified as "other".

²APEC C is associated with the ash settling ponds located east adjacent to Area 5B (located within Areas 3 and 5A). The pCOCs identified for APEC C on-site includes PAHs and metals (including hydride-forming metals) in soil and groundwater. However, EXP compared the PAH and metal (including hydride-forming metals) groundwater results at the source at Areas 3 and 5A and all parameters were within the Table 9 SCS. As there were no PAH and metal (including hydride-forming metals) impacts in groundwater at the source, the media potential impacted within APEC C includes soil only.

PHCs = petroleum hydrocarbons

BTEX = Benzene, Toluene, Ethylbenzene, Xylenes

PAHs = polycyclic aromatic hydrocarbons

As, Se, Sb = arsenic, selenium, antimony

PCBs = polychlorinated biphenyls

OCPs = Organochlorine Pesticides (OCPs)

Table 8: Area 6 - Areas of Potential Environmental Concern

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One property	Potentially Contaminating Activity ¹	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
A	Entire Area 6	S1: (21) Explosives and Firing Range	On-site	PAHs Metals As, Sb, Se	Soil
B	Central portion of Area 6	S2: (46) Rail Yards Tracks and Spurs	On-site	PAHs Metals As, Sb, Se	Soil
C	Central portion of Area 6	S3B: (30) Importation of Fill Material of Unknown Quality	On-site	PHCs PAHs Metals As, Sb, Se	Soil
D	Central portion of Area 6	S5: (Other) Bottom Ash Storage and Bottom Ash Pelletizing Plant	On-site/Off-site	PAHs Metals As, Sb, Se	Soil
E	Central and south portion of Area 6	S6: (Other) Coal Yard	On-site	PHCs BTEX PAHs Metals As, Sb, Se B-HWS	Soil
F	Central portion of Area 6	S16: (28) Gasoline and Associated Products Storage in Fixed Tanks	Off-site	PHCs BTEX	Soil

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One property	Potentially Contaminating Activity ¹	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
G	Central portion of Area 6	S43: (51) Solvent Manufacturing, Processing and Bulk Storage	Off-site	VOCs	Groundwater
H	Eastern portion of Area 6	S45: (56) Treatment of Sewage Equal to or Greater Than 10,000 litres per day	Off-site	Nitrate Nitrite Total ammonia-N Chlorine Orthophosphate Phosphorous Sulfite Sulfate	Groundwater
I	Southwest portion of Area 6	S47: (30) Importation of Fill Material of Unknown Quality	On-site	PHCs PAHs Metals As, Sb, Se	Soil

¹PCA name and number as listed in Table 2 of Schedule D of O. Reg. 153/04. Where the activity is not listed, it is identified as "other".

PHCs = petroleum hydrocarbons

VOCs = volatile organic compounds

BTEX = benzene, toluene, ethylbenzene, and xylenes

PAHs = polycyclic aromatic hydrocarbons

As, Se, Sb = arsenic, selenium, antimony

B-HWS = hot water soluble boron

To assess the aforementioned PCAs, Phase Two ESAs were completed at each RSC Area by EXP. It is noted that Phase Two ESA work is on-going in Areas 3, 5A, 5B, and 6. Where appropriate, EXP utilized historical data to supplement current conclusions. For complete summaries of all investigations completed up to, and including, the due diligence work completed by EXP in 2017, see EXP's Phase One ESA (EXP, 2020A). More recent Phase Two ESA work has been documented in the Phase Two ESA reports referenced in Section 2 and in the reporting that is currently in progress.

Areas of Concern (AOC) which are the subject of this RAP are summarized in Section 2, per RSC Area.

Furthermore, it is noted that soil is currently being moved in support of developing road networks per City specifications to protect City workers. Soil in the roadways will meet the Table 3 or 9 Site Condition Standards (SCS) for an industrial/commercial/community land use with coarse textured soil.

2. Remediation Approach

A combination of remedial excavation and RA will be completed to allow the filing of RSCs on the above noted Areas and support the intended conveyances to the City. For the purpose of this Section, the following Tables of Standards are used in determining contaminants of concern (COCs) within the respective Areas:

Table 9: Site Condition Standards per Area

Area	MECP Site Condition Standard	Abbreviation*
Area 1A	Table 3 Site Condition Standards for a residential/parkland/institutional land use with medium to fine textured soil	Table 3 SCS
Area 1B	Table 9 Site Condition Standards for a residential/parkland/institutional/industrial/commercial/community land use	Table 9 SCS
Area 2	Table 3 Site Condition Standards for a residential/parkland/institutional land use with medium to fine textured soil	Table 3 SCS
Area 3	Table 3 Site Condition Standards for a residential/parkland/institutional land use with medium to fine textured soil	Table 3 SCS
Area 4	Table 3 Site Condition Standards for a residential/parkland/institutional land use with medium to fine textured soil	Table 3 SCS
Area 5A	Table 9 Site Condition Standards for a residential/parkland/institutional/industrial/commercial/community land use	Table 9 SCS
Area 5B	Table 9 Site Condition Standards for a residential/parkland/institutional/industrial/commercial/community land use	Table 9 SCS
Area 6	Table 1 Site Condition Standards for a residential/parkland/institutional/industrial/commercial/community land use	Table 1 SCS

*The abbreviated SCS form will be referenced herein

The anticipated timelines for RSC Areas, is provided in Section 2.1 and a breakdown of remedial approaches, per RSC Area, is provided below in Sections 2.2 to 2.8.

2.1 Anticipated Timelines for RSCs, Construction Phasing, Land Conveyance, and RMM Installations

The anticipated timelines for RSC Areas, Construction Phasing, Conveyance, and RMM Installations, are provided in Table 10 below.

Table 10: Anticipated Timelines for RSCs, Construction Phasing, Land Conveyance, and RMM Installations

RSC Area	Type of RSC	RSC Filing Date	Anticipated RSC Acceptance for Ongoing Work	Conveyance of All Public Land (Roads, Parks, Hazard Lands, Development Blocks)	RMM Installation
1A	Generic	September 23, 2020	Not Applicable	February 2023	<ul style="list-style-type: none"> Construction of Soil Cap's Within Parks – Start in Fall 2022 and Completed Summer 2024 Construction of Soil Cap's Within City Conveyance Blocks – Start Fall 2022 and Completed Summer 2024 Construction of Soil Cap's Within Roads – Start Spring 2023 and Completed Summer 2023
1B	Generic	September 23, 2020	Not Applicable		
2	Modified Generic Risk Assessment (MGRA)	March 9, 2021	Not Applicable		
3	Tier 3 RA	Not Completed	July 2022		
4	MGRA	April 6, 2021	Not Applicable		
5A	Tier 3 RA	Not Completed	December 2022		
5B	Generic	Not Completed	December 2021		
6	Tier 3 RA	Not Completed	July 2022		

2.2 Area 1A

Upon environmental investigation at this Area, the following AOCs listed in Table 11 were identified. All references to Figures within this Section are made to those present in the EXP Phase Two ESA report (EXP, 2020B), provided under separate cover.

Table 11: AOC Summary Table (Pre-remediation)

Area of Contamination and Location	COCs in excess of Table 3 SCS	Medium	Description of Area	Distribution of Contaminants
A Southeast corner of the site	Benzene	Soil	Former Coal Yard Area	Exceedances of benzene were identified at two adjacent locations (CY-220A-TP and WCY-103-TP). The horizontal extent of the AOC is shown on Figure 7. Vertical delineation of these exceedances was achieved based on the results at CY-220-TH-D at a depth of 2.29 to 2.90 mbgs. Vertical delineation is shown on cross section C-C' in Figure 7A.
B Northwest portion of the site	PCBs	Soil	South of baseball fields	The soil impacts were distributed across a 3,840 m ² area on the northwest portion of the site, south of the baseball fields. The horizontal extent of the AOC is shown on Figures 12 and 12A. Vertical delineation of these exceedances was achieved at BB4-PCB-31 and BB4-PCB-18 at depths of 2.13 to 2.74 mbgs and 0.76 to 1.52 mbgs, respectively. Vertical delineation is shown

Area of Contamination and Location	COCs in excess of Table 3 SCS	Medium	Description of Area	Distribution of Contaminants
				on cross-sections A-A' and B-B' (Figures 12B and 12C).

To address the contamination identified in Table 10 above and achieve an RSC filing, EXP was commissioned to supervise a remedial excavation at Area 1A. All soil was remediated to within the Table 3 SCS. The excavation was completed in two (2) separate sections (to coincide with the APECs identified above) as follows:

PCB remediation

The remedial excavation activities took place between December 5, 2018 and December 17, 2018. The excavation was divided into four (4) portions: a) Hotspot Area 1; b) Hotspot Area 2; c) Hotspot Area 3; and d) Main Excavation Area.

A total of six (6) soil samples, including one (1) interim confirmatory soil sample, were collected from Hotspot Area 1 for PCB analysis. Where interim confirmatory soil samples exceeded the Table 3 SCS for PCBs, the excavation was extended until a clean sample could be obtained. Five (5) final confirmatory soil samples were collected from the final extents of the Hotspot Area 1 excavation, chosen at worst-case locations based on field observations.

The final size of Hotspot Area 1 measured 8.2 metres in length, 6 metres in width and approximately 2.5 metres in depth. All final excavation depths for Hotspot Area 1 were measured relative to the same reference elevation used for the main excavation area. During the remediation, excavated soil was temporarily piled for visual and olfactory observations and soil segregation. Based on the visual, olfactory and soil analytical results, the soil was segregated into four (4) stockpiles: a) impacted fill over 50ppm; b) impacted fill under 50ppm; c) impacted soil over 50ppm; and d) impacted soil under 50 ppm. Approximately 120 m³ of PCB impacted soil was removed from Hotspot Area 1 and segregated and stockpiled on Area 3 of the site. Any PCB-impacted material that did not meet the criteria for the risk assessment were transferred to Recupere Sol located at 80, rue des Melezes, Saint Ambroise, QC by Laidlaw Carriers Bulk GP Inc. (Ontario Certificate of Approval 2856-5FDPRT).

All final confirmatory wall and floor samples within Hotspot Area 1 met the Table 3 SCS.

A total of twelve (12) soil samples, including four interim confirmatory samples and one (1) field duplicate, were collected from Hotspot Area 2 for PCB analysis. Where interim confirmatory soil samples exceeded the Table 3 SCS for PCBs, the excavation was extended until a clean sample could be obtained. The final confirmatory soil samples were collected from the final extents of the Hotspot Area 2 excavation, chosen at worst-case locations based on field observations.

The final size of Hotspot Area 2 measured 20 metres in length, 10 metres in width and approximately 3 metres in depth. All final excavation depths for Hotspot Area 2 were measured relative to the same reference elevation used for the main excavation area. During the excavation, excavated soil was temporarily piled for visual and olfactory observations and soil segregation. Based on the visual, olfactory and soil analytical results, the soil was segregated into four (4) stockpiles; a) impacted fill over 50ppm; b) impacted fill under 50ppm; c) impacted topsoil over 50ppm; and d) impacted topsoil under 50 ppm. Approximately 600 m³ of PCB impacted soil was removed from Hotspot Area 2 and segregated and stockpiled on Area 3 of the larger Hydro Road property, located on the northeastern portion of the larger development site, north of the former coal yard. Any PCB-impacted material that did not meet the criteria for the risk assessment were transferred to Recupere Sol located at 80, rue des Melezes, Saint Ambroise, QC by Laidlaw Carriers Bulk GP Inc. (Ontario Certificate of Approval 2856-5FDPRT).

Seven (7) of the eight (8) final confirmatory wall and floor samples within Hotspot Area 2 met the Table 3 SCS. The duplicate sample (H2-D1-1.5V3) exceeded the MECP Table 3 SCS; however, the averaged PCB concentration of duplicate sample (H2-D1-1.5V3) and its original sample is 0.3 ug/g which met the Table 3 SCS, and as such, no further work was warranted.

A total of six (6) soil samples, including one (1) field duplicate sample, were collected from Hotspot Area 3. The final confirmatory soil samples were collected from the final extents of the Hotspot Area 3 excavation, chosen at worst-case locations based on field observations. All six (6) samples were analysed for PCBs.

The final size of Hotspot Area 3 measured 8 metres in length, 4.2 metres in width and approximately 1.2 metres in depth. All final excavation depths for Hotspot Area 3 were measured relative to the same reference elevation used for the main excavation area. During the remediation, excavated soil was temporarily piled for visual and olfactory observations and soil segregation. Based on the visual, olfactory and soil analytical results, the soil was segregated into four (4) stockpiles; a) impacted fill over 50ppm; b) impacted fill under 50ppm; c) impacted topsoil over 50ppm; and d) impacted topsoil under 50 ppm. Approximately 43 m³ of PCB impacted soil was removed from Hotspot Area 3 and segregated and stockpiled on Area 3 of the larger Hydro Road property, located on the northeastern portion of the larger development site. Any PCB-impacted material that did not meet the criteria for the risk assessment were transferred to Recupere Sol located at 80, rue des Melezes, Saint Ambroise, QC by Laidlaw Carriers Bulk GP Inc. (Ontario Certificate of Approval 2856-5FDPRT).

All six (6) final confirmatory wall and floor samples within Hotspot Area 3 met the Table 3 SCS.

A total of sixty-five (65) soil samples, including twenty-four (24) interim confirmatory soil samples and seven (7) field duplicate samples, were collected from the Main Excavation Area for PCB analysis. Where interim confirmatory soil samples exceeded the Table 3 SCS for PCBs, the excavation was extended until a clean sample could be obtained. A total of forty-one (41) final confirmatory soil samples, including three (3) field duplicate samples, were collected from the final extents of the Main Excavation Area, chosen at worst-case locations based on field observations.

The final size of the Main Excavation measured 30 metres in length, 128 metres in width and ranged from 0.61 to 2.13 metres in depth. Sample depths for the main excavation area and all hotspot areas were determined relative to the same reference elevation. During the excavation, excavated soil was temporarily piled for visual and olfactory observations and soil segregation. Based on the field observations and analytical results, it was determined that all the soil from the Main Excavation Area was impacted and would require off-site disposal. Approximately 4,040 m³ of PCB impacted soil was removed from the Main Excavation Area and segregated at a staging area into four (4) separate stockpiles for disposal and future re-use: a) impacted fill over 50ppm; b) impacted fill under 50ppm; c) impacted topsoil over 50ppm; and d) impacted topsoil under 50 ppm. These stockpiles were later moved to Area 3 of the Hydro Road site where they will form part of a record of site condition, with the exception of 18 m³ of PCB-impacted material that did not meet the criteria for the risk assessment. These 18 m³ of PCB-impacted soil were transferred to Recupere Sol located at 80, rue des Melezes, Saint Ambroise, QC by Laidlaw Carriers Bulk GP Inc. (Ontario Certificate of Approval 2856-5FDPRT).

All final confirmatory wall and floor samples met MECP Table 3 SCS for residential/parkland/institutional land use with medium to fine textured soil.

4,040 m³ of backfill material sourced from 575 and 585 Bloor Street East, Toronto, Ontario was brought in to regrade the PCB remediation area. A total of seventeen (17) soil samples, including two (2) field duplicate samples, were collected from the 4,040 m³ of imported backfill material. The confirmatory soil samples were chosen at worst-case locations, based on field observations. All fifteen (15) soil samples and two (2) field duplicate samples were analyzed for petroleum hydrocarbon (PHC), volatile organic compounds (VOC), polycyclic aromatic hydrocarbons (PAHs), metals and inorganics and PCBs.

All backfill samples met MECP Table 3 SCS for residential/parkland/institutional land use with medium to fine textured soil.

The objective of the remedial program was to remove impacted soil and to conduct confirmatory soil sampling at the limits of the excavation. All confirmatory soil samples collected from the final extents of the Main Excavation Area, Hotspot Area 1, Hotspot Area 2, and Hotspot Area 3 excavations had concentrations of PCBs within the MECP Table 3 SCS for residential/parkland/institutional land use with medium to fine textured soil. Therefore, the PCB impacts in soil, previously found at the northwestern portion of the site, were successfully remediated to within Table 3 Standards.

Benzene Remediation

The benzene remedial excavation was conducted between September 23 and October 3, 2019. The final excavation measured approximately 24 metres in length by 33 metres in width. The excavation extended to a depth of approximately 2 metres, resulting in the removal of 1,584 m³ of impacted material. Excavated soil was temporarily piled for visual and olfactory observations and supplementary testing. The excavated soil was subsequently relocated to Area 3 of the Hydro Road site.

A total of seventeen (17) soil samples, including one (1) interim confirmatory soil sample (W3) and two (2) duplicates, were collected from the remediation area, and analyzed for BTEX. Where interim confirmatory soil samples exceeded the Table 3 SCS for BTEX, the excavation was extended until a clean sample could be obtained.

All the final confirmatory wall and floor samples within the excavation met the Table 3 SCS.

No backfill was conducted for the benzene remedial excavation.

The remediated areas in Area 1A are shown on Figure 15.

Based on the complete remedial excavation of Area 1A, an RSC was submitted to the MECP. The RSC (227136) was acknowledged by the MECP on September 23, 2020.

2.3 Area 1B

Upon environmental investigation at this Area, the following AOCs listed in Table 12 were identified. All references to Figures within this Section are made to those present in the EXP Phase Two ESA report (EXP, 2020C), provided under separate cover.

Table 12: AOC Summary Table (Pre-remediation)

Area of Contamination and Location	COCs in excess of Table 9 SCS	Medium	Description of Area	Distribution of Contaminants
A Northwest portion of the site	EC	Soil	North of outlet channel at BH18-01	Exceedances of EC were identified at BH18-01. The horizontal extent of the AOC is shown on Figure 13A. Vertical delineation of these exceedances was achieved based on the results at BH18-01 at a depth of 1.52 to 2.13 mbgs. Vertical delineation is shown on cross section A-A' in Figure 13B.
B North-central portion of the site	1- and 2-methylnaphthalene, naphthalene, phenanthrene, and zinc	Soil	North of outlet channel at BH13-10	Exceedances of 1- and 2-methylnaphthalene, naphthalene, phenanthrene, and zinc were identified at BH13-10. The horizontal extent of the AOC is shown on Figures 10A and 11A. Vertical delineation of these exceedances was achieved based on confirmatory sampling results, at a depth of 1.5 mbgs. Vertical delineation of PAHs is shown on the remediation plan in Figure 10D and vertical delineation of zinc is shown on the remediation plan in Figure 11E.
C Northwest portion of the site	Antimony and EC	Soil	North of outlet channel at MW16-13	Exceedances of antimony and EC were identified at MW16-13. The horizontal extent of the AOC is shown on Figures 11A and 13A. Vertical delineation of these exceedances was achieved based on the results at MW16-13 at a depth of 1.52 to 2.13 and 1.07 to 1.37 mbgs for antimony and EC, respectively. Vertical delineation of antimony is shown on cross sections A-A' and B-B' in Figures 11B and 11C, and vertical delineation of EC is shown on cross sections A-A' and B-B' in Figures 13B and 13C.

Area of Contamination and Location	COCs in excess of Table 9 SCS	Medium	Description of Area	Distribution of Contaminants
D Northeast portion of the site	Xylenes	Soil	North of the outlet channel at BH/MW18-02	An exceedance of xylenes was identified at BH/MW18-02. The horizontal extent of the AOC is shown on Figure 9A. Vertical delineation of this exceedance was achieved based on the results at BH/MW18-02 at a depth of 0.76 to 1.07 mbgs. Vertical delineation is shown on cross section A-A' in Figure 9B.

To address the contamination identified in Table 11 above and achieve an RSC filing, EXP was commissioned to supervise a remedial excavation at Area 1B. All soil was remediated to within the Table 9 SCS and all excavated soils were relocated to within Area 3 of the Hydro Road site. The excavation was completed in four (4) separate sections (to coincide with the APECs identified above) as follows:

Remediation Area BH18-01

The Remediation Area BH18-01 remedial excavation was conducted on August 26, 2019. The final excavation measured approximately 2.2 metres in length by 3 metres in width and extended to 2.2 metres in depth, resulting in the removal of 14.5m³ of impacted material. Excavated soil was temporarily stockpiled off-Site at a separate parcel of 985 Hydro Road for visual and olfactory observations, supplementary testing, and future relocation.

Soil samples were collected and submitted for laboratory analysis at a frequency as per Table 3 (*Minimum Confirmation Sampling Requirements for Excavation*) in Schedule E of O. Reg. 153/04. A total of five (5) soil samples, including one (1) field duplicate (BH18-01-F100-2.2M), were collected from the remediation area and analyzed for EC.

All the final confirmatory wall and floor samples within the area met the Table 9 SCS.

No backfill activities were conducted for the Remediation Area BH18-01 remedial excavation.

Remediation Area BH13-10

The Remediation Area BH13-10 remedial excavation was conducted on August 26, 2019. The final excavation measured approximately 3.2 metres in length by 2.5 metres in width and extended to 1.5 metres in depth, resulting in the removal of 12m³ of impacted material. Excavated soil was temporarily stockpiled off-Site at a separate parcel of 985 Hydro Road for visual and olfactory observations, supplementary testing, and future relocation.

Soil samples were collected and submitted for laboratory analysis at a frequency as per Table 3 (*Minimum Confirmation Sampling Requirements for Excavation*) in Schedule E of O. Reg. 153/04. A total of five (5) soil samples, including one (1) field duplicate (BH13-10-SW100-1M), were collected from the remediation area, and analyzed for PAHs and metals.

All the final confirmatory wall and floor samples within the area met the Table 9 SCS.

No backfill activities were conducted for the Remediation Area BH13-10 remedial excavation.

Remediation Area MW16-13

The Remediation Area MW16-13 remedial excavation was conducted on August 26, 2019. The final excavation measured approximately 3.0 metres in length by 2.5 metres in width and the excavation extended to 2.0 metres in depth, resulting in the removal of 15m³ of impacted material. Excavated soil was temporarily stockpiled off-site at a separate parcel of 985 Hydro Road for visual and olfactory observations, supplementary testing, and future relocation.

Soil samples were collected and submitted for laboratory analysis at a frequency as per Table 3 (*Minimum Confirmation Sampling Requirements for Excavation*) in Schedule E of O. Reg. 153/04. A total of four (4) soil samples, were collected from the remediation area and analyzed for EC and metals.

All the final confirmatory wall and floor samples within the area met MECP Table 9 SCS.

No backfill activities were conducted for the Remediation Area MW16-13 remedial excavation.

Remediation Area BH/MW18-02

The Remediation Area BH/MW18-02 remedial excavation was conducted between August 26 and September 26, 2019. The final excavation measured approximately 2.7 metres in length by 3.7 metres in width and the excavation extended to 1.2 metres in depth, resulting in the removal of 12m³ of impacted material. Excavated soil was temporarily stockpiled off-Site at a separate parcel of 985 Hydro Road for visual and olfactory observations, supplementary testing, and future relocation.

Soil samples were collected and submitted for laboratory analysis at a frequency as per Table 3 (*Minimum Confirmation Sampling Requirements for Excavation*) in Schedule E of O. Reg. 153/04. A total of six (6) soil samples, including one (1) intermediate sample (MW18-02-EW-0.5M) and one (1) field duplicate (MW18-02-F100-1.2M), were collected from the remediation area and analyzed for BTEX.

All the final confirmatory wall and floor samples within the area met the Table 9 SCS.

No backfill activities were conducted for the Remediation Area BH/MW18-02 remedial excavation.

The remediated areas in Area 1B are shown on Figure 15.

Based on the complete remedial excavation of Area 1B, an RSC was submitted to the MECP. The RSC (227137) was acknowledged by the MECP on September 23, 2020.

2.4 Area 2

Upon environmental investigation at this Area, the following AOCs listed in Table 13 were identified. All references to Figures within this Section are made to those present in the EXP Phase Two ESA report (EXP, 2020D), provided under separate cover.

Table 13: AOC Summary

Area of Contamination and Location	COCs in excess of Table 3 SCS	Medium	Description of Area	Distribution of Contaminants
A Central portion of site	Benzene, toluene	Soil	Former Coal Yard Area	The soil impacts are distributed on the central and southwest portion of the site within the former coal yard area. The horizontal extent of the AOC is shown on Figure 7B. Vertical delineation of these exceedances was achieved at TP-A2-6, TP-A2-3, CY-217-TP and BH23-06 at depths of 1.2 to 1.5 mbgs. Vertical delineation is shown on cross-sections A-A', C-C' and D-D' (Figures 7C, 7D and 7E).
B Isolated area on northeast portion of site	Barium, selenium, thallium, arsenic* and vanadium	Soil	South of former bottom ash pile	Exceedances of barium, selenium, thallium, arsenic and/or vanadium were identified at two adjacent locations (AP-3-MW/TP and TP-A2-FA-4). The horizontal extent of the AOC is shown on Figure 9B. Vertical delineation of these exceedances was achieved based on the results at NCY-201-TH. Metals and hydride-forming

Area of Contamination and Location	COCs in excess of Table 3 SCS	Medium	Description of Area	Distribution of Contaminants
				metal impacts extend to a depth of 4.4 mbgs, as shown in cross section B-B' in Figure 9D.
C North portion of site	HWS Boron	Soil	North of former Coal Yard Area, in and around vicinity of former bottom ash pile	Exceedances of HWS boron has been identified on the north portion of the site, north of the coal yard. The horizontal extent of the AOC is shown on Figure 10B. Vertical delineation of these exceedances has been achieved at TP-A2-FA-6 and NCY-201-TH to depths of 2.8 mbgs and 4.4 mbgs, respectively. Vertical delineation is shown on cross section A-A' and B-B' in Figures 10C and 10D.
D South portion of site	EC	Soil	Former Coal Yard Area	Elevated levels of EC have been identified at a number of locations across the entire south portion of the site as shown in Figure 11B. The vertical extent of these impacts has not been achieved at BH23-06, CY-214-TP and CY-221D-TH at depths ranging from 1.2 to 3.1 mbgs. Vertical delineation is shown on cross sections D-D' in Figure 11E.

* Arsenic in soil was remediated within Table 3 SCS, as summarized in Section 2.4.1.

To address the contamination referenced above, a combined remediation and MGRA approach has been undertaken within this Area. A summary is provided below, however, for specific details in relation to: (a) the remediation see the Phase Two ESA report for this Area (EXP, 2020D) and (b) the MGRA, see the MGRA report for this Area (EXP, 2020E).

2.4.1 Remedial Excavation

Remedial excavation was completed within APEC B for arsenic. This was executed in support of the MGRA given that the maximum arsenic concentrations exceeded the allowable property-specific standards (PSS) for this type of RA and property use combination. The remedial excavation is summarized below:

The remedial excavation activities took place between November 21 and December 14, 2019. The excavation was located within Area 2 and extended onto Area 6. The final size of the Excavation measured approximately 15 to 22 metres in length, 14.5 to 15.6 metres in width and ranged from 1.6 to 2.8 metres in depth. The final limits of the remediation covered an area of approximately 268 m². During the excavation, excavated soil was temporarily piled for visual and olfactory observations and soil segregation. Approximately 620 m³ of metals impacted soil were removed from the Excavation and segregated and stockpiled on the northeastern portion of the site for future re-use. The excavated soil was then re-located to Area 3 within the 985 Hydro Road property.

A total of twenty (20) soil samples, including eighteen (18) final confirmatory samples, two (2) interim samples and field duplicates, were collected from the Remedial Excavation Area as part of the remedial activities. All twenty (20) samples were analyzed for hydride-forming metals parameters.

All final confirmatory wall and floor samples met the Table 3 SCS for all parameters analyzed with exception of two (2) final wall samples (EW6-1.4M and EW7-1.2M) in Area 6. As Area 6 is subject to the Table 1 SCS, the following parameters exceeded the Table 1 SCS at EW6-1.4M and/or EW7-1.2M: antimony, arsenic, barium, beryllium, boron, molybdenum, selenium, thallium, and uranium. An exceedance of the Table 1 SCS was also identified for molybdenum at floor sample F6-1.6M, collected within Area 6.

The objective of the remedial program was to remove the arsenic impacted soil from within Area 2 and to conduct confirmatory soil sampling at the limits of the excavation. All confirmatory soil samples collected from the final extents of the Remedial

Excavation Area within Area 2 had concentrations of arsenic within the Table 3 SCS. Therefore, the arsenic impacts in soil, previously found at the northwestern portion of Area 2, were remediated to within Table 3 SCS, and arsenic is no longer considered a COC in soil in Area 2.

It is noted that the two (2) wall samples and one floor sample (EW6-1.4M, EW7-1.2M and F6-1.6M) collected in Area 6 exceeded the applicable Table 1 and 3 SCS for several metal parameters. Therefore, the impacts in Area 6 are being addressed via a separate risk assessment (see Section 2.9).

The remediated area in Area 2 is shown on Figure 15.

2.4.2 Modified Generic Risk Assessment

To address the remaining contamination within AOCs A to D, an MGRA was carried out for Area 2 and was accepted by the MECP on November 19, 2020. An MGRA is a type of RA that is submitted based on the “Approved Model” under Part XV.1 of the Environmental Protection Act (EPA) and O. Reg. 153/04. An MGRA is a scientific evaluation of the COCs that are present on a site, taking into consideration site-specific conditions, to derive a set of soil and/or ground water Standards that are specific to a property, and are almost always less stringent than the generic Standards derived by the MECP, while being equally protective. Upon acceptance by the MECP, an MGRA allows for an RSC to be filed based on these PSS, thereby allowing soil and ground water with concentrations that would otherwise have exceeded the MECP generic Standards to remain on the property.

The status of the MGRA for this Area is as follows:

1. The PSF and MGRA Report were first submitted to the MECP for review on March 1, 2019. Comments on the PSF and MGRA were provided by the MECP on May 6, 2019.
2. In response to MECP comments, EXP submitted MGRA Addenda with a response to comments and necessary revisions within the body of the MGRA. MGRA Addendum 1 was submitted to the MECP on November 4, 2019 and comments were received on Dec 10, 2019. MGRA Addendum 2 was subsequently submitted to the MECP on March 9, 2020 and comments were received on May 21, 2020. MGRA Addendum 3 was subsequently submitted to the MECP on July 14, 2020 and accepted by the MECP on November 19, 2020. Following MGRA acceptance, Certificate of Property Use (CPU; 8343-BVHNF3) was issued on November 19, 2021 in relation to the MGRA. A copy of the CPU for Area 2 is provided in Appendix E.
3. The RSC (227664) was acknowledged by the MECP on March 9, 2021.

Details outlining the RA approach and conclusions are provided in the sections below.

2.4.2.1 Project Objectives

The objective of the MGRA was to derive PSS for each COC, to replace the generic MECP SCS as the applicable Standard for the site and to support the RSC filing and intended conveyances to the City.

2.4.2.2 RA Approach

The RA that was completed for the site is considered a “Limited Scope Risk Assessment under O. Reg. 153/04 Schedule C, section 7”.

COCs carried forward for evaluation in the RA were selected based on screening against the Table 3 SCS. Based on this screening, the soil COCs carried forward for evaluation in the MGRA were: benzene, toluene, barium, selenium, thallium, vanadium, boron (hot water soluble) and EC. No groundwater COCs* were retained. The maximum COCs in soil are presented in Table 1 in Appendix F.

*Given that the intended redevelopment includes four levels of underground parking, the parking garage will be submerged below the water table. Therefore, the assumptions used to derive the Table 3 SCS are not sufficiently conservative for vapour intrusion pathways and hence volatile parameters in groundwater were also screened against the Table 7 SCS (applicable to sites with shallow groundwater) were used in addition to the screening with the Table 3 SCS for determination of COCs carried forward in the RA. As a result of screening against the Table 7 SCS, no additional groundwater COCs were identified.

2.4.2.3 Receptors and Pathways

Human Health

The selection of human receptors was based on the future mixed residential and commercial/community use of this Area. Therefore, the receptors chosen for analysis are those standard receptors found at residential properties (which is a more conservative scenario than commercial/community) and includes: property residents (all ages), property visitors (all ages), property trespassers (child and adult). Furthermore, as the site may also be used for commercial property use, the long-term indoor worker and long-term outdoor worker (e.g., maintenance workers) were also considered possible receptors. Subsurface workers (e.g., construction/utility workers may also be present during redevelopment of the site and as such, were also considered.

Based on the COCs identified at the site, possible routes of exposure for human receptors include the following:

- Incidental soil ingestion and dermal contact for the property resident, visitor, trespasser, long-term outdoor worker, and subsurface worker;
- Inhalation of soil particulates for the subsurface worker;
- Inhalation of indoor air for the property resident, visitor, trespasser, and long-term indoor worker;
- Inhalation of outdoor air for the property resident, visitor, trespasser, long-term outdoor worker; and,
- Vapour skin contact for the property resident, visitor, trespasser, long-term outdoor and indoor worker, and subsurface worker

Given that no groundwater COCs were identified, all potential groundwater pathways were considered incomplete.

Note, EC and HWS boron are parameters of ecological significance only for assessing phytotoxicity, and therefore, were not considered in the HHCSM.

The potential exposure routes for human receptors are summarized in Figure 5A. As RMM were intended for the site, a human health conceptual site model (HHCSM) in the presence of RMM is provided as Figure 5B.

Off-site human receptors consist of the same receptors found on-site. All off-site pathways were considered incomplete. Refer to Figure 5C for HHCSM for off-site human receptors.

Ecological Health

The selection of ecological receptors takes into consideration the location of the site in an urban area and the presence of Lake Ontario, located near this Area. Relevant on-site receptors, as illustrated in the ECSM (Figure 6A) consist of terrestrial VECs such as plants, soil invertebrates, mammals and birds.

On-site exposure routes include the following:

- Root, stem and foliar uptake and contact by terrestrial plants;
- Soil particulate inhalation, dermal contact and incidental ingestion by soil invertebrates and mammals and birds;
- Ingestion of impacted plant and animal tissue by soil invertebrates and mammals and birds; and,
- Vapour inhalation by soil invertebrates and mammals and birds.

As RMM are intended for the site, an ECSM in the presence of RMM is provided as Figure 6B.

Off-site ecological receptors consist of the same terrestrial receptors found on-site, in addition to aquatic species. Relevant exposure pathways for off-site aquatic receptors such as aquatic plants, aquatic invertebrates, aquatic birds and mammals and fish include the following:

- Root, stem and foliar uptake of surface water for aquatic plants;
- Ingestion and dermal contact of surface water for aquatic invertebrates, mammals, birds and fish;
- Ingestion of impacted plant and animal tissue for aquatic invertebrates, mammals, birds and fish; and
- Gill uptake of surface water for fish.

It is noted that all exposure pathways for off-site aquatic receptors were considered incomplete as there are no groundwater COCs. Refer to Figure 6C for ECSM for off-site ecological receptors.

2.2.4 Risk Management Measures

Based on the applicable pathways noted in Section 2.3.2.3, the following RMM were proposed within the MGRA:

- Engineered measures for vapour intrusion (active soil vapour intrusion mitigation system) for the proposed on-site building to mitigate potential risks associated with indoor air inhalation of vapours sourced from soil or a storage garage underneath all buildings within this Area;
- A fill cap or a hard cap covering the full extent of Area 2;
- A Health and Safety Plan (HASP) for the protection of construction/utility workers performing subgrade work; and,
- A Soil Management Plan (SMP).

As per the Guiding Principles, a separate agreement for municipality-specific capping requirements (utilities, 1.5 m cap) will be prepared as these are not specified in the MGRA. As was discussed during meetings with the City, this extra agreement, while not captured in the CPU, will supersede the capping thickness in the CPU where conveyance/dedication lands are concerned.

Typical soil barrier details for Dedication and Conveyance Lands, excluding along utilities, is provided in Figure 2. Typical soil barriers for private lands are shown in Figure 3. Typical soil barrier schematic, including utility corridors is shown on Figure 4. Furthermore, it is acknowledged that the City of Mississauga topsoil and finish grading requirements will be adhered to as part of the soil capping requirements for public parkland and within public boulevards with tree plantings. The City of Mississauga requirements are provided in Appendix G. LCLP is aware and acknowledges geotechnical specifications for soil cap/backfill material in public park blocks and road dedications with reference to City standards for public park and road construction.

2.5 Area 3

Upon environmental investigation at this Area, the following AOCs listed in Table 14 were identified. All references to subsurface work completed to December 2020 are presented in EXP's Phase Two ESA report (EXP, 2020F), provided under separate cover. Additional subsurface work has been completed in 2021, which included the advancement of twenty-eight (28) test holes, sixty-five (65) test pits, three (3) monitoring wells, and re-installation of six (6) monitoring wells. The additional subsurface work was completed to investigate data gaps identified in relation to the APECs and delineation of COCs, confirm/update groundwater quality, confirm soil pH, and assess soil movement and imported backfill within Area 3. Based on the 2021 subsurface results, the following new COCs will be carried forward in the RA: toluene and various PAHs

(acenaphthene, benzo(a)anthracene, benzo(a)pyrene, benzo(b/j)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene) in soil.

It is noted that cis-1,2-dichloroethylene (cis-1,2-DCE) and PHC fraction F4 in groundwater were previously identified as a COC based on isolated exceedances at MW255. As two (2) recent rounds of sampling at this location returned concentrations within the Table 3 SCS, these parameter are no longer considered COCs in this Area.

A list of COCs to be carried forward in the RA based on work completed to date is provided in Section 2.5.2.2. It is noted that Area 3 is currently undergoing grading and additional sampling therefore maximums are subject to change. The Phase Two ESA Update report documenting recent subsurface work is still in progress and figures will be provided in the updated report. Based on work completed to date, a general summary of AOCs are provided below.

Table 14: AOC Summary Table

Area of Contamination and Location	COCs in excess of Table 3 SCS	Medium	Description of Area	Distribution of Contaminants
Southeast portion of site	PHC fractions F1 through F3	Soil	Former coal yard, remedial excavation area	The soil impacts are distributed on the east portion of the site within and extend to just outside of the former remedial excavation area. It is noted Impacts are assumed to extend to bedrock based on the results of confirmatory floor samples collected within the remedial excavation at depths just above bedrock.
Central portion of the site (former Powerhouse footprint and south of the Powerhouse)	PHCs Benzene and toluene PAHs Metals ORPs	Soil	Central portion of the site (former Powerhouse footprint and south of the Powerhouse)	COCs are spread across the former Powerhouse footprint and south of the powerhouse (i.e. central portion of the site). Soil impacts are anticipated to extend to bedrock across much of this AOC. These COCs are attributed to former industrial activities at the site, historic importation of fill and soil movement of impacted material from other portions of the 985 Hydro Road Property.
Northeast corner of site	Benzene, xylenes	Soil	Within former coal yard	The soil impacts within this AOC are limited to the northeast corner of the site at A3A-TP332. Vertical delineation is achieved at a depth of 2.1 mbgs.
Northeast corner of site	1- and 2-Methylnaphthalene	Soil	Within former coal yard	The soil impacts are limited within this AOC to the northeast corner of the site at A3A-TP332. Vertical delineation is achieved at a depth of 1.52 mbgs.
Northeast and southeast corner of site	EC	Soil	Northeast and southeast corners of site within former coal yard	Exceedances of EC were identified within the northeast and southeast portion of the site within the former coal yard.. Vertical delineation was achieved at a depth of 2.4 and 1.52 mbgs, respectively.
South-Central portion of site	PHC fractions F2 and F3	Groundwater	South of Powerhouse	PHC exceedances are present across the south-central portion of the site. Vertical delineation of these impacts were achieved based on the results at MW13-12-D and MW226-D on the central and east portions of this AOC. Vertical delineation on the west portion of this AOC was attempted on the west portion of the AOC in the vicinity of hopper room 7 at MW211-D and MW211-DD, however PHC fraction F2 impacts remained. Further vertical delineation of this area was not undertaken as PHCs are less dense than water and therefore tend to float on the groundwater table. As such, additional vertical delineation is not anticipated to result in new maximum concentrations at the site or contribute any further significant information

Area of Contamination and Location	COCs in excess of Table 3 SCS	Medium	Description of Area	Distribution of Contaminants
				regarding the interpretation of the distribution and extent of PHC impacts in groundwater within the western portion of this AOC and is therefore has not been recommended.
Central-east portion of site	PHC fractions F2 and F3	Groundwater	East of former Powerhouse in the vicinity of historical USTs	PHC fraction F2 and F3 exceedances were identified east of the former Powerhouse in the area of historical USTs containing ignition oil (No. 2 fuel oil).. Vertical delineation was achieved at a depth of 6.10 mbgs at TH-PH1-4.
West-central portion of the site	Selenium	Groundwater	Near Hopper Room 7	Exceedances of selenium were identified at MW212. Vertical delineation was achieved at MW212-D at a depth of 9.14 mbgs.

To address the contamination referenced above, a combined remediation and Tier 3 Risk Assessment (RA) has been undertaken within this Area. A summary is provided below, however, for specific details in relation to the: (a) remedial excavation, see the Phase Two ESA report for this Area (EXP, 2020F); and (b) Tier 3 RA see the RA report for this Area (EXP, 2020G).

2.5.1 Remedial Excavation

A remedial excavation and confirmatory sampling program was conducted by CRA (2008) to remediate PHC impacts in the area of the former maintenance garage on the south portion of the former coal yard. The remediation area was primarily contained within Area 5A but also extended onto Areas 3,4, and 6. Figure 15 shows the Area boundaries and the portion of the remediation area within Area 3.. The total remedial excavation was defined into three (3) areas by CRA (2008):

1. The excavation associated with the historic Lake Ontario Shoreline and was approximately 280 metres (east-west) by 18 metres (north-south);
2. The excavation in the area adjacent to the former maintenance garage (located on Area 5A), which was approximately 100 metres (north-south) by 40 metres (east-west).
3. A third area, located entirely within Area 5A was also excavated to a depth of 2.7 mbgs to remove a concrete structure encountered during excavation of the main excavation. The concrete structure was approximately 100 metres in length by 3 metres in width, positioned east-west to the south of the former diesel fuel AST and former gasoline and diesel fuel USTs to the east of the maintenance garage.

The portion of the remedial excavation within Area 3 comprised an area of approximately 2,210 m² and was excavated to depths ranging from 1.1 to 2.7 mbgs on the westernmost portion of the excavation and from 4.1 to 5.7 mbgs on the eastern portion of the excavation within Area 3. Approximately 9,520 m³ of soil was excavated from the Area 3 as part of the remedial activities, assuming an average depth of the western portion of the excavation of 2 mbgs and an average depth of the eastern portion of the excavation of 5.2 mbgs. Impacted soil was disposed off-site to an MECP licensed facility (Solution Soil Treatment Facility, located in Falconbridge, Ontario).

Based on an area of 2,210 m², twenty-one (21) wall samples and thirteen (13) floor samples were required to be collected as per O. Reg. 153/04 Schedule E, Table 3, *Minimum Confirmation Sampling Requirements for Excavation*. A total of twenty-five (25) wall samples and twenty-five (25) floor samples were collected at the limits of the excavation. Based on the results of the confirmatory sampling, several confirmatory sampling locations do not meet the currently applicable SCS for PHC fractions F1 through F3 within a portion of the remedial excavation contained within the site boundaries.

The excavation was backfilled with native clayey silt excavated as part of the remediation activities as well as soil imported from 1 Bloor Street, in Toronto, Ontario. Nine (9) soil samples were collected from on-site soils that were excavated and stockpiled for re-use and eighteen (18) soil samples were collected from soil imported from 1 Bloor Street. All samples were

within the applicable Table 3 SCS with the exception of one (1) exceedance of HWS boron in one (1) soil sample collected from 1 Bloor Street and three exceedances of PHC fraction F2 in soil samples collected from the on-site excavated soil used as backfill. A total of 13,091.3 m³ of soil from 1 Bloor Street was imported to backfill the excavation. It is noted that as part of EXP's Phase Two ESA (EXP, 2020F), five (5) locations were advanced within the remediation area and soil samples collected for PHCs, BTEX, PAHs, metals and/or PCBs. All samples collected by EXP within the former remediation area as part of this investigation were within the applicable SCS. Additional sampling of the backfill was completed by EXP in 2021 and exceedances of PHC fraction F2 and EC were identified within this area.

It is also noted that dewatering activities were conducted as part of the remedial excavation, which resulted in a total of 130,733 L of PHC-impacted water being removed from the 985 Hydro Road Property and disposed to an MECP approved facility.

2.5.2 Tier 3 Risk Assessment

A Tier 3 RA is a scientific evaluation of the COCs that are present on a site, taking into consideration site-specific conditions, to derive a set of soil and/or ground water standards that are specific to a property. The health risks posed by each COC are evaluated for each pathway against each receptor using prescribed toxicological methods. A PSS will be derived for each COC in each medium and will replace the generic MECP SCS as the applicable Standard for the property, on the RSC.

The use of an RA to develop PSS for a site in Ontario is an option included in O. Reg. 153/04, and is based on providing protection for both human and ecological health, equivalent to that provided by the generic SCS.

The RA process is comprised of several steps as follows:

1. The first step of the RA is to submit an RA PSF for MECP review. This is the initial document in the RA process and provides an outline of the RA property characteristics and intended RA approach. EXP submitted the PSF on March 1, 2019.
2. Comments on the PSF were provided by the MECP on May 6, 2019, which were incorporated into the RA report, the preparation of which is the second step in the RA process. The initial RA was provided to the MECP on August 4, 2020, and comments were received on November 20, 2020.
3. EXP is in the process of assembling the response to the MECP comments on the RA. It is anticipated that two (2) RA Addendum reports are anticipated to resolve all comments.
4. Upon RA acceptance, an RSC for the site can be filed online in the MECP Brownfield Registry. It should be noted, however, that the RMM (see Section 2.4.1.5) will be outlined on a Certificate of Property Use (CPU), which will be issued by the MECP, to be registered on title by the property owner. The CPU must be issued prior to the RSC being filed.

Details outlining the intended RA approach and anticipated conclusions are provided in the sections below. It is noted that the information and conclusions presented may be subject to change upon review by the MECP and the additional field work.

2.5.2.1 Project Objectives

The objective of the RA is to derive PSS for each COC, to replace the generic MECP SCS as the applicable Standard for the site and to support the RSC filing and intended conveyances to the City.

2.5.2.2 RA Approach

The RA that will be completed for this Area will be considered a “risk assessment other than those identified in O. Reg. 153/04, Schedule C, Part II” as defined by O. Reg. 153/04. Schedule C, Part II describes limited scope RAs, estimate of natural local background concentrations RAs, new science RAs and wider area of abatement RAs. All of the COCs currently selected for development of PSS are listed within the applicable MECP SCS and have derived Standards.

COCs carried forward for evaluation in the RA were selected based on screening against the Table 3 SCS. Based on this screening, the COCs carried forward for evaluation in the RA are:

Soil COCs:

PHCs

- PHC fractions F1 to F4

VOCs

- Benzene
- Toluene
- Xylenes

PAHs

- Acenaphthene
- Acenaphthylene
- Anthracene
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b/j)fluoranthene
- Benzo(k)fluoranthene
- Dibenz(a,h)anthracene
- Fluoranthene
- Indeno(1,2,3-cd)pyrene
- 1- and 2-Methylnaphthalene
- Naphthalene
- Phenanthrene

Metals and Hydride-Forming Metals

- Arsenic
- Beryllium
- Cadmium
- Cobalt
- Lead
- Molybdenum
- Selenium

- Thallium
- Vanadium
- Zinc

Other Regulated Parameters

- Mercury
- Hot Water Soluble (HWS) boron
- EC
- SAR

Polychlorinated Biphenyls

- PCBs

Groundwater COCs

PHCs

- PHC fractions F2 and F3

Hydride-Forming Metals

- Selenium

In addition to the COCs noted above, the following parameters exceeded the Table 7 SCS, considered applicable for screening of volatile groundwater parameters due to the shallow groundwater at the site:

- Benzene
- 1,1-Dichloroethylene
- 1,3-Dichloropropene,
- Carbon tetrachloride
- Ethylene dibromide
- Mercury

However, with the exception of benzene, none of the above-noted parameters exceeding the Table 7 SCS have ever been detected on-site and the exceedance(s) are due to elevated RDLs. As such, these parameters are not retained as COCs for the risk assessment intended to be conducted at the site. As there are several measured exceedances of the Table 7 SCS for benzene, this parameter was retained as a COC.

Based on current environmental data, the maximum COC concentrations in soil and groundwater can be found in Tables 2a and 2b, respectively in Appendix F. Note these are subject to change based on additional sampling (if required by MECP) and soil movement within the larger property for site grading.

2.5.2.3 Receptors and Pathways

Human Health

The selection of human receptors is based on the future mixed parkland/residential/commercial use of the site. Therefore, the receptors chosen for analysis are those standard receptors found at residential properties and includes: property residents (all ages), property visitors (all ages), property trespassers (child and adult). Furthermore, as the site may also be used for commercial and parkland property use, the long-term indoor worker and long-term outdoor worker (e.g., maintenance

workers) and recreational visitors (all ages) are also considered possible receptors. Subsurface workers (e.g., construction/utility workers) may also be present during redevelopment of the site and as such, are also considered.

Based on the COCs identified at the site, possible routes of exposure for human receptors include the following:

- Indirect exposure to volatile COCs released from soil or groundwater to indoor air through inhalation and dermal contact for the resident, visitor, indoor worker, and City of Mississauga maintenance worker;
- Incidental soil ingestion, dermal contact, and inhalation of soil particulates for the property resident, visitor, long-term outdoor worker, and subsurface worker;
- Inhalation of outdoor air for the property resident, visitor, and long-term outdoor worker;
- Inhalation of outdoor air (ground level) and trench air for the subsurface worker;
- Vapour skin contact for the property resident, visitor, indoor worker, long-term outdoor worker, and subsurface worker;
- Incidental groundwater ingestion and dermal contact while working in a trench for the subsurface worker; and,
- Ingestion of homegrown garden produce for the property resident and visitor.

Note, EC, SAR and HWS boron are parameters of ecological significance only for assessing phytotoxicity, and therefore, are not considered in the HHCSM.

The potential exposure routes for human receptors are summarized in Figure 7A. As risk management measures are intended for the Site, a HHCSM in the presence of RMM is provided as Figure 7B.

Off-site human receptors consist of the same human receptors found on-Site. Relevant exposure pathways for off-site receptors include the following (As shown in Figure 7A):

- Inhalation of soil/dust particles blown off-site during high intensity soil works/development;
- Inhalation of indoor air for the property resident, visitor, trespasser, long-term indoor worker, and City of Mississauga maintenance worker;
- Inhalation of outdoor air for the property resident, visitor, trespasser, long-term outdoor worker;
- Inhalation of trench air for the subsurface worker;
- Vapour skin contact for the property resident, visitor, trespasser, long-term outdoor and indoor worker, and subsurface worker;
- Incidental groundwater ingestion and dermal contact while working in a trench for the subsurface worker;
- Incidental surface water ingestion and dermal contact within an off-site water body for the property resident and visitor; and,
- Ingestion of fish within an off-site water body for the property resident and visitor.

Ecological Health

The selection of ecological receptors takes into consideration the location of the site in an urban area and the presence of Lake Ontario, located near to the RA property. Relevant on-site receptors, as illustrated in the ECSM (Figure 8A) consist of terrestrial VECs such as plants, soil invertebrates, mammals and birds.

On-site exposure routes include the following:

- Direct exposure to soil and groundwater COCs through root uptake (terrestrial vegetation);
- Direct exposure to soil COCs through dermal contact, incidental ingestion and/or particulate inhalation (soil invertebrates and terrestrial birds and mammals);
- Ingestion of impacted food/prey by soil invertebrates and terrestrial birds and mammals;
- Indirect exposure to volatile COCs released from soil and groundwater to outdoor air through atmospheric deposition (terrestrial vegetation); and,

- Indirect exposure to volatile COCs released from soil and groundwater to outdoor air through inhalation and dermal contact (soil invertebrates and terrestrial birds and mammals).

As RMM are intended for the site, an ECSM in the presence of RMM is provided as Figure 8B.

Off-site ecological receptors consist of the same terrestrial receptors found on-site, in addition to aquatic species. Relevant exposure pathways for off-Site aquatic receptors such as aquatic plants, aquatic invertebrates, aquatic birds and mammals and fish include the following (as shown in Figure 8A):

- Direct exposure to groundwater COCs through root uptake (terrestrial vegetation);
- Direct exposure to soil COCs through particulate inhalation (terrestrial birds and mammals);
- Indirect exposure to volatile COCs released from soil and groundwater to outdoor air through atmospheric deposition (terrestrial vegetation);
- Indirect exposure to volatile COCs released from soil and groundwater to outdoor air through inhalation and dermal contact (soil invertebrates and terrestrial birds and mammals);
- Direct exposure to surface water through dermal contact and ingestion (terrestrial birds and mammals, aquatic invertebrates, aquatic birds and mammals, amphibians, and fish);
- Indirect exposure through ingestion of impacted plant and animal tissue by terrestrial birds and mammals, aquatic invertebrates, aquatic birds and mammals, and fish;
- Direct exposure to surface water through root uptake (aquatic terrestrial); and,
- Direct exposure to surface water through gill intake (aquatic invertebrates and fish).

2.5.2.4 Risk Management Measures

Based on the applicable pathways noted in Section 2.4.1.4, the following RMM are required at the site. It should be noted that in the event that any RMM changes from those outlined in the RAP, as a result of discussions/comments from the MECP, EXP will advise LCPL of said changes.

Proposed RMM	Pathway Mitigated	Affected Receptors	Performance Objectives
Vapour Mitigation System	Indoor Air Inhalation (sourced from soil and groundwater)	Residents, Site Visitors, Indoor Workers, Maintenance Workers	Reduction of COC concentrations in indoor air to within target levels.
Storage Garage with Intermittent Ventilation (commercial)	Indoor Air Inhalation for a Commercial Slab-on-Grade Building (sourced from soil and groundwater)	Indoor Workers, Site Visitors	Reduction of COC concentrations in indoor air to within target levels.
Storage Garage with Intermittent Ventilation and No First Floor Residential Use (residential)	Indoor Air Inhalation for a Residential Building (sourced from soil and groundwater)	Residents, Site Visitors	Reduction of COC concentrations in indoor air to within target levels.
Soil Barrier	Direct contact with soil	Residents, Maintenance Workers, Site Visitors, soil invertebrates and terrestrial plants, mammals and birds	100% blockage of direct contact pathways through implementation of a physical barrier.

Proposed RMM	Pathway Mitigated	Affected Receptors	Performance Objectives
Health and Safety Plan	Direct contact with soil	Construction/Utility Workers	100% blockage of direct contact pathways by use of personal protective equipment (PPE).
	Incidental direct contact with groundwater	Construction/Utility Workers	100% blockage of direct contact pathways by use of PPE and trench dewatering.
	Trench Air Inhalation (soil)	Construction/Utility Workers	Reduction of COC concentrations within trench air to within target levels by limiting construction to Wide Trenches* or, for a Narrow Trench, the use of respiratory PPE, monitoring of air and/or windspeed, as determined by an appropriately qualified person.
Soil Management Plan	Direct Contact with Soil	All receptors	100% blockage of direct contact pathways by soil management and administrative restrictions and exposure during earthworks.
Groundwater Management Plan	Incidental Direct Contact with Groundwater	All receptors	100% blockage of direct contact pathways by groundwater management and administrative restrictions and exposure during earthworks extending below the water table.
Prohibition of planting of fruit and vegetables for consumption	Garden produce ingestion	All human receptors	Maintain assumptions made within the RA that this pathway is incomplete. Ensures 100% blockage of this pathway.

* **Definition of a Wide Trench:** A “trench” which is wider than it is deep, but may still be narrow compared to its length. In this RA, the trench was assumed to be a minimum of 2 metres in depth to be considered a trench.

As per the Guiding Principles, a separate agreement for municipality-specific capping requirements (utilities, 1.5 m cap) will be prepared. As was discussed during meetings with the City, this extra agreement, while not captured in the CPU, will supersede the capping thickness in the CPU where conveyance/dedication lands are concerned.

Typical soil barrier details for Dedication and Conveyance Lands, excluding along utilities, is provided in Figure 2. Typical soil barriers for private lands are shown in Figure 3. Typical soil barrier schematic, including utility corridors is shown on Figure 4. Furthermore, it is acknowledged that the City of Mississauga topsoil and finish grading requirements will be adhered to as part of the soil capping requirements for for public parkland and within public boulevards with tree plantings. The City of Mississauga requirements are provided in Appendix G. LCLP is aware and acknowledges geotechnical specifications for soil cap/backfill material in public park blocks and road dedications with reference to City standards for public park and road construction.

It is noted that based on the most recent plans, it is anticipated that only public washrooms/storage buildings may be present within the Dedication Lands, for which the vapour intrusion RMM consists of a sub-slab vapour membrane only. Associated monitoring of this RMM includes indoor air sampling. The anticipated estimated costs for indoor air monitoring are provided in Appendix B.

Currently, there are no plans to construct residential or commercial buildings within the Dedication Lands within Area 3; however, vapour intrusion RMM for future residential buildings has been included for completeness. The vapour intrusion mitigation systems recommended for a future residential or commercial building consists of:

- Storage garage (intermittent ventilation) for a commercial building;
- For a residential building, the storage garage (intermittent ventilation) must also be combined with either an administrative restriction prohibiting the use of the first storey of the building for residential use OR a vapour membrane barrier* installed below the grade slab and walls;
- A sub-slab vapour membrane barrier with a passive sub-slab venting system (with the option of converting into an active system) for any building option.

MECP has indicated that an active venting system should be proposed for residential use buildings per their comments on the RA, dated November 20, 2020. However, EXP is not committing to the active system for residential buildings at this time; if an active venting system is required, the QP will coordinate with the City of Mississauga.

While performing subgrade work within a narrow trench, an increased windspeed, additional respiratory PPE or monitoring of volatile COCs during subgrade work is required. Based on the assumptions and models used in the RA, a windspeed of 5.4 m/s is required to be maintained within a narrow trench to maintain acceptable risk levels. Monitoring of windspeed can be conducted with an anemometer. Furthermore, fans can be used to increase windspeed within trenches to appropriate speeds. The anticipated estimated cost for increasing and monitoring windspeeds, monitoring volatile COCs, and implementation of respiratory PPE within a narrow trench is presented in Appendix B.

Specifications of a wide trench are depicted in Figure D-1. The locations of the future utilities throughout the larger 985 Hydro Road property is shown on Figure D-2.

Within the rights-of-way, the following providers will own and maintain the utility infrastructures:

Utility	Company
Hydro	Alectra
Gas Mains	Enbridge
Telecommunication	Bell Rogers
District Energy*	Enwave
Vacuum Waste*	Miller Waste
Storm Sewers/LIDs	City of Mississauga
Sanitary Sewers and Sanitary Forcemain	Peel Region
Watermain	Peel Region

*Services are not 100% guaranteed to proceed in this project. As of July 2021, Enwave and Miller Waste will operate District Energy and Vacuum Waste, respectively.

LCPL acknowledges that the above listed utility providers will be consulted concerning the operation within trenches and health and safety requirements as a Condition of Draft Plan Approval, concurrently with the Engineering Submission. It is anticipated that the engineering submission will occur in the fourth quarter (Q4) of 2021. Furthermore, the utility providers will provide written approval of these measures. It is noted that as future utility providers may change, any new provider will be notified of the Trench RMM and health and safety requirements.

2.6 Area 4

Upon environmental investigation at this Area, the following AOCs listed in Table 15 were identified. All references to Figures are made to those present in the EXP Phase Two ESA report (EXP, 2020G), provided under separate cover.

Table 15: AOC Summary Table

Area of Contamination and Location	COCs in excess of Table 3 SCS	Medium	Description of Area	Distribution of Contaminants
D Entire site excluding central-east portion	EC	Soil	Former Coal Yard Area	Elevated levels of EC have been identified across the entire site as shown in Figure 11B. The vertical extent of these impacts has been achieved based on samples collected from TP-A4-6, MW23-07, BH5-16D, BH6-16D, and CY-211-TP-D at depths ranging from 0.8 to 2.5 mbgs, respectively.

To address the contamination referenced above, a combined remediation and MGRA has been undertaken within this Area. A summary is provided below, however, for specific details in relation to: (a) remedial excavation, see the Phase Two report for this Area (EXP, 2020G); and (b) the MGRA see the MGRA report for this Area (EXP, 2020H).

2.6.1 Remedial Excavation

A remedial excavation and confirmatory sampling program was conducted by CRA (2008) to remediate PHC impacts on the south portion of the former coal yard. The remediation area was primarily contained within Area 5A (off-site but within the 985 Hydro Road property) but also extended on Areas 3 and 6 (off-site but within the 985 Hydro Road property) and 4 (the site). Figure 15 shows the Area boundaries and the portion of the remediation area within Area 4. The portion of the remedial excavation extending onto the site is located along its south portion. Although none of the soil samples submitted for laboratory analysis exceeded the applicable SCS for petroleum related parameters, PHC impacts were assumed to be present within Area 4 based on visual and olfactory evidence of PHCs at several test pits (TP3-07, TP5-07, TP8-07, TP10-07, TP11-07, TP36-07; CRA, 2008).

The remedial excavation was broken into three (3) areas by CRA (2008):

1. The excavation associated with the historic Lake Ontario Shoreline and was approximately 280 metres (east-west) by 18 metres (north-south);
2. The excavation in the area adjacent to the former maintenance garage (located on Area 5A), which was approximately 100 metres (north-south) by 40 metres (east-west). These areas were excavated to a base depth ranging from 4.3 to 5.7 mbgs.
3. A third area, located entirely within Area 5A was also excavated to a depth of 2.7 mbgs to remove a concrete structure encountered during excavation of the main excavation. The concrete structure was approximately 100 metres in length by 3 metres in width, positioned east-west to the south of the former diesel fuel AST and former gasoline and diesel fuel USTs to the east of the maintenance garage.

The portion of the remedial excavation within Area 4 comprised an area of approximately 1,740 m². Approximately 27,099 tonnes of PHC-impacted soil was excavated and disposed off-site to an MECP licensed facility (Solution Soil Treatment Facility, located in Falconbridge, Ontario) as part of the remedial activities. Based on an area of 9,340 m², seventy-six (76) wall samples and forty-nine (49) floor samples were required to be collected as per O. Reg. 153/04 Schedule E, Table 3, *Minimum Confirmation Sampling Requirements for Excavation*. A total of one hundred and thirty-eight (138) wall samples and one hundred and four (104) floor samples were collected at the limits of the excavation. Of these confirmatory samples, twenty-two (22) wall samples and seventeen (17) floor samples were collected from within the portion of the remedial excavation within the Area 4 site boundaries, which also meet the minimum requirements for an area of 1,740 m² of nine (9) floor samples and fifteen (15) wall samples; all confirmatory soil samples collected within Area 4 were within the Table 3 SCS. It is noted that two (2) confirmatory floor samples (labelled as B2 and B6), collected within Area 4, were presented in data tables

prepared by CRA (2008) and identified minor exceedances of the Table 3 SCS for PHC fraction F2. However, the laboratory certificate of analysis for these samples was not provided within CRA (2008) and so these results could not be verified. As such, EXP advanced two (2) test holes in the locations of B2 and B6 to confirm the quality of soil with respect to PHCs at these two (2) locations; no exceedances of the Table 3 SCS were identified. Therefore, the remediation within Area 4 was considered to meet the Table 3 SCS.

The excavation was backfilled with native clayey silt excavated as part of the remediation activities as well as soil imported from 1 Bloor Street, in Toronto, Ontario. Nine (9) soil samples were collected from on-site soils that were excavated and stockpiled for re-use and eighteen (18) soil samples were collected from soil imported from 1 Bloor Street. All samples were within the Table 3 SCS with the exception of one (1) exceedance of HWS boron in one (1) soil sample collected from 1 Bloor Street and one (1) exceedance of PHC fraction F2 within the on-site excavated soil used as backfill. A total of 13,091.3 m³ of soil from 1 Bloor Street was imported to backfill the excavation. It is noted that as part of EXP's Phase Two ESA (EXP, 2020G), nine (9) test pits/test holes were advanced within the remediation area and soil samples collected for PHCs, BTEX, PAHs, metals, PCBs and/or HWS boron. All samples collected by EXP within the former remediation area were within the Table 3 SCS.

2.6.2 Modified Generic Risk Assessment

To address the contamination within AOC D, an MGRA was carried out for Area 4 and was accepted by the MECP on November 19, 2020. See Section 2.3.1 for details on the MGRA model and process.

The status of the MGRA process for this Area is as follows:

1. The PSF and MGRA Report were first submitted to the MECP for review on March 1, 2019. Comments on the PSF and MGRA were provided by the MECP on May 6, 2019.
2. In response to MECP comments, EXP submitted MGRA Addenda with a response to comments and necessary revisions within the body of the MGRA. MGRA Addendum 1 was submitted to the MECP on November 4, 2019 and comments were received on Dec 10, 2019. MGRA Addendum 2 was subsequently submitted to the MECP on March 9, 2020 and comments were received on May 21, 2020. MGRA Addendum 3 was subsequently submitted to the MECP on July 14, 2020 and accepted by the MECP on November 19, 2020. Following MGRA acceptance CPU (1323-BVHPHX) was issued on November 19, 2020 in relation to the MGRA. A copy of the CPU for Area 4 is provided in Appendix E.
3. The RSC (227665) was acknowledged by the MECP on April 6, 2021.

Details outlining the RA approach and conclusions are provided in the sections below.

2.6.2.1 Project Objectives

The objective of the MGRA is to derive PSS for each COC, to replace the generic MECP SCS as the applicable Standard for the site and to support the RSC filing and intended conveyances to the City.

2.6.2.2 RA Approach

The RA that was completed for the site is considered a "Limited Scope Risk Assessment under O. Reg. 153/04 Schedule C, section 7".

COCs carried forward for evaluation in the RA were selected based on screening against the Table 3 SCS. Based on this screening, the soil COC carried forward for evaluation in the MGRA is EC. The maximum COCs in soil are presented in Table 3 in Appendix F.

*Given that the intended redevelopment includes four levels of underground parking, the parking garage will be submerged below the water table. Therefore, the assumptions used to derive the Table 3 SCS are not sufficiently conservative for vapour intrusion pathways and hence volatile parameters in groundwater were also screened against the Table 7 SCS (applicable to sites with shallow groundwater) were used in addition to the screening with the Table 3 SCS for determination of COCs carried forward in the RA. As a result of screening against the Table 7 SCS, no additional groundwater COCs were identified.

2.6.2.3 Receptors and Pathways

Human Health

The selection of human receptors was based on the future institutional property use of the site. Therefore, the receptors chosen for analysis are those standard receptors found at institutional properties and includes: students (adults), property visitors (all ages), property trespassers (child and adult), long-term indoor worker and long-term outdoor worker (e.g., maintenance workers). Subsurface workers (e.g., construction/utility workers may also be present during redevelopment of the Site and as such, were also considered.

Given that EC is a parameter of ecological significance only for assessing phytotoxicity, it was not of concern to human health, and all potential soil pathways were considered incomplete.

Given that no groundwater COCs were identified, all potential groundwater pathways were considered incomplete. The potential exposure routes for human receptors are summarized in Figure 9A. As discussed above, all human health pathways were considered incomplete.

Off-site human receptors consist of the same receptors found on-site along with property residents. All off-site pathways were considered incomplete. Refer to Figure 9B for HHCSM for off-site human receptors.

Ecological Health

The selection of ecological receptors takes into consideration the location of the site in an urban area and the presence of Lake Ontario and future rehabilitated Serson Creek, located near to the RA property. Relevant on-site receptors, as illustrated in the ECSM (Figure 10A) consist of terrestrial VECs such as plants, soil invertebrates, mammals and birds.

Given that the only COC identified on-site was EC is soil, the only on-site exposure route considered complete include the following:

- Root, stem and foliar uptake and contact by terrestrial plants.

As RMM were intended for the site, an ECSM in the presence of RMM is provided as Figure 10B.

Off-site ecological receptors consist of the same terrestrial receptors found on-site, in addition to aquatic species. Relevant exposure pathways for off-site aquatic receptors such as aquatic plants, aquatic invertebrates, aquatic birds and mammals and fish include the following:

- Root, stem and foliar uptake of surface water for aquatic plants;
- Ingestion and dermal contact of surface water for aquatic invertebrates, mammals, birds and fish;
- Ingestion of impacted plant and animal tissue for aquatic invertebrates, mammals, birds and fish; and
- Gill uptake of surface water for fish.

It is noted that all exposure pathways for off-site aquatic receptors are considered incomplete as there are no groundwater COCs. Refer to Figure 10C for ECSM for off-site ecological receptors.

2.6.2.4 Risk Management Measures

Based on the applicable pathways noted in Section 2.6.1.3, the following RMM are proposed for the Site:

- A fill cap or a hard cap covering the full extent of Area 4, and;
- A Soil Management Plan (SMP).

Typical soil barrier details for the Dedication Lands, excluding along utilities, for protection of ecological receptors is provided in Figure 2. It is noted that given that the only COC identified for Area 4 (EC) is of ecological significance only, a clean corridor along utilities for the purpose of utility worker safety is not required. Furthermore, it is acknowledged that the City of Mississauga topsoil and finish grading requirements will be adhered to as part of the soil capping requirements for public parkland and within public boulevards with tree plantings. The City of Mississauga requirements are provided in Appendix G. LCLP is aware and acknowledges geotechnical specifications for soil cap/backfill material in public park blocks and road dedications with reference to City standards for public park and road construction.

2.7 Area 5A

Upon environmental investigation at this Area, the following AOCs listed in Table 16 were identified. All references to subsurface work completed to December 2020 is presented in EXP Phase Two ESA report (EXP, 2020I), provided under separate cover. Additional subsurface work has been completed in 2021, which included the advancement of twelve (12) test holes, thirty-two (32) test pits, twenty-five (25) monitoring wells, and re-installation of one (1) monitoring well. The additional subsurface work was completed to investigate data gaps identified in relation to the APECs and delineation of COCs, and to confirm/update groundwater quality. Based on the 2021 subsurface results, the following new COCs will be carried forward in the RA: acetone, acenaphthylene, beryllium, and copper in soil. A list of COCs to be carried forward in the RA based on work completed to date is provided in Section 2.7.2.2. It is noted that Area 5A is currently additional sampling therefore maximums are subject to change. Furthermore, free product has been observed at Area 5A in the central portion of the site, north of former Pumphouse 1. EXP and LCPL are in the process of developing a go forward strategy to remove the product in support of the future RSC requirements. An outline of the proposed free product remediation is shown on Figure 15. The Phase Two ESA Update report documenting recent subsurface work is still in progress and figures will be provided in the updated report. Based on the work completed to date, a general summary of AOC is provided below.

Table 16: AOC Summary Table

Area of Contamination and Location	COCs in excess of Table 9 SCS	Medium	Description of Area	Distribution of Contaminants
West-central portion of site	PHC fractions F2 to F4	Soil	South of former powerhouse on west portion of site	The soil impacts are distributed south of the powerhouse on the west portion of the site.. These impacts are assumed to extend to bedrock limited to depths of approximately 2.3 mbgs.
Central portion of site	PHC fractions F1 to F4	Soil	South of former powerhouse	The soil impacts are distributed south of the powerhouse. . Exceedances are assumed to extend to bedrock based on exceedances in soil samples collected just above bedrock.
East portion of site	PHC fractions F1 to F3	Soil	Former coal yard, remedial excavation area	The soil impacts are distributed on the east portion of the site within, and extending beyond, the former remedial excavation area. Exceedances of PHC fractions F1 to F3 are assumed to extend to bedrock..
Northeast portion of site	PHC fraction F2	Soil	Former coal yard	An isolated PHC fraction F2 exceedance was identified at BH8-16. . Vertical delineation of this AOC was achieved at a depth of 1.22 mbgs.

Area of Contamination and Location	COCs in excess of Table 9 SCS	Medium	Description of Area	Distribution of Contaminants
West-central portion of site	Benzene, xylenes	Soil	South of former powerhouse on west portion of site	The soil impacts are distributed south of the powerhouse on the west portion of the site. These impacts are limited to depths of approximately 3 mbgs..
Central portion of site	BTEX	Soil	South of former powerhouse	The soil impacts are distributed south of the powerhouse. These impacts are limited to depths of approximately 3 mbgs and shallower.
East portion of site	PHC fraction F2 and F3, BTEX, acetone, n-hexane,	Soil	Former coal yard, remedial excavation area	The soil impacts are distributed on the east portion of the site within, and extending beyond, the former remedial excavation area. Acetone impacts were isolated at A5A-BH9 to a depth of approximately 1.52 mbgs; n-hexane impacts were isolated to A5A-BF1 to a depth of approximately 1.52 mbgs. Exceedances of PHCs and BTEX are assumed to extend to bedrock based on slight exceedances of these parameters in confirmatory floor samples and soil samples collected just above bedrock..
East portion of site	BTEX, n-hexane, tetrachloroethylene	Soil	Southeast portion of former coal yard	Exceedances of BTEX, n-hexane and/or tetrachloroethylene were identified at SCY-101-TP and SCY-204-TP. Vertical delineation of these impacts, with the exception of xylenes, was achieved at depths ranging from 1.8 to 2 mbgs, based on the results at SCY-202-TP and TP-A5-SCY-12, respectively. However, xylene exceedances at TP-A5-SCY-12 were identified. Additional vertical delineation for xylenes was not carried out as VOC concentrations decreased with depth. Therefore, additional vertical delineation is considered unlikely to contribute any further significant information regarding the interpretation of the distribution and extent of xylene impacts within this AOC and has not been undertaken.
Isolated locations on central portion of site	PAHs (Acenaphthylene, fluorene, 1- and 2-methylnaphthalene and/or naphthalene)	Soil	South of former powerhouse	Two isolated PAH exceedances were identified at PH5-6-MW and TP307-2018. Vertical delineation at PH5-6-MW was achieved based on the results at the same location at a depth of 1.22. The PAH impacts at TP307-2018 were vertically delineated to a depth of 3.7 mbgs (TP307-D).
Northeast corner of site	PAHs (1- and 2-methylnaphthalene and naphthalene)	Soil	Northeast corner of site, within former coal yard	PAH impacts were identified on the northeast corner of the site. Vertical delineation of this AOC was achieved at a depth of 0.61 mbgs based on the results at CY-234-TP.

Area of Contamination and Location	COCs in excess of Table 9 SCS	Medium	Description of Area	Distribution of Contaminants
Southeast portion of site	PAHs (all except acenaphthylene)	Soil	South of former coal yard, former coal pile effluent pond	The PAH impacts were identified south of the former coal yard, in the vicinity of the former coal pile effluent ponds. Vertical delineation on the western half of this AOC was achieved at a depth of 1.8 mbgs as shown in Figure 8E. However, on the eastern half of this AOC, vertical delineation was achieved at a depth of 3.1 mbgs.
East portion of the site	PAHs (acenaphthene, acenaphthylene, benzo(a)anthracene, fluoranthene, fluorene, 1 and 2-methylnaphthalene, naphthalene, and phenanthrene)	Soil	Former coal yard, remedial excavation area	Elevated levels of various PAHs were identified at two locations (A5A-BF7 and A5A-BF9) within the western portion of the former remediation area of the coal yard. Exceedances of PAHs are assumed to extend to bedrock based on samples collected just above the bedrock surface.
Central portion of site	Antimony, arsenic, beryllium, chromium, lead, molybdenum, selenium, zinc	Soil	South of former powerhouse	Metal and hydride-forming metal exceedances were identified across the central and west portions of the site, south of the former powerhouse. These impacts extend to a depth of approximately 2.6 to 3 mbgs.
Southeast portion of site	Antimony, arsenic, boron, cobalt, molybdenum, selenium, silver, thallium	Soil	South of former coal yard, former coal pile effluent pond	Metal and hydride-forming metal exceedances were identified south of the former coal yard, near the former coal pile effluent pond. Vertical delineation has been achieved for all parameters within this AOC at depths ranging from 0.8 to 2.44 mbgs, with the exception of molybdenum, which exceeded at the maximum depth investigated within this AOC at TP-A5-SCY-8D not been achieved within this AOC. However, additional vertical delineation is considered unlikely to contribute any further significant information regarding the interpretation of the distribution and extent of metal impacts within this AOC and therefore has not been undertaken.
Isolated locations across central portion of site	HWS Boron	Soil	South of former powerhouse	Elevated concentrations HWS boron have been identified on the central portion of the site and at isolated locations south of the powerhouse. Vertical delineation on the southwest portion of the was achieved at a depth of 1.5 to 1.98 mbgs at BH13-07-D and A5A-TP317.. Vertical delineation south of the powerhouse was achieved at a depth of 1.8 mbgs at TP-CTU-12.
East portion of site	HWS Boron	Soil	South coal yard/ South of coal yard	Elevated concentrations HWS boron have been identified across the south portion of the coal yard and to the south. Vertical delineation was achieved at depths ranging from 1.3 to 2.44 at TP-A5-SCY-4 and TP-A5-SCY-5.
West portion of site	EC	Soil	Southwest of Powerhouse	Elevated levels of EC have been identified at several locations on the west portion of the site, southwest of the powerhouse. Vertical delineation of these impacts were achieved at BH12-16 at a depth of 1.2.

Area of Contamination and Location	COCs in excess of Table 9 SCS	Medium	Description of Area	Distribution of Contaminants
East portion of site	EC	Soil	Former coal yard and south of former coal yard	Elevated levels of EC have been across the east portion of site, within the former coal yard. Vertical delineation was achieved at some areas at depths ranging from 1.2 to 3.8 mbgs and extended to bedrock in other areas.
Central portion of site	PCBs	Soil	South of Powerhouse	PCB exceedances were identified in the central portion of the site. Vertical delineation of these impacts were achieved at depths ranging from 1.22 to 1.52 mbgs.
Central portion of site	PHC fractions F1, F2 and F3	Groundwater	South of Powerhouse	PHC exceedances are present across the central portion of the site. Vertical delineation of these impacts were achieved based on the results at MW13-17-2018, MW13-21-2018, CTU-5-MWD, TH-CTU-4, and TH-CTU-6D.
West portion of site	PHC fraction F4	Groundwater	Within footprint of former ash settling ponds	One isolated exceedance of PHC fraction F4 was identified at WTP-4-MW.. Vertical delineation was not conducted as it was considered unlikely to contribute any further significant information regarding the interpretation of the distribution and extent of PHC fraction F4 in groundwater given that this parameter does not have the tendency to sink within an aquifer. As such, worst-case concentrations are already anticipated to have been identified. Furthermore, this area is currently inaccessible due to construction activities.

To address the contamination referenced above, a combined remediation and Tier 3 RA approach has been undertaken within this Area. A summary is provided below, however, for specific details in relation to the: (a) remedial excavation, see the Phase Two ESA report for this Area (EXP, 2020I); and (b) Tier 3 RA see the RA report for this Area (EXP, 2020J).

2.7.1 Remedial Excavation

A remedial excavation and confirmatory sampling program was conducted by CRA (2008) to remediate PHC impacts on the south portion of the former coal yard. The remediation area was primarily contained within Area 5A but also extended onto Areas 3,4, and 6. Figure 15 shows the Area boundaries and the portion of the remediation area within Area 5A. The remedial excavation was defined into three (3) areas by CRA (2008):

1. The excavation associated with the historic Lake Ontario Shoreline and was approximately 280 metres (east-west) by 18 metres (north-south);
2. The excavation in the area adjacent to the former maintenance garage (located on Area 5A), which was approximately 100 metres (north-south) by 40 metres (east-west). These areas were excavated to a base depth ranging from 4.3 to 5.7 mbgs.
3. A third area, located entirely within Area 5A was also excavated to a depth of 2.7 mbgs to remove a concrete structure encountered during excavation of the main excavation. The concrete structure was approximately 100 metres in length by 3 metres in width, positioned east-west to the south of the former diesel fuel AST and former gasoline and diesel fuel USTs to the east of the maintenance garage.

The portion of the remedial excavation within Area 5A comprised an area of approximately 5,200 m². Approximately 25,200 m³ of soil was excavated from Area 5A as part of the remedial activities, assuming an average depth of the main excavation of 5 mbgs and accounting for the presence of the concrete structure at a depth of 1.8 mbgs. Impacted soil was disposed off-site to an MECP licensed facility (Solution Soil Treatment Facility, located in Falconbridge, Ontario).

Based on an area of 5,200 m², 45 wall samples and 28 floor samples were required to be collected as per O. Reg. 153/04 Schedule E, Table 3, *Minimum Confirmation Sampling Requirements for Excavation*. A total of 75 wall samples and 60 floor samples were collected from the limits of the excavation within Area 5A. Based on the results of the confirmatory sampling within Area 5A, several confirmatory sampling locations do not meet the current applicable SCS. As such, the remedial area is considered to be impacted with PHCs, specifically PHC fractions F1 to F3 and petroleum-related parameters benzene, ethylbenzene, and xylenes. Confirmatory samples collected from the walls of the excavation met the applicable Standards with the exception of several sidewall samples collected from southeast corner of the excavation and northwest portion of the excavation. Exceedances were also identified in several floor samples, primarily within Area 2 of the excavation (west portion of the excavation) with a few isolated exceedances in floor samples collected from the east portion of the excavation.

The excavation was backfilled with native clayey silt excavated as part of the remediation activities as well as soil imported from 1 Bloor Street, in Toronto, Ontario. Nine (9) soil samples were collected from on-site soils that were excavated and stockpiled for re-use and eighteen (18) soil samples were collected from soil imported from 1 Bloor Street. All samples were within the applicable Table 9 SCS with the exception of one (1) exceedance of HWS boron in one (1) soil sample collected from 1 Bloor Street and four (4) exceedances of PHC fraction F2 and one exceedance of PHC fraction F3 within samples collected from the on-site excavated soil used as backfill. This backfill has been identified as a PCA as outlined in Section 1. It is noted that as part of EXP's Phase Two ESA (EXP, 2020I), five (5) locations were advanced within the remediation area and soil samples collected for PHCs, BTEX, PAHs, metals and/or PCBs. Six (6) additional samples were also collected within the former remediation area on-site for HWS boron. All samples collected by EXP within the former remediation area were within the applicable SCS during this investigation. Additional sampling of the backfill was completed by EXP in 2021 and exceedances of PHC fractions F2 and F3, n-hexane, benzene, xylenes, acetone, PAHs, and EC were identified within this area. An estimated volume of 24,425 m³ of soil was backfilled within the portion of the remedial excavation within Area 5A, assuming an average depth of the main excavation of 5 mbgs and a depth of 2.7 mbgs in the area of the former concrete structure.

It is also noted that dewatering activities were conducted as part of the remedial excavation, which resulted in a total of 130,733 litres of PHC-impacted water being removed from the 985 Hydro Road Property and disposed to an MECP approved facility.

2.7.2 Tier 3 Risk Assessment

See Section 2.5.1 for a description of the Tier 3 RA process.

The status of the RA process on this Area is as follows:

1. EXP submitted the PSF on March 1, 2019.
2. Comments on the PSF were provided by the MECP on May 6, 2019, which were incorporated into the RA report, the preparation of which is the second step in the RA process. The initial RA was provided to the MECP on August 4, 2020, and comments were received on November 23, 2020.
3. EXP is in the process of preparing a response to the MECP comments on the RA, and two (2) RA Addendum reports are anticipated to resolve all comments.
4. Upon RA acceptance, an RSC for the site can be filed online in the MECP Brownfield Registry. It should be noted, however, that the RMM (see Section 2.7.2.4) will be outlined on a Certificate of Property Use (CPU), which will be issued by the MECP, to be registered on title by the property owner. The CPU must be issued prior to the RSC being filed.

Details outlining the intended RA approach and anticipated conclusions are provided in the sections below. It is noted that the information and conclusions presented may be subject to change upon review by the MECP and the additional field work.

2.7.2.1 Project Objectives

The objective of the RA is to derive PSS for each COC, to replace the generic MECP SCS as the applicable Standard for the site and to support the RSC filing and intended conveyances to the City.

2.7.2.2 RA Approach

The RA that will be completed for this Area will be considered a “risk assessment other than those identified in O. Reg. 153/04, Schedule C, Part II” as defined by O. Reg. 153/04. Schedule C, Part II describes limited scope RAs, estimate of natural local background concentrations RAs, new science RAs and wider area of abatement RAs. All of the COCs currently selected for development of PSS are listed within the applicable MECP SCS and have derived Standards.

COCs carried forward for evaluation in the RA were selected based on screening against the Table 9 SCS. Based on this screening, the COCs carried forward for evaluation in the RA are:

Soil COCs:

PHCs

- PHC fractions F1 to F4

Volatile Organic Compounds

- Acetone
- BTEX
- n-Hexane
- Tetrachloroethylene

PAHs

- Acenaphthene
- Acenaphthylene
- Anthracene
- Benz(a)anthracene
- Benzo(a)pyrene
- Benzo(b/j)fluoranthene
- Benzo(g,h,i)perylene
- Benzo(k)fluoranthene
- Chrysene
- Dibenzo(a,h)anthracene
- Fluoranthene
- Fluorene
- Indeno(1,2,3-cd) pyrene
- 1- and 2-Methylnaphthalene
- Naphthalene
- Phenanthrene
- Pyrene

Metals and Hydride-Forming Metals

- Antimony
- Arsenic

- Beryllium
- Boron
- Chromium
- Cobalt
- Copper
- Lead
- Molybdenum
- Selenium
- Silver
- Thallium
- Zinc

Other Regulated Parameters

- Hot Water Soluble (HWS) boron
- Electrical Conductivity (EC)

Polychlorinated Biphenyls

- PCBs (total)

Groundwater COCs:

PHCs

- PHC fractions F1 to F4

In addition to the COCs noted above, the following parameters exceeded the Table 7 SCS, considered applicable for screening of volatile groundwater parameters due to the shallow groundwater at the site.:

- Benzene
- 1,1-Dichloroethylene
- 1,2-Dichloroethane
- 1,3-Dichloropropene
- 1,4-Dichlorobenzene
- Carbon tetrachloride

1,1-Dichloroethylene, 1,3-dichloropropene and carbon tetrachloride have never been detected on-site and the two (2) instances of exceedances are due to elevated RDLs. As such, these parameters are not retained as COCs. One measured exceedance of 1,2-Dichloroethane and benzene were identified at WTP-4-MW and WTP-1-MW, respectively (EXP, 2018) and therefore were retained as COCs. Measured exceedances of 1,4-dichlorobenzene were identified at two locations, MW31 and MW32 (CRA, 2009) and therefore this parameter was also retained as a COC based on the shallow groundwater condition and screening against Table 7 SCS.

Based on current environmental data, the maximum COC concentrations in soil and groundwater can be found in Tables 4a and 4b, respectively in Appendix F. Note these are subject to change based on additional sampling (if required by MECP) and soil movement within the larger property for site grading.

2.7.2.3 Receptors and Pathways

Human Health

The selection of human receptors is based on the future parkland use of the site. However, per correspondence with the City of Mississauga, to meet the conveyance requirements, it was assumed that the site could potentially be used for residential purposes in the future. Therefore, the receptors chosen for analysis are those standard receptors found at a residential property and include site residents, site visitors, and long-term outdoor workers. Subsurface workers (e.g., construction/utility workers) may also be present during redevelopment of the site and as such, are also considered.

Based on the COCs identified at the site, possible routes of exposure for human receptors include the following:

- Indirect exposure to volatile COCs released from soil or groundwater to indoor air through inhalation and dermal contact for the resident, visitor, and City of Mississauga maintenance worker;
- Incidental soil ingestion, dermal contact, and inhalation of soil particulates for the property resident, visitor, long-term outdoor worker, and subsurface worker;
- Inhalation of outdoor air for the property resident, visitor, and long-term outdoor worker;
- Inhalation of outdoor air (ground level) and trench air for the subsurface worker;
- Vapour skin contact for the property resident, visitor, long-term outdoor worker, and subsurface worker;
- Incidental groundwater ingestion and dermal contact while working in a trench for the subsurface worker; and
- Ingestion of homegrown garden produce for the property resident and visitor.

Note, EC and HSW Boron are parameters of ecological significance only for assessing phytotoxicity, and therefore, are not considered in the human health conceptual site model.

The potential exposure routes for human receptors are summarized in Figure 11A. As risk management measures are intended for the site, a human health conceptual site model (HHCSM) in the presence of RMM is provided as Figure 11B.

Based on the current and anticipated parkland, residential, institutional, and commercial uses of the neighbouring properties to the east, north, and west and Lake Ontario to the south, potential off-site receptors include property residents, visitors (recreational and trespassers), students, long-term indoor workers, maintenance workers, and construction/subsurface utility workers. Relevant exposure pathways for off-site receptors include the following as shown on Figure 11A:

- Inhalation of indoor air for the property resident, visitor, student, and long-term indoor worker;
- Inhalation of outdoor air for the property resident, visitor, student, long-term outdoor worker;
- Inhalation of trench air for the subsurface worker;
- Inhalation of soil/dust particles blown off-site during high intensity soil works/ development;
- Vapour skin contact for the property resident, visitor, student, long-term outdoor and indoor workers, and subsurface worker;
- Incidental groundwater ingestion and dermal contact while working in a trench for the subsurface worker;
- Incidental surface water ingestion and dermal contact within an off-site water body for the property residents and visitor;
- Ingestion of fish within an off-site water body for the property resident and property visitor; and,
- Incidental ingestion and dermal contact with sediment within an off-site water body resulting from soil erosion/run-off for the property resident and visitor.

Ecological Health

The selection of ecological receptors takes into consideration the location of the site in an urban area and the presence of Lake Ontario, located near to the RA property. Relevant on-site receptors, as illustrated in the ECSM (Figure 12A) consist of terrestrial VECs such as plants, soil invertebrates, mammals and birds.

On-site exposure routes include the following:

- Direct exposure to soil and groundwater COCs through root uptake (terrestrial vegetation);
- Direct exposure to soil COCs through dermal contact, incidental ingestion and/or particulate inhalation (soil invertebrates and terrestrial mammals and birds);
- Ingestion of impacted food/prey by soil invertebrates and terrestrial mammals and birds;
- Indirect exposure to volatile COCs released from soil and groundwater to outdoor air through atmospheric deposition (terrestrial vegetation); and,
- Indirect exposure to volatile COCs released from soil and groundwater to outdoor air through inhalation and dermal contact (soil invertebrates and terrestrial mammals and birds).

As RMM are intended for the site, an ECSM in the presence of RMM is provided as Figure 12B.

Off-site ecological receptors consist of the same terrestrial receptors found on-site, in addition to aquatic species. Relevant exposure pathways for off-site aquatic receptors such as aquatic plants, aquatic invertebrates, aquatic birds and mammals and fish include the following as shown on Figure 12A:

- Direct exposure to soil COCs through particulate inhalation (terrestrial birds and mammals);
- Indirect exposure to volatile COCs released from soil and groundwater to outdoor air through atmospheric deposition (terrestrial vegetation);
- Indirect exposure to volatile COCs released from soil and groundwater to outdoor air through inhalation and dermal contact (soil invertebrates and terrestrial mammals and birds);
- Direct exposure to groundwater COCs through root uptake (terrestrial vegetation);
- Direct exposure to surface water through root uptake (aquatic plants);
- Direct exposure to surface water through dermal contact and ingestion (terrestrial birds and mammals, aquatic invertebrates, aquatic birds and mammals, and fish);
- Ingestion of impacted plant and animal tissue by terrestrial birds and mammals, aquatic invertebrates, aquatic birds and mammals, and fish;
- Direct exposure to surface water through gill intake (aquatic invertebrates and fish);
- Direct exposure to sediment through stem, foliar, and root uptake (aquatic vegetation); and,
- Direct exposure to sediment through dermal contact and incidental ingestion (terrestrial birds and mammals, aquatic invertebrates, aquatic birds and mammals, and fish).

2.7.2.4 Risk Management Measures

Based on the applicable pathways noted in Section 2.7.2.3, it is anticipated that the following RMM is required at the site. It should be noted that in the event that any RMM changes from those outlined in the RAP, as a result of discussions/comments from the MECP, EXP will advise LCPL of said changes.

Proposed RMM	Pathway Mitigated	Affected Receptors	Performance Objectives
Vapour Mitigation System	Indoor Air Inhalation (sourced from soil and groundwater)	Residents, Site Visitors, Maintenance Workers	Reduction of COC concentrations in indoor air to within target levels.
Soil Barrier	Direct contact with soil	Residents, Maintenance Workers, Site Visitors, soil invertebrates and terrestrial plants, mammals and birds	100% blockage of direct contact pathways through implementation of a physical barrier.

Proposed RMM	Pathway Mitigated	Affected Receptors	Performance Objectives
Erosion Control	Soil Erosion	Off-Site aquatic life and recreational users of Lake Ontario	100% blockage of the soil erosion pathway through implementation of a physical barrier.
Health and Safety Plan	Direct contact with soil	Construction/Utility Workers	100% blockage of direct contact pathways by use of PPE.
	Incidental direct contact with groundwater	Construction/Utility Workers	100% blockage of direct contact pathways by use of PPE and trench dewatering.
	Trench Air Inhalation (soil)	Construction/Utility Workers	Reduction of COC concentrations within trench air to within target levels by limiting construction to Wide Trenches* or, for a Narrow Trench, the use of respiratory PPE, monitoring of air and/or windspeed, as determined by an appropriately qualified person.
Soil Management Plan	Direct Contact with Soil, Soil Erosion	All receptors	100% blockage of direct contact pathways by soil management and administrative restrictions and exposure during earthworks.
Groundwater Management Plan	Incidental Direct Contact with Groundwater	All receptors	100% blockage of direct contact pathways by groundwater management and administrative restrictions and exposure during earthworks extending below the water table.
Prohibition of planting of fruit and vegetables for consumption	Garden produce ingestion	All human receptors	Maintain assumptions made within the RA that this pathway is incomplete. Ensures 100% blockage of this pathway.

* **Definition of a Wide Trench:** A “trench” which is wider than it is deep, but may still be narrow compared to its length. In this RA, the trench was assumed to be a minimum of 2 metres in depth to be considered a trench.

As per the Guiding Principles, a separate agreement for municipality-specific capping requirements (utilities, 1.5 m cap) will be prepared. As was discussed during meetings with the City, this extra agreement, while not captured in the CPU, will supersede the capping thickness in the CPU where conveyance/dedication lands are concerned.

Typical soil barrier details for Dedication and Conveyance Lands, excluding along utilities, is provided in Figure 2. Typical soil barriers for private lands are shown in Figure 3. Typical soil barrier schematic, including utility corridors is shown on Figure 4. Furthermore, it is acknowledged that the City of Mississauga soil mix specification standards for public parkland and within public boulevards with tree plantings will be adhered to as part of the soil capping requirements. The City of Mississauga specifications are provided in Appendix G. LCLP is aware and acknowledges geotechnical specifications for soil cap/backfill material in public park blocks and road dedications with reference to City standards for public park and road construction.

It is noted that based on the most recent plans, it is anticipated that only public washrooms/storage buildings may be present within the Dedication Lands, for which the vapour intrusion RMM consists of a sub-slab vapour membrane only. Associated

monitoring of this RMM includes indoor air sampling. The anticipated estimated costs for indoor air monitoring are provided in Appendix B.

Currently, there are no plans to construct residential buildings at the site; however, vapour intrusion RMM for future residential buildings have been included for completeness. The vapour intrusion mitigation system recommended for a future residential building consists of a sub-slab vapour membrane barrier with a passive sub-slab venting system (with the option of converting into an active system). MECP has indicated that an active venting system should be proposed for residential use buildings per their comments on the RA, dated November 23, 2020. However, EXP is not committing to the active system at this time; if an active venting system is required, the QP will coordinate with the City of Mississauga.

While performing subgrade work within a narrow trench, an increased windspeed, additional respiratory PPE or monitoring of volatile COCs during subgrade work is required. Based on the assumptions and models used in the RA, a windspeed of 4.8 m/s is required to be maintained within a narrow trench to maintain acceptable risk levels. Monitoring of windspeed can be conducted with an anemometer. Furthermore, fans can be used to increase windspeed within trenches to appropriate speeds. The anticipated estimated cost for increasing and monitoring windspeeds, monitoring volatile COCs, and implementation of respiratory PPE within a narrow trench is presented in Appendix B.

Specifications of a wide trench are depicted in Figure D-1. The locations of the future utilities throughout the larger 985 Hydro Road property is shown on Figure D-2.

Within the rights-of-way, the following providers will own and maintain the utility infrastructures:

Utility	Company
Hydro	Alectra
Gas Mains	Enbridge
Telecommunication	Bell Rogers
District Energy*	Enwave
Vacuum Waste*	Miller Waste
Storm Sewers/LIDs	City of Mississauga
Sanitary Sewers and Sanitary Forcemain	Peel Region
Watermain	Peel Region

*Services are not 100% guaranteed to proceed in this project. As of July 2021, Enwave and Miller Waste will operate District Energy and Vacuum Waste, respectively.

LCPL acknowledges that the above listed utility providers will be consulted concerning the operation within trenches scenario and health and safety requirements as a Condition of Draft Plan Approval, concurrently with the Engineering Submission. It is anticipated that the engineering submission will occur in the fourth quarter (Q4) of 2021. Furthermore, the utility providers will provide written approval of these measures. It is noted that as future utility providers may change, any new provider will be notified of the Trench RMM and health and safety requirements.

2.8 Area 5B

Upon environmental investigation at this Area, the following AOCs listed in Table 17 were identified. All references to subsurface work completed to December 2020 is presented in EXP's Phase Two ESA report (EXP, 2020K), provided under separate cover. Additional subsurface work has been completed in 2021, which included the advancement of twelve (12) test pits. The additional subsurface work was completed to investigate data gaps identified in relation to the APECs and delineation of COCs. Based on current environmental data, the maximum COC concentrations in soil and groundwater can be found in Tables 5a and 5b, respectively, in Appendix F. Note that these are subject to change based on additional sampling (if required by MECP) and soil movement within the larger property for site grading. The Phase Two ESA Update report documenting

recent subsurface work is still in progress and figures will be provided in the updated report. Based on the work completed to date, a general summary of AOC is provided below.

Table 17: AOC Summary Table

Area of Contamination and Location	COCs in excess of Table 9 SCS	Medium	Distribution of Contaminants
A East portion of the site, along the pier (former coal unloading area)	PHC fractions F1 to F4	Soil	The soil impacts are distributed on the east portion of the site, along the pier, in the area of the former coal unloading area. Vertical delineation at BH18-11 and BH18-13 were achieved based on the results at the same locations at depths of 0.13 mbgs and 0.15 mbgs, respectively.
B1 Isolated area on the southwest portion of the site	Xylenes	Soil	An exceedance of xylenes was identified at one location (BH18-05).. Vertical delineation at BH18-05 was achieved based on the results at the same location at a depth of 2.44 mbgs.
B2 East portion of the site, along the pier (former coal unloading area)	BTEX	Soil	The soil impacts are distributed on the east portion of the site, along the pier, in the area of the former coal unloading area.. It is noted that the horizontal extent of the BTEX impact goes to the concrete infrastructure on the south portion of the pier. Vertical delineation was achieved at depths ranging from 0.15 mbgs to 0.3 mbgs.
C East portion of the site, along the pier (former coal unloading area)	Acenaphthene, fluorene, 1- and 2-methylnaphthalene, naphthalene, and phenanthrene	Soil	The soil impacts are distributed on the east portion of the site, along the pier, in the area of the former coal unloading area. It is noted that the horizontal extent of the PAH impact goes to the concrete infrastructure on the south portion of the pier. Vertical delineation of these impacts were achieved at depths ranging from 0.1 to 0.3 mbgs.
D1 Isolated area on the north portion of the site	Antimony, boron, cadmium, and molybdenum	Soil	Exceedances of antimony, boron, cadmium, and molybdenum was identified at one location (MW13-02). Vertical delineation of these exceedances was achieved based on results at MW13-02-D at a depth of 1.52 mbgs.
D2 Southwest portion of the site	Antimony, arsenic, barium, boron, chromium, molybdenum, and selenium	Soil	The soil impacts are distributed on the southwest portion of the site. Vertical delineation of these impacts were achieved at depths ranging from 0.76 mbgs to 2.59 mbgs.
D3 East portion of the site, along the pier (former coal unloading area)	Arsenic, cadmium, molybdenum, selenium, zinc	Soil	The soil impacts are distributed on the east portion of the site, along the pier, in the area of the former coal unloading area. Vertical delineation of these impacts were achieved at depths ranging from 0.1 to 0.76 mbgs based on the results at BH18-11, BH16-22, BH16-23, and BH16-24.

To address the contamination referenced above, it is intended that Area 5B be remediated. An outline of the proposed soil remediation is shown on Figure 15. It is noted that a Tier 3 RA was previously initiated by the City for this land; however, the impacts noted were surficial in nature and would have required removal in support of the construction of a cap, per the requirements of the City. As such, the remedial approach has changed from initial submittals. It should be noted that the Tier 3 RA may be continued should any soil impacts remain following the remediation program. Upon the completion of the remediation (if soil impacts are remediated), an RSC for the site can be filed online in the MECP Brownfield Registry.

2.9 Area 6

Upon environmental investigation at this Area, the following AOCs listed in Table 18 were identified. All references to subsurface work completed to December 2020 is presented in EXP Phase Two ESA report (EXP, 2020M), provided under separate cover. Additional subsurface work has been completed in 2021. A list of COCs to be carried forward in the RA based on work completed to date is provided in Section 2.9.2.2. It is noted that Area 6 is currently undergoing additional sampling therefore maximums are subject to change. The Phase Two ESA Update report documenting recent subsurface work is still in progress and figures will be provided in the updated report. Based on work completed to date, a general summary of AOCs are provided below.

Table 18. AOC Summary Table

Area of Potential Area of Contamination and Location	COCs in excess of Table 1 SCS	Medium	Description of Area	Distribution of Contaminants
North of the former coal yard area	PHC fractions F2, F3 and/or F4	Soil	North of the former coal yard area	The soil impacts are distributed in the northern portion of the site, north of the of the former coal yard. Vertical delineation of these exceedances was achieved at all locations and impacts extend to 8.38 mbgs.
Central portion of Area 6	PHC fractions F1, F2, F3 and/or F4	Soil	East of the central portion of the former coal yard area	The soil impacts are distributed in the central portion of the site, east of the of the former coal yard. Where vertical delineation of these exceedances was achieved, impacts extend to 3.81 mbgs.
South portion of Area 6 within the former PHC remedial excavation	PHC fraction F2	Soil	South portion of the site within the former PHC remedial excavation	The soil impacts are distributed in the south portion of the site, within the former PHC remedial excavation. Vertical delineation of these exceedances was achieved at A6-TH504D where impacts extend to 4.57 mbgs.
North of the former coal yard area	Benzene, xylene	Soil	North of the former coal yard area	The soil impacts are distributed in the northern portion of the site, north of the of the former coal yard. Vertical delineation of these

Area of Potential Area of Contamination and Location	COCs in excess of Table 1 SCS	Medium	Description of Area	Distribution of Contaminants
				exceedances was achieved at A6-TH306 where impacts extend to 6 mbgs.
Central portion of Area 6	Benzene, toluene, ethylbenzene, xylene	Soil	East of the central portion of the former coal yard area	The soil impacts are distributed in the central portion of the site, east of the of the former coal yard. Vertical delineation of these exceedances was achieved, impacts extend to a maximum depth of 4.55 mbgs at A6-TH302D. It should be noted that A6-TH302D was advanced after a significant cut of approximately 3.03 m from the original grade.
South portion of Area 6 within the former PHC remedial excavation	Benzene and xylene	Soil	South portion of the site within the former PHC remedial excavation	The soil impacts are distributed in the south portion of the site, within the former PHC remedial excavation. Vertical delineation of these exceedances was achieved at all locations, impacts extend to a maximum depth of 3.81 mbgs.
North of the former coal yard area	Fluoranthene, 1- and 2-methylnaphthalene, naphthalene, and phenanthrene	Soil	North of the former coal yard area	The fluoranthene, 1- and 2-methylnaphthalene, naphthalene and phenanthrene impact is in an isolated location at MW250-2018. Vertical delineation of these exceedances was achieved and extends to 4.27 mbgs.
Central portion of Area 6	Various PAHs	Soil	East of the former coal yard area	The soil impacts are distributed across the majority of the central/southern portion of the site. Vertical delineation of these exceedances was achieved in the majority of the test holes and extends to 3.05 mbgs.

Area of Potential Area of Contamination and Location	COCs in excess of Table 1 SCS	Medium	Description of Area	Distribution of Contaminants
South portion of Area 6, south of the former PHC remediation excavation	Fluoranthene	Soil	South of the former PHC remediation excavation	The fluoranthene impact is in an isolated location at A6-TH516. Vertical delineation of this exceedance was achieved and extends to a maximum depth of 3.81 mbgs.
Northern portion of Area 6	Zinc	Soil	Northern portion of Area 6	Barium and zinc impacts are located in the northern portion of the site. Vertical delineation of these exceedances was achieved and extends to 0.76 mbgs.
North of the former coal yard area	Arsenic, boron, molybdenum, and selenium	Soil	North of the former coal yard area	The metal impacts are located in the northern portion of the site. Vertical delineation of these exceedances was achieved and extends to 5.31 mbgs.
North of the former coal yard area	Various metals	Soil	North of the former coal yard area	The metal impacts are located in the northern portion of the site. Vertical delineation of these exceedances was achieved and extends to 1.8 mbgs.
Southern portion of Area 6	Arsenic and selenium	Soil	Southern portion of the site	The metal impacts are located in the southern portion of the site. Vertical delineation of these exceedances was achieved and extends to a maximum depth of 12.66 mbgs at A6-TH261D. It should be noted that A6-TH261D was advanced after a significant cut of approximately 11.9 m from the original grade.
South portion of Area 6, south of the former PHC remediation excavation	Barium and zinc	Soil	South of the former PHC remediation excavation	The barium and zinc impacts are in an isolated location at A6-TH516. Vertical delineation of this exceedance was achieved and extends to a maximum depth of 3.81 mbgs.
North of the former coal yard	Hot water soluble boron	Soil	North of the former coal yard	The hot water soluble boron impacts are located north of the former coal yard. Vertical delineation of these exceedances was achieved at MW250-2018/TH-A2-FA-3 at a depth of 5.31 mbgs.

Area of Potential Area of Contamination and Location	COCs in excess of Table 1 SCS	Medium	Description of Area	Distribution of Contaminants
Southern portion of Area 6	Hot water soluble boron	Soil	Southern portion of the site	The HWS boron impact is located at MWA6-13 in the southern portion of the site. Vertical delineation was achieved a MWA6-13D at a depth of 0.76 mbgs.
North-central portion of Area 6	PCBs	Soil	East of the former coal yard	The PCB impacts are located east of the former coal yard. Vertical delineation was achieved and extends to a maximum depth of 1.52 mbgs.

To address the contamination referenced above, a combined remedial excavation and Tier 3 RA approach has been undertaken within this Area. A summary is provided below, however, for specific details in relation to the: (a) remedial excavation, see the Phase Two ESA report for this Area (EXP, 2020M); and (b) Tier 3 RA see the RA report for this Area (EXP, 2020N).

2.9.1 Remedial Excavation

PHC Remediation

A remedial excavation and confirmatory sampling program were conducted by CRA (2008) to remediate PHC impacts on the south portion of the former coal yard. The remediation area was primarily contained within Area 5A (off-site but within the 985 Hydro Road property) but also extended on Areas 3 and 4 (off-site but within the 985 Hydro Road property) and Area 6 (the site). The portion of the remedial excavation extending onto the site is located in the southwestern portion. Figure 15 shows the Area boundaries and the portion of the remediation area within Area 6. The remedial excavation was broken into three areas by CRA (2008):

1. The excavation associated with the historic Lake Ontario shoreline (located within Areas 5A, 4 and 6) and was approximately 280 metres (east-west) by 18 metres (north-south);
2. The excavation in the area adjacent to the former maintenance garage (located on Areas 3 and 5A), which was approximately 100 metres (north-south) by 40 metres (east-west); and,
3. The excavation trench along the former water service line (located on Area 5A), which was approximately 100 metres (east-west) by 3 metres (north-south).

A total area of approximately 9,430 m² was excavated to a base depth ranging from 4.3 to 5.7 mbgs. The portion of the remedial excavation within Area 6 comprised an area of approximately 280 m² and extended to depths ranging from 5.0 to 5.4 mbgs. Approximately 27,099 tonnes of PHC-impacted soil was excavated and disposed off-site to an MECP licensed facility (Solution Soil Treatment Facility, located in Falconbridge, Ontario) as part of the remedial activities. Based on an area of 280 m², 6 wall samples and 4 floor samples were required to be collected as per O. Reg. 153/04 Schedule E, Table 3, Minimum Confirmation Sampling Requirements for Excavation. A total of 138 wall samples and 104 floor samples were collected at the limits of the excavation. Of these confirmatory samples, six (6) wall samples and five (5) floor samples were collected from within the portion of the remedial excavation within the Area 6 site boundaries; all confirmatory soil samples collected within Area 6 were within the Table 1 SCS.

The excavation was backfilled with native clayey silt excavated as part of the remediation activities as well as soil imported from 1 Bloor Street, in Toronto, Ontario. Nine (9) soil samples were collected from on-site soils that were excavated and

stockpiled for re-use and eighteen (18) soil samples were collected from soil imported from 1 Bloor Street. All samples were within the Table 1 SCS with the exception of:

- Three (3) samples exceeding PHC fraction F2 and two (2) exceedances of barium in soil samples collected from 1 Bloor Street; and,
- Four (4) exceedances of PHC fractions F2 and/or F3, one (1) exceedance of barium, one (1) exceedance of molybdenum and one exceedance of boron within the on-site excavated soil used as backfill.

A total of 13,091.3 m³ of soil from 1 Bloor Street was imported to backfill the excavation. It is noted that as part of EXP's Phase Two ESA (2021) activities within the 985 Hydro Road property, nine (9) soil samples from four (4) locations (A6-TH504A to A6-TH504D/A6-TH504D-D) were collected from depths ranging from grade to 5.18 mbgs and analyzed for PHC fractions F1 to F4, BTEX, PAHs and metals and inorganic parameters (including previously exceeding parameters, barium, boron, and molybdenum) to confirm concentrations within the remediation. All soil samples collected by EXP within the former remediation area in Area 6 were within the Table 1 SCS with the exception of:

- PHC fraction F2 at A6-TH504D from 3.81 to 4.42 mbgs. A deeper sample collected from 4.57 to 5.18 mbgs at the same location at A6-TH504D-D was within the Table 1 SCS; and,
- Benzene at A6-TH504D from 1.52 to 2.13 mbgs. A deeper sample collected from 3.81 to 4.42 mbgs in the vicinity at A6-TH504D-D was within the Table 1 SCS.

Arsenic Remediation (Area 2)

A remedial excavation and confirmatory sampling program was conducted by EXP (see Section 2.4.1) to remediate arsenic impacts located adjacent to the site, on Area 2. The final limits of the remediation area had an area of 268 m² and extended between approximately 4 and 6 metres east of Area 2 to within the west-central portion of Area 6. The portion of the excavation within Area 6 comprised approximately 109 m². The depth of the excavation within Area 6 ranged from 1.6 to 2.8 mbgs.

Approximately 620 m³ of arsenic impacted soil was excavated as part of the remedial activities, of which approximately 250 m³ was excavated from Area 6. The excavated soil was relocated to Area 3 of the 985 Hydro Road property which is currently the subject of a Tier 3 RA and will obtain its own RSC.

Based on a remedial area of 109 m² within Area 6, three (3) floor samples, including one (1) field duplicate sample, and two (2) wall samples were collected for metals and inorganic parameters within the Area 6 boundary in accordance with the sampling required of O. Reg. 153/04 Schedule E, Table 3, Minimum Confirmation Sampling Requirements for Excavation. As the excavation extended beyond the west property boundary, confirmatory wall samples used to confirm remediation of arsenic impacts within Area 6 were collected from the south and east walls only.

All confirmatory samples obtained at the limits of the excavation within Area 6 met applicable the Table 1 SCS for arsenic with the exception of two (2) samples (EW-6-1.4M and EW-7-1.2M).

It should be noted that two (2) floor samples, one (1) field duplicate sample and two (2) wall samples were collected for PHC fractions F1 to F4 within the arsenic remedial excavation. Although the arsenic remedial activities extended onto Area 6 due to changes in the site boundaries, the samples collected within Area 6 was not considered a remediation. There was no data excluded based on the excavation completed within this area and the wall/floor samples collected were not considered confirmatory samples. All samples met the Table 1 SCS for PHC fractions F1 to F4 with the exception of EW-11 (PHC fractions F2 to F4 exceedances) and SW-12 (PHC fraction F2 exceedance). It is noted that these results were not used to support a PHC remediation program and are considered soil grab samples.

The remedial excavation has been left open so no backfill was imported and no testing of backfill was required.

Benzene Remediation

Remediation of benzene to within the Table 3 SCS in portions of Area 6 adjacent to, and within 15 metres of Area 4 are planned to eliminate the requirements for vapour mitigation RMMs as outlined in Section 2.9.2.4. Confirmatory sampling was completed as part of Serson Creek construction and extended along the creek bed and to the eastern edge of the temporary gravel road.

During Serson Creek construction the remediation area was determined to be approximately 2,675 m² in area. A total of twenty (20) wall samples and thirteen (13) floor samples, along with five (5) field duplicate samples were collected and submitted for laboratory analysis of BTEX. All samples were within the Table 3 SCS with the exception of one (1) wall sample, PBR-W3, collected from the western boundary of the excavation area (i.e. eastern edge of the temporary gravel road). Additional remediation is intended to remove remaining benzene impacts in this area as part of the removal of the temporary gravel road in 2025 as shown in Figure 15.

2.9.2 Tier 3 Risk Assessment

See Section 2.5.1 for a description of the Tier 3 RA process.

The status of the RA process for this Area is as follows:

1. The first step of the RA is to submit an RA PSF for MECP review. This is the initial document in the RA process and provides an outline of the RA property characteristics and intended RA approach. EXP submitted the PSF on August 4, 2020.
2. Comments on the PSF were provided by the MECP on October 20, 2020, which were incorporated into the RA report, the preparation of which is the second step in the RA process. The initial RA was provided to the MECP on March 5, 2021, and comments were received on May 10, 2021.
3. EXP is in the process of addressing the MECP comments on the RA, and two (2) RA Addendum reports are anticipated to resolve all comments.
4. Upon RA acceptance, an RSC for the site can be filed online in the MECP Brownfield Registry. It should be noted, however, that the RMM (see Section 2.9.2.4) will be outlined on a CPU, which will be issued by the MECP, to be registered on title by the property owner. The CPU must be issued prior to the RSC being filed.

Details outlining the intended RA approach and anticipated conclusions are provided in the sections below. It is noted that the information and conclusions presented may be subject to change upon review by the MECP and the additional field work.

2.9.2.1 Project Objectives

The objective of the RA is to derive PSS for each COC, to replace the generic MECP SCS as the applicable Standard for the site and to support the RSC filing and intended conveyances to the City.

2.9.2.2 RA Approach

The RA that will be completed for this Area will be considered a “risk assessment other than those identified in O. Reg. 153/04, Schedule C, Part II” as defined by O. Reg. 153/04. Schedule C, Part II describes limited scope RAs, estimate of natural local

background concentrations RAs, new science RAs and wider area of abatement RAs. All of the COCs currently selected for development of PSS are listed within the applicable MECP SCS and have derived Standards.

COCs carried forward for evaluation in the RA were selected based on screening against the Table 1 SCS. Based on this screening, the COCs carried forward for evaluation in the RA are:

Soil COCs:Petroleum Hydrocarbons

- PHC fractions F1 to F4

Volatile Organic Compounds

- BTEX

Polycyclic Aromatic Hydrocarbons

- Acenaphthene
- Acenaphthylene
- Anthracene
- Benz(a)anthracene
- Benzo(a)pyrene
- Benzo(b/j)fluoranthene
- Dibenzo(a,h)anthracene
- Fluoranthene
- Fluorene
- Indeno(1,2,3-cd) pyrene
- 1- and 2-methylnaphthalene
- Naphthalene
- Phenanthrene
- Pyrene

Metals and Hydride-Forming Metals

- Antimony
- Arsenic
- Barium
- Beryllium
- Boron
- Molybdenum
- Selenium
- Thallium
- Uranium
- Zinc

Other Regulated Parameters

- Hot Water Soluble (HWS) boron

Based on current environmental data, the maximum COC concentrations in soil can be found in Table 6 in Appendix F. Note that these are subject to change based on additional sampling (if required by MECP) and soil movement within the larger property for site grading.

Groundwater COCs:

No groundwater COCs were identified on this Area.

Sediment COCs:

No APECs were associated with sediment present on-site and as such this medium was not tested.

2.9.2.3 Receptors and Pathways

Human Health

The selection of human receptors is based on the future mixed property use of the site (parkland, residential, commercial, and institutional use). Therefore, the receptors chosen for analysis are those standard receptors found at parkland, residential, commercial, and institutional properties and include: property visitors (all ages), property trespassers (all ages), property residents (all ages), long-term indoor workers and long-term outdoor worker (e.g., maintenance workers). Subsurface workers (e.g., construction/utility workers) may also be present during redevelopment of the Site and as such, are also considered.

Based on the COCs identified at the site, possible routes of exposure for human receptors include the following:

- Incidental soil ingestion, dermal contact, and inhalation of soil particulates for the property visitor, property trespasser, property resident, long-term outdoor worker (City of Mississauga maintenance worker), and subsurface worker;
- Inhalation of indoor air for the property visitor, property trespasser, property resident and long-term indoor worker;
- Inhalation of outdoor air for the property visitor, property trespasser, property resident, long-term outdoor worker, and subsurface worker;
- Inhalation of trench air for the subsurface worker;
- Vapour skin contact for the property visitor, property trespasser, property resident, long-term indoor worker, long-term outdoor worker, and subsurface worker;
- Homegrown garden produce ingestion for the property resident and visitor;
- Incidental ingestion and dermal contact of sediment for the property visitor, property trespasser, property resident, long-term outdoor worker, and subsurface worker; and,
- Ingestion of fish within Serson Creek for the property visitor, property trespasser, and property resident.

Given that no groundwater COCs were identified, all potential groundwater pathways are considered incomplete. While the leaching of COCs from soil to groundwater followed by the subsequent migration to surface water is possible, the incidental ingestion and dermal contact of surface water were considered to be incomplete given that on-site contamination is from historical activities and no groundwater COCs were identified on-site.

Since the erosion and sedimentation of surface soil into the future rehabilitated Serson Creek is possible, incidental ingestion and dermal contact with sediment and ingestion of fish were considered to be complete exposure pathways.

Given that HWS boron is a parameter of ecological significance only for assessing phytotoxicity, this COC is not of concern to human health and is not considered in the HHCSM.

The potential exposure routes for human receptors are summarized in Figure 13A. As RMM are intended for the site, an HHCSM in the presence of RMM is provided as Figure 13B.

Off-site human receptors consist of the same receptors found on-site. Relevant exposure pathways for off-site receptors include the following:

- Inhalation of indoor air for the visitor, trespasser, resident, and long-term indoor worker;
- Inhalation of outdoor air for the visitor, trespasser, resident, long-term outdoor worker, and subsurface worker;
- Inhalation of trench air for the subsurface worker;
- Vapour skin contact for the property resident, visitor, trespasser, long-term outdoor and indoor worker, and subsurface worker;
- Inhalation of soil particles blown off-site during high intensity soil works/development for visitor, trespasser, resident, long-term outdoor worker, and subsurface worker;
- Incidental surface water ingestion and dermal contact with surface water for the visitor, trespasser, and resident within Serson Creek;
- Incidental ingestion and dermal contact of soil via erosion/run-off for the visitor, trespasser, and resident within Serson Creek.
- Ingestion of fish within Serson Creek for the property visitor, property trespasser and property resident.

Refer to Figure 13C for HHCSM for off-site human receptors, As RMM are intended for the site, an HHCSM in the presence of RMM is provided in Figure 13D.

Ecological Health

The selection of ecological receptors takes into consideration the location of the site in an urban area and the presence of Lake Ontario and future development plans to rehabilitate Serson Creek, to be located within the RA property. Relevant on-site receptors consist of terrestrial VECs such as terrestrial plants, soil invertebrates, mammals and birds, as well as aquatic VECs such as aquatic vegetation, invertebrates, birds and mammals, and fish.

Based on the soil COCs identified at the site, possible routes of exposure for on-site ecological receptors include the following:

- Direct exposure to soil and sediment COCs through root uptake and/or root contact (plants);
- Direct exposure to soil COCs through dermal contact, incidental ingestion and/or particulate inhalation (soil invertebrates and terrestrial wildlife);
- Direct exposure to sediment through dermal contact and incidental ingestion (aquatic invertebrates and aquatic wildlife);
- Indirect exposure to volatile COCs released from soil to outdoor air through atmospheric deposition (plants);
- Indirect exposure to volatile COCs released from soil to outdoor air through inhalation and dermal contact (soil invertebrates and terrestrial wildlife);

- Indirect exposure to soil COCs in surface water due to erosion/run-off (terrestrial wildlife, Aquatic plants, aquatic invertebrates and aquatic wildlife); and
- Indirect exposure to soil COCs due to ingestion of terrestrial plants/prey (terrestrial wildlife, soil invertebrates).

Given that no groundwater COCs were identified, all potential groundwater pathways are considered incomplete. While the leaching of COCs from soil to groundwater followed by the subsequent migration to surface water is possible, surface water exposure pathways were considered to be incomplete given that on-site contamination is from historical activities and no groundwater COCs were identified on-site.

Since the erosion and sedimentation of surface soil into the future rehabilitated Serson Creek is possible, direct contact exposure pathways with sediment were considered to be complete exposure pathways.

The potential exposure routes for ecological receptors are summarized in Figure 14A. As RMM are intended for the site, an ECSM in the presence of RMM is provided as Figure 14B.

Off-site ecological receptors consist of the same terrestrial and aquatic receptors found on-site. Relevant exposure pathways include the following:

- Direct exposure to soil COCs through particulate inhalation (terrestrial birds and mammals);
- Ingestion of impacted food/prey by soil invertebrates and terrestrial birds and mammals;
- Indirect exposure to volatile COCs released from soil to outdoor air through atmospheric deposition (plants);
- Indirect exposure to volatile COCs released from soil to outdoor air through inhalation and dermal contact (soil invertebrates and terrestrial wildlife);
- Direct exposure to surface water through root uptake (aquatic plants);
- Direct exposure to surface water through dermal contact and ingestion (terrestrial birds and mammals, aquatic invertebrates, aquatic birds and mammals, and fish);
- Direct exposure to surface water through gill intake (fish);
- Direct exposure to sediment through stem, foliar, and root uptake (aquatic vegetation); and,
- Direct exposure to sediment through dermal contact and incidental ingestion (terrestrial birds and mammals, aquatic invertebrates, aquatic birds and mammals, and fish).

Refer to Figure 14C for ECSM for off-site ecological receptors. As RMM are intended for the site, an ECSM in the presence of RMM is provided as Figure 14D.

2.9.2.4 Risk Management Measures

Based on the applicable pathways noted in Section 2.9.2.3, it is anticipated that the following RMM will be required at the site. It should be noted that in the event that any RMM changes from those outlined in the RAP, as a result of discussions/comments from the MECP, EXP will advise LCPL of said changes.

Proposed RMM	Pathway Mitigated	Affected Receptors	Performance Objectives
Vapour Mitigation System	Indoor Air Inhalation (sourced from soil)	Residents, Site Visitors, Indoor Workers	Reduction of COC concentrations in indoor air to within target levels.

Proposed RMM	Pathway Mitigated	Affected Receptors	Performance Objectives
Soil Barrier	Direct contact with soil	Residents, Maintenance Workers, Site Visitors, Soil Invertebrates and Terrestrial Plants, Mammals and Birds	100% blockage of direct contact pathways through implementation of a physical barrier.
Serson Creek Soil Cover System	Direct contact with soil	Aquatic receptors	100% blockage of direct contact pathways through implementation of a physical barrier.
Serson Creek Soil Erosion Control	Soil erosion	On- and off-site aquatic receptors	100% blockage of soil erosion to the surface water body through implementation of a physical barrier.
Health and Safety Plan	Direct contact with soil	Construction/Subsurface Utility Workers	100% blockage of direct contact pathways by use of PPE.
Soil Management Plan	Direct contact with soil, soil erosion	All receptors	100% blockage of direct contact pathways by soil management and administrative restrictions and exposure during earthworks.
Prohibition of planting of fruit and vegetables for consumption	Garden produce ingestion	All human receptors	Maintain assumptions made within the RA that this pathway is incomplete. Ensures 100% blockage of this pathway.

Serson Creek is currently a man-made structure in the central portion that consists of an underground piping network acting as a stormwater management system. Water within this portion of the creek is intermittent and does not support aquatic habitat; however, future redevelopment plans include the rehabilitation and realignment of Serson Creek, which is intended to support aquatic habitat, and thus will be considered a surface water body as per O. Reg 153/04.

The rehabilitation of Serson Creek will occur in three stages as detailed in Figure STG-1 – Serson Creek Construction Staging and ESC Plan (provided in Appendix C):

- Stage 1: Pre-construction
- Stage 2: Channel construction
- Stage 3: Channel activation

The future development plans are presented in the figures below (provided in Appendix C):

- Figures CH-1 to CH-3 – Serson Creek Plan and Profile (Urbantech and Beacon Environmental, July 2020)
- Figure DET-1 – Serson Creek Channel Details (Urbantech and Beacon Environmental, July 2020)
- Corridor cross section figures (NAK Design Strategies, October 2020)

Figures CH-1 to CH-3 illustrate the plan, profile and cross-section plans of the future rehabilitation of Serson Creek. The rehabilitation of Serson Creek will extend along the eastern boundary of Area 6 and transition into the existing channel north and south of Area 6 as highlighted in Figures CH-1 to CH-3. The creek is expected to be approximately 20 m wide with a creek bed of approximately 10 to 15 m wide and a trail located adjacent west of the creek as presented in the corridor cross section figures.

The Serson Creek corridor redevelopment will incorporate natural channel design elements to provide a low flow channel with a series of riffles, pools, pocket wetlands (Figure DET-1). Additionally, the Serson Creek corridor incorporates erosion control measures including rock revetments and bioengineering treatments.

The soil cover system within the Serson Creek corridor is to consist of a 0.5 metre clean soil cap meeting the Table 9 SCS for parkland use. Furthermore, the soil barrier within the low flow channel of the Serson Creek corridor must be underlain by a demarcation blanket such as a geotextile fabric (i.e., at the plane of contact between the clean fill and underlying impacted soil). It should be noted that the Table 9 SCS for soil are also selected for pocket wetlands within the low-flow channel.

Riffles and pools will be constructed in the creek bed as illustrated in Figures CH-1 to CH-3, STG-1, and DET-1. Riffles are approximately 0.5 metres in height and ranging from approximately 10 to 25 metres long, sloping in the direction of Serson Creek's flow, at approximately 5 to 15 metre intervals. The stone caps within the Serson Creek channel are considered a barrier to the underlying soil which will be regularly monitored and maintained.

The Serson Creek corridor will incorporate erosion control measures including rock revetments and bioengineering treatments.

Outside of the Serson Creek corridor, landscaped areas within the area to be conveyed to the City of Mississauga may be capped with a minimum 1.5 m thick barrier of imported or non-imported native soil meeting the applicable MECP Table 9 SCS. The remaining landscaped areas (i.e. outside of Serson Creek corridor and the area conveyed to the City of Mississauga) may be capped with a minimum 1.0 m thick soil barrier of imported or non-imported native soil meeting the applicable MECP Table 9 SCS.

Where tree planting pits are proposed, clean fill must be present to a depth of 1.0 mbgs. In addition, the root ball must be placed entirely within clean soil.

Typical soil barrier details within the area outside of the Serson Creek Corridor is provided as Figure C-1 in Appendix C. Plan view drawing showing the anticipated capping areas is provided as Drawing C-2. A cross section plan is provided as Drawing C-3 and cross sections are provided as Drawing C-4 and C-5.

Vapour intrusion RMM are required within Area 6. It should be noted that as remediation of PHC fraction F2 and benzene are planned as part of the removal of the temporary gravel road in 2025 following the filing of the RSC, vapour intrusion pathways would no longer be present, thus eliminating the requirements for vapour mitigation RMMs outlined in the Risk Management Plan (RMP)/CPU. An outline of the future remediation of PHC fractions and benzene are shown on Figure 15. It is acknowledged that the vapour mitigation RMMs would still be a requirement until the Director provides written confirmation that they are satisfied with any remedial work completed. However, any buildings constructed in Area 6 that encroaches onto Area 2 will include an identical vapour mitigation RMM as imposed in the CPU for Area 2 and would require vapour mitigation RMMs even after the remediation program is successfully completed. Based on the current development plan, it is anticipated that a temporary City of Mississauga Parks Depot will be present on Area 2 and encroach into Area 6. As such, this building will require compliance with Area 2 CPU regarding vapour mitigation RMM.

3. References

1. Conestoga-Rovers & Associates., *Remedial Activities, Former Lakeview Generating Station Coal Yard, 800 Hydro Road, Mississauga, Ontario*, June 2008.
2. Conestoga-Rovers & Associates, *Phase II Environmental Site Assessment - Former Powerhouse Area, Former Lakeview Generating Station Coal Yard, 800 Hydro Road, Mississauga, Ontario*, June 2009.
3. EXP Services Inc. (2018), *Due Diligence Phase II Environmental Site Assessment, 800 Hydro Road, Mississauga, Ontario*, March 2, 2018.
4. EXP Services Inc. 2020A. *Phase One Environmental Site Assessment for 985 Hydro Road, Mississauga, Ontario* dated November 26, 2020.
5. EXP Services Inc. 2020B. *Phase Two Environmental Site Assessment for Area 1A at 985 Hydro Road, Mississauga, Ontario* dated July 23, 2020.
6. Record of Site Condition Number 227136, Area 1A, 985 Hydro Road, Mississauga, Ontario.
7. EXP Services Inc. 2020C. *Phase Two Environmental Site Assessment for Area 1B at 985 Hydro Road, Mississauga, Ontario* dated November 26, 2020.
8. Record of Site Condition Number 227137, Area 1B, 985 Hydro Road, Mississauga, Ontario.
9. EXP Services Inc. 2020D. *Phase Two Environmental Site Assessment for Area 2 at 985 Hydro Road, Mississauga, Ontario* dated July 14, 2020.
10. EXP Services Inc. 2020E. *Modified Generic Risk Assessment (Original Submission through Addendum 3) for Area 2 at 985 Hydro Road, Mississauga, Ontario* dated July 14, 2020.
11. Record of Site Condition Number 227664, Area 2, 985 Hydro Road, Mississauga, Ontario.
12. EXP Services Inc. 2020F. *Phase Two Environmental Site Assessment for Area 3 at 985 Hydro Road, Mississauga, Ontario* dated November 26, 2020.
13. EXP Services Inc. , *Phase Two Environmental Site Assessment Update for Area 3 at 985 Hydro Road, Mississauga, Ontario*, in progress, 2021.
14. EXP Services Inc. 2020F. *Tier 3 Risk Assessment for Area 3 at 985 Hydro Road, Mississauga, Ontario* dated July 14, 2020.
15. EXP Services Inc. 2020G. *Phase Two Environmental Site Assessment for Area 4 at 985 Hydro Road, Mississauga, Ontario* dated July 14, 2020.
16. EXP Services Inc. 2020H. *Modified Generic Risk Assessment (Original Submission through Addendum 3) for Area 4 at 985 Hydro Road, Mississauga, Ontario* dated July 14, 2020.
17. Record of Site Condition Number 227665, Area 4, 985 Hydro Road, Mississauga, Ontario.
18. EXP Services Inc. 2020I. *Phase Two Environmental Site Assessment for Area 5A at 985 Hydro Road, Mississauga, Ontario* dated August 5, 2020.
19. EXP Services Inc., *Phase Two Environmental Site Assessment Update for Area 5A at 985 Hydro Road, Mississauga, Ontario*, in progress, 2021.
20. EXP Services Inc. 2020J. *Tier 3 Risk Assessment for Area 5A at 985 Hydro Road, Mississauga, Ontario* dated July 31, 2020.
21. EXP Services Inc. 2020K. *Phase Two Environmental Site Assessment for Area 5B at 985 Hydro Road, Mississauga, Ontario* dated August 5, 2020.
22. EXP Services Inc., *Phase Two Environmental Site Assessment Update for Area 5B at 985 Hydro Road, Mississauga, Ontario*, in progress, 2021.

Project Number: MRK-00243747-A0
Date: August 30, 2021

23. EXP Services Inc. 2020M. Phase Two Environmental Site Assessment for Area 6 at 985 Hydro Road, Mississauga, Ontario dated August 7, 2020.
24. EXP Services Inc., Phase Two Environmental Site Assessment Update for Area 6, 985 Hydro Road, Mississauga, Ontario, in progress, 2021.
25. EXP Services Inc. 2020N. Tier 3 Risk Assessment for Area 6 at 985 Hydro Road, Mississauga, Ontario dated July 14, 2020.

4. Summary

EXP is of the opinion that, upon completion of the RAs for any remaining exceedances on each RSC Area, RSCs can be filed to the MECP Brownfields Registry for the site. Once the RSCs are acknowledged by the MECP, copies shall be provided to the City of Mississauga, to support the intended land conveyances. It is understood that only those Areas subject to an RA will be subject to peer review on behalf of the City of Mississauga. It is further noted that the RMM and monitoring requirements provided within this report are subject to change pending review and approval by MECP and finalization of redevelopment plans.

We trust this letter is satisfactory for your purposes. Should you have any questions, please do not hesitate to contact this office.

Sincerely,

EXP Services Inc.



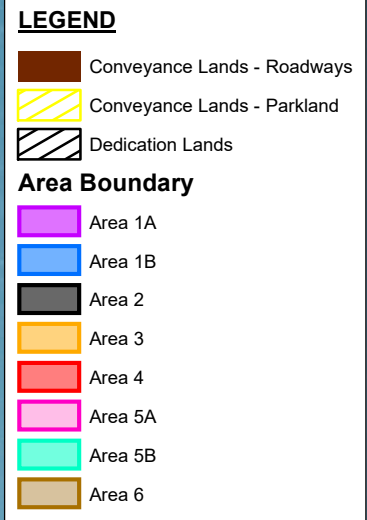
Ruxandra Côté, M.E.Sc.,
Manager - Markham
Environmental Services

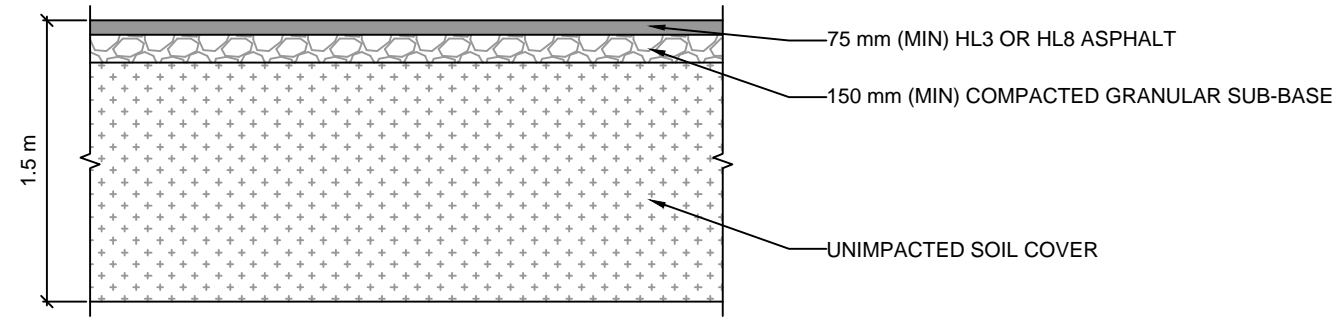


Robert Helik, P. Eng.
Vice President
Environmental Services

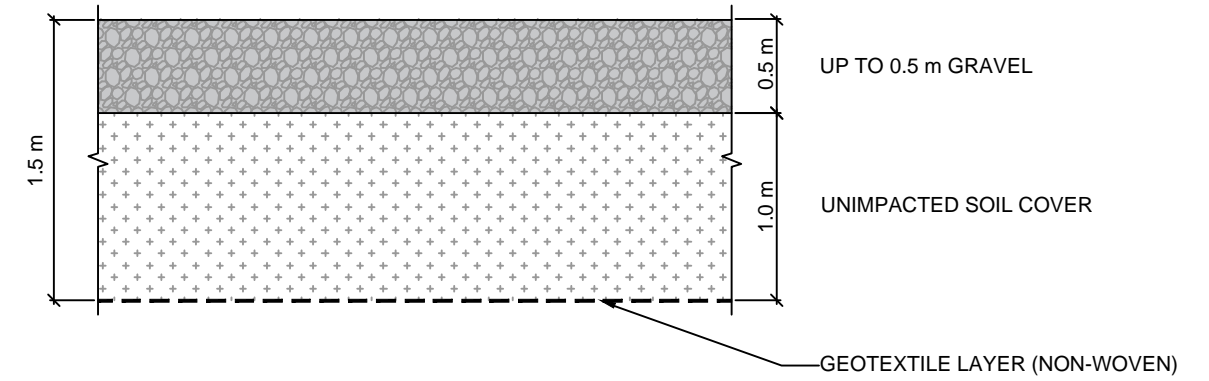
Attachments: Figures
Appendix A: Survey Plan
Appendix B: Estimated Monitoring Costs
Appendix C: Serson Creek Development Drawings
Appendix D: Wide Trench and Utility Drawings
Appendix E: Certificates of Property Use
Appendix F: Maximum Concentrations
Appendix G: City of Mississauga – Topsoil and Finish Grading Document

Figures

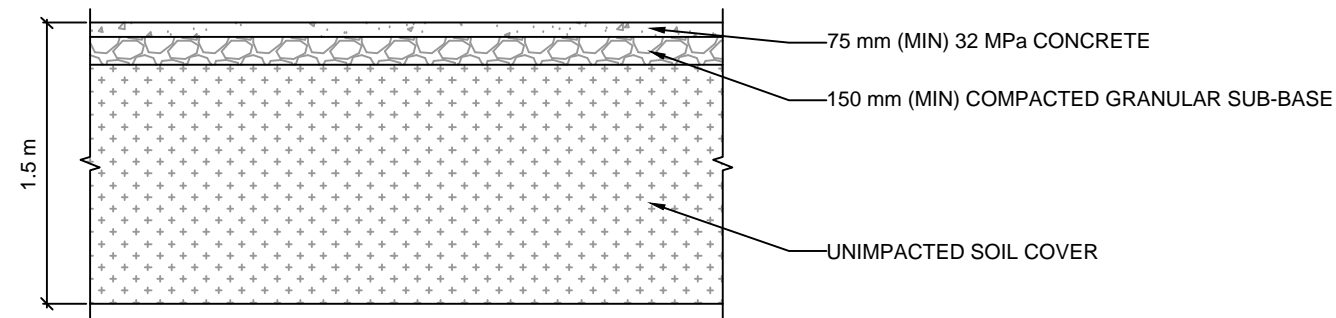




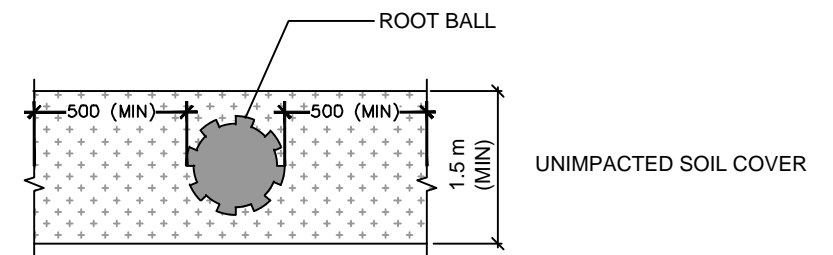
DETAIL 1 ASPHALT AND GRANULAR SUB-BASE CONSTRUCTION
NTS



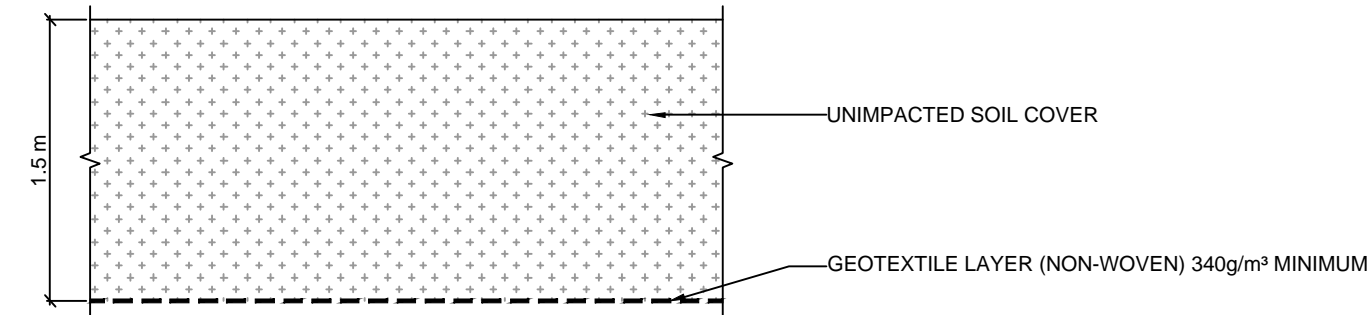
DETAIL 2C GRAVEL ROADWAYS
NTS



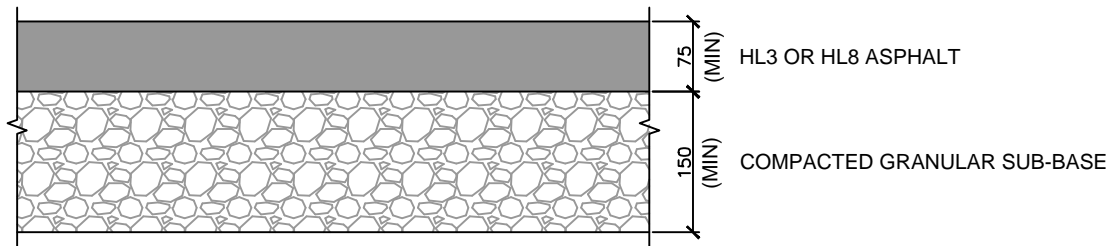
DETAIL 2A CONCRETE SIDEWALK/FOUNDATION AND GRANULAR SUB-BASE CONSTRUCTION
NTS



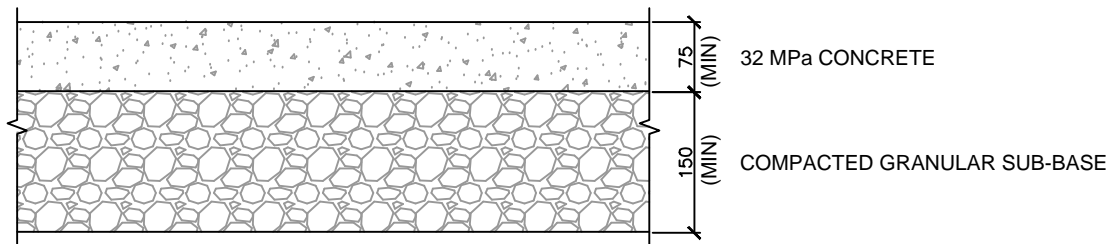
DETAIL 2D TREE PLANTING SPECIFICATIONS
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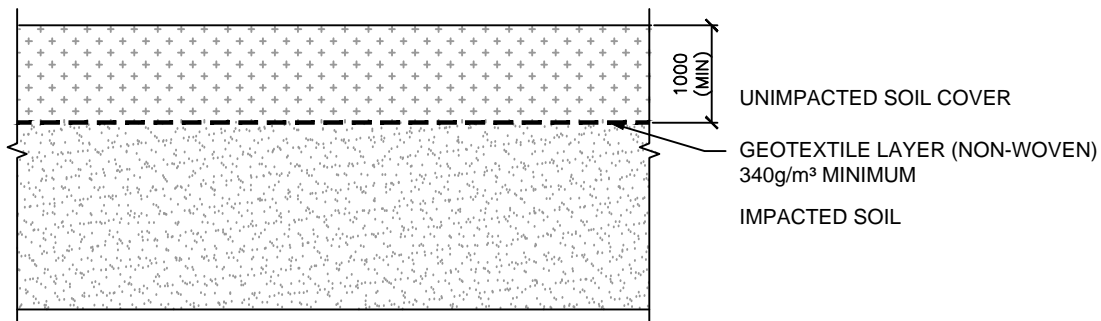
DETAIL 2B SOFT CAP CONSTRUCTION
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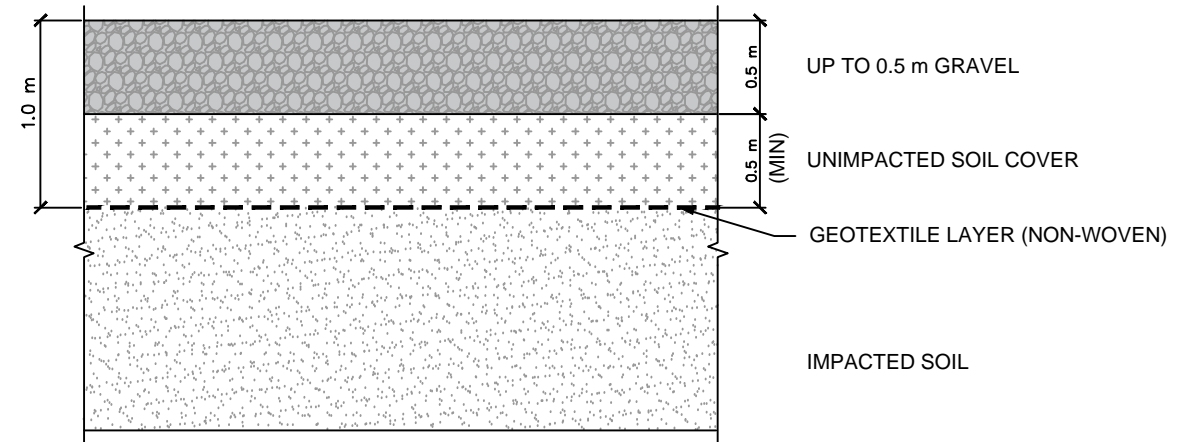
DETAIL 1 ASPHALT AND GRANULAR SUB-BASE CONSTRUCTION
NTS



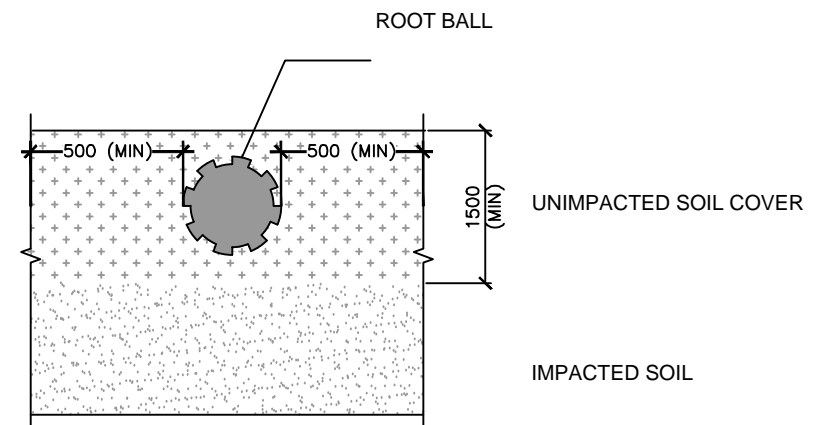
DETAIL 2 CONCRETE SIDEWALK/FOUNDATION AND GRANULAR SUB-BASE CONSTRUCTION
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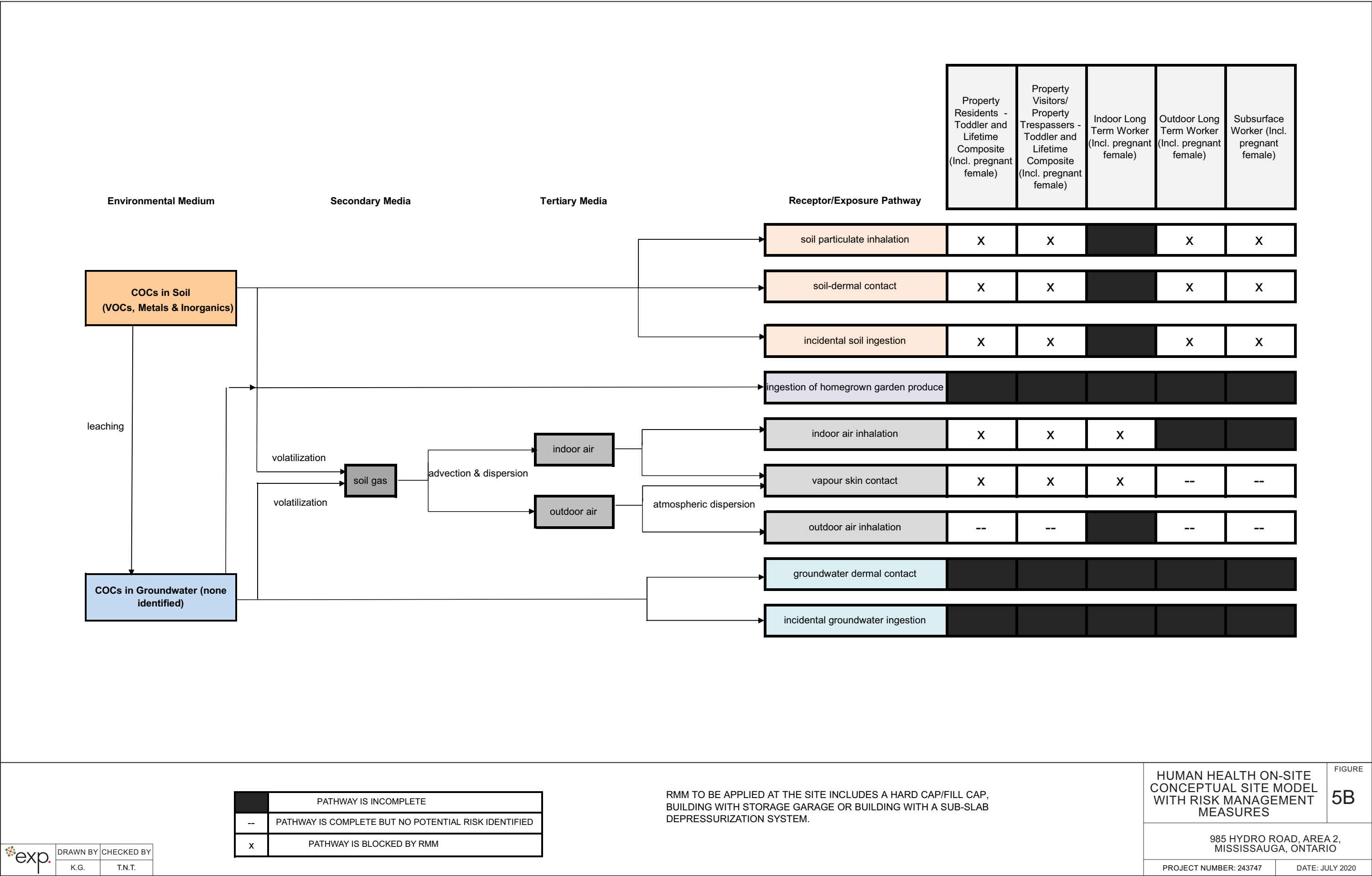
DETAIL 3 SOFT CAP CONSTRUCTION
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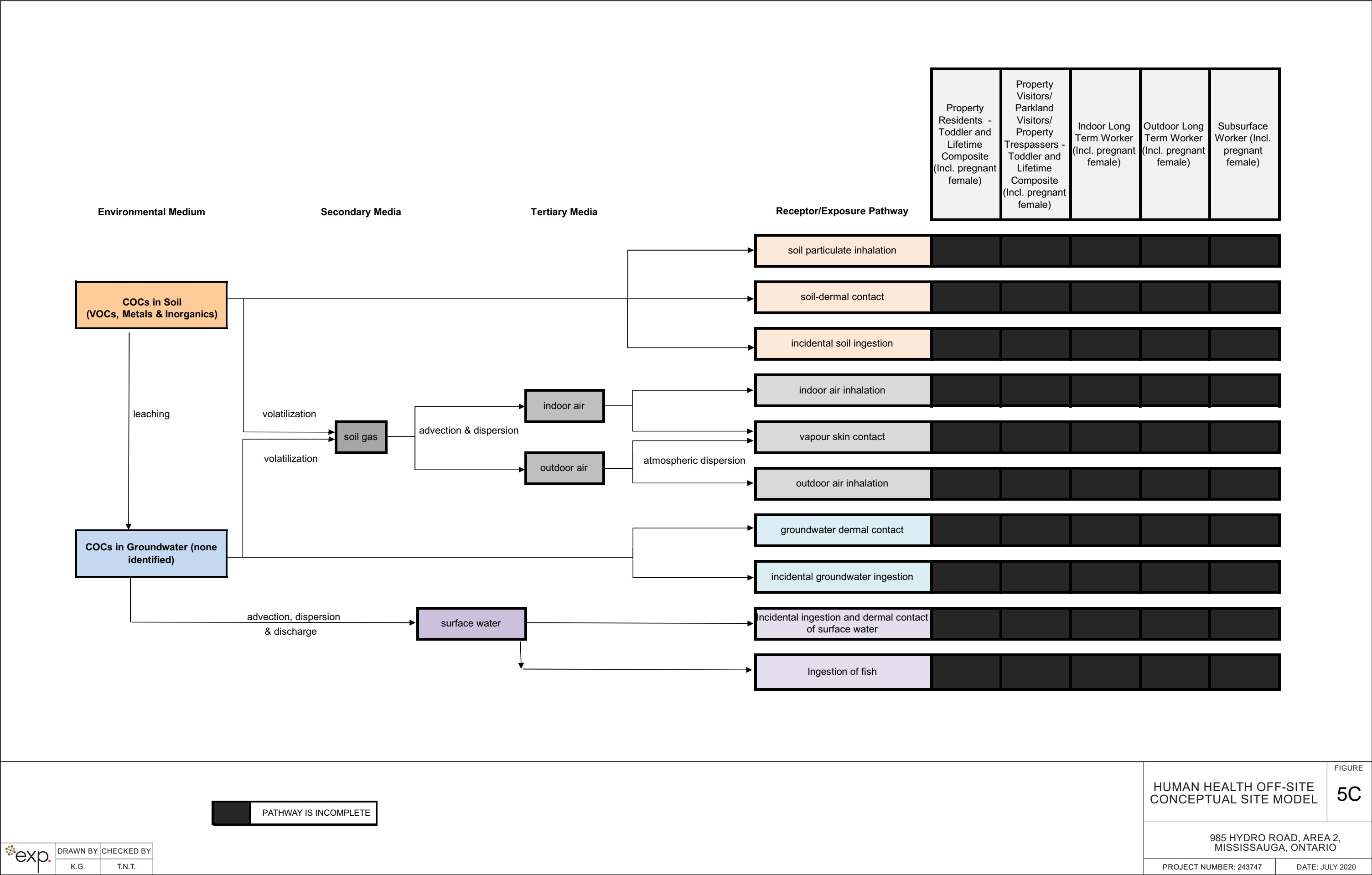


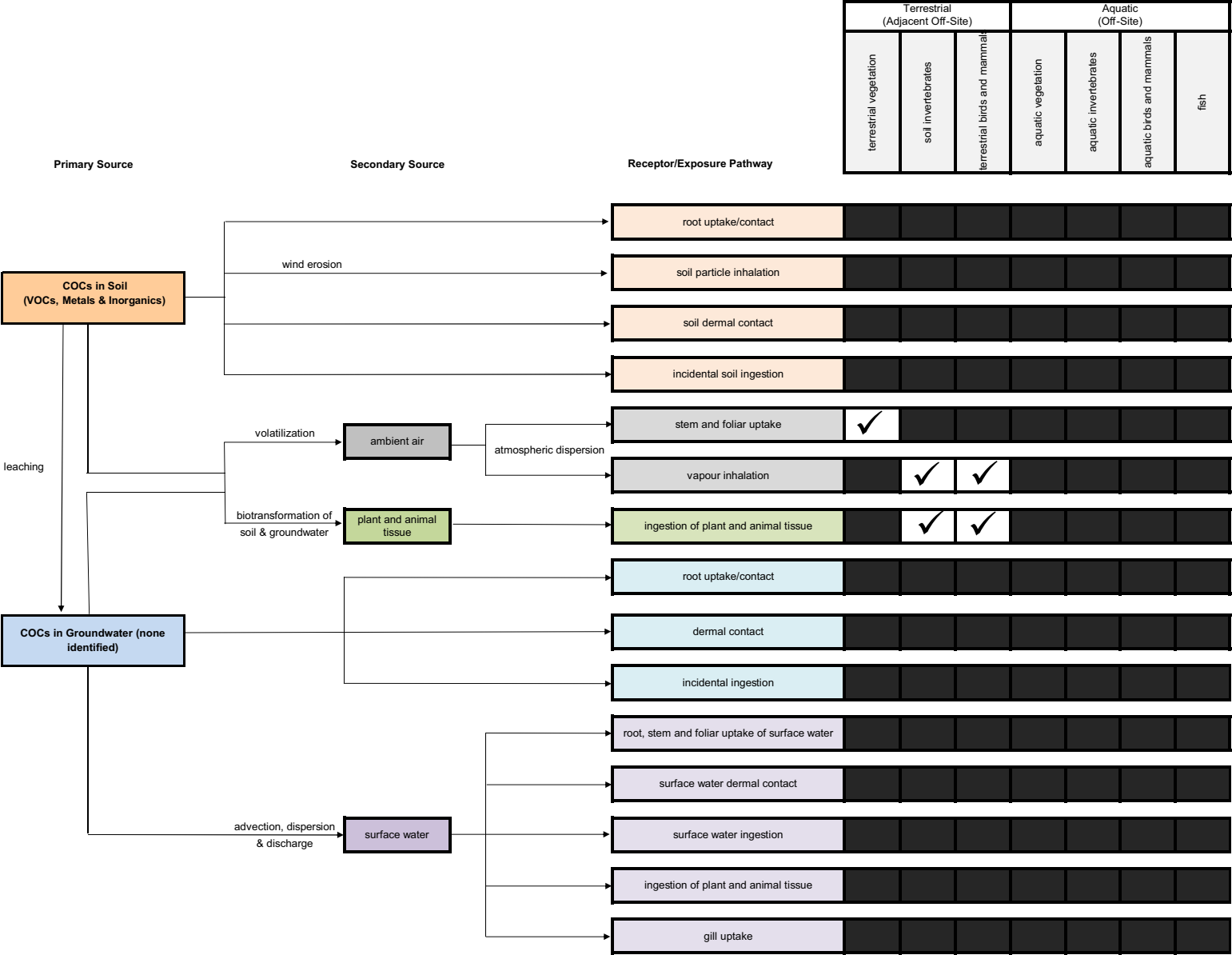
DETAIL 4 GRAVEL ROADWAYS
NTS

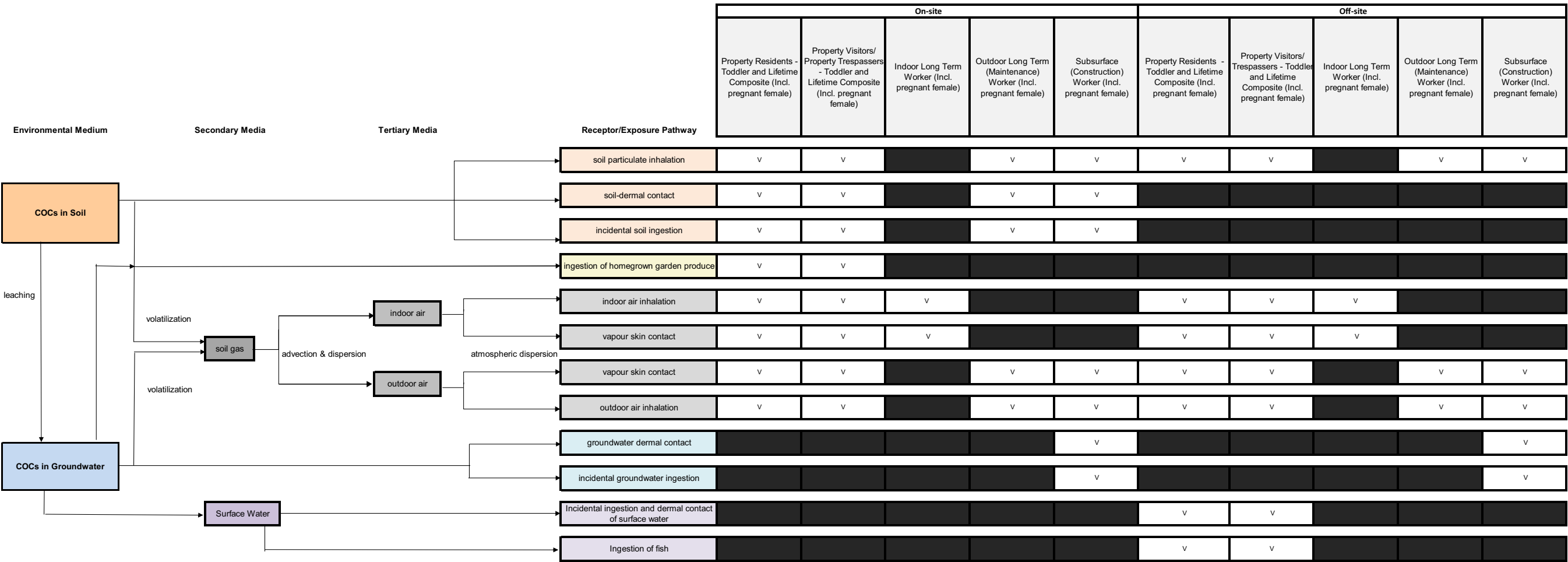


DETAIL 5 TREE PLANTING SPECIFICATIONS
NTS









LEGEND:

	PATHWAY IS INCOMPLETE
V	PATHWAY IS COMPLETE

exp.	DRAWN BY	CHECKED BY
	K.G.	T.N.T.

243747-AREA 3 HHCSM_ECSM-AUG21:HHCSM W/O RMM

HUMAN HEALTH
CONCEPTUAL SITE MODEL
WITHOUT RISK
MANAGEMENT MEASURES

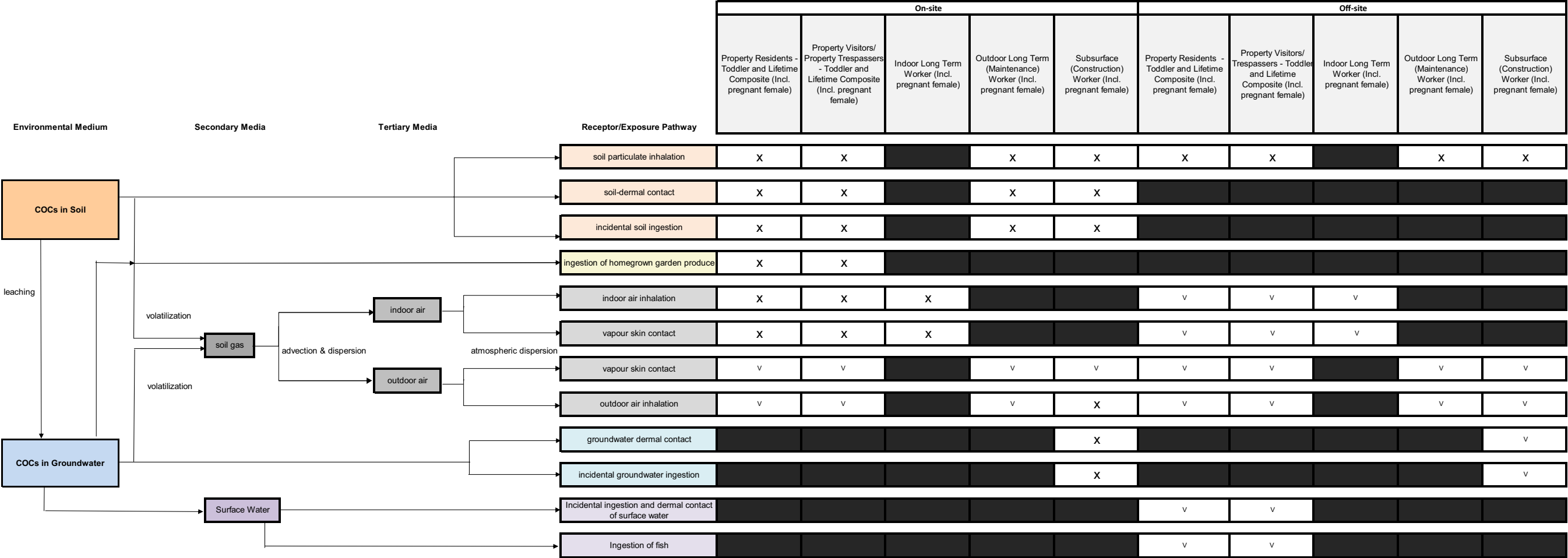
FIGURE

7A

985 HYDRO ROAD, AREA 3,
MISSISSAUGA, ONTARIO

PROJECT NUMBER: 243747

DATE: AUGUST 2021



LEGEND:

	PATHWAY IS INCOMPLETE
v	PATHWAY IS COMPLETE
x	PATHWAY IS MITIGATED BY RMM

RMMs TO BE APPLIED AT THE SITE FOR HUMAN HEALTH PROTECTION INCLUDE A VAPOUR MITIGATION SYSTEM, SOIL BARRIER, GARDEN PRODUCE RESTRICTION, HEALTH AND SAFETY PLAN, AND SOIL AND GROUND WATER MANAGEMENT PLANS.

HUMAN HEALTH
CONCEPTUAL SITE MODEL
WITH RISK MANAGEMENT
MEASURES


FIGURE

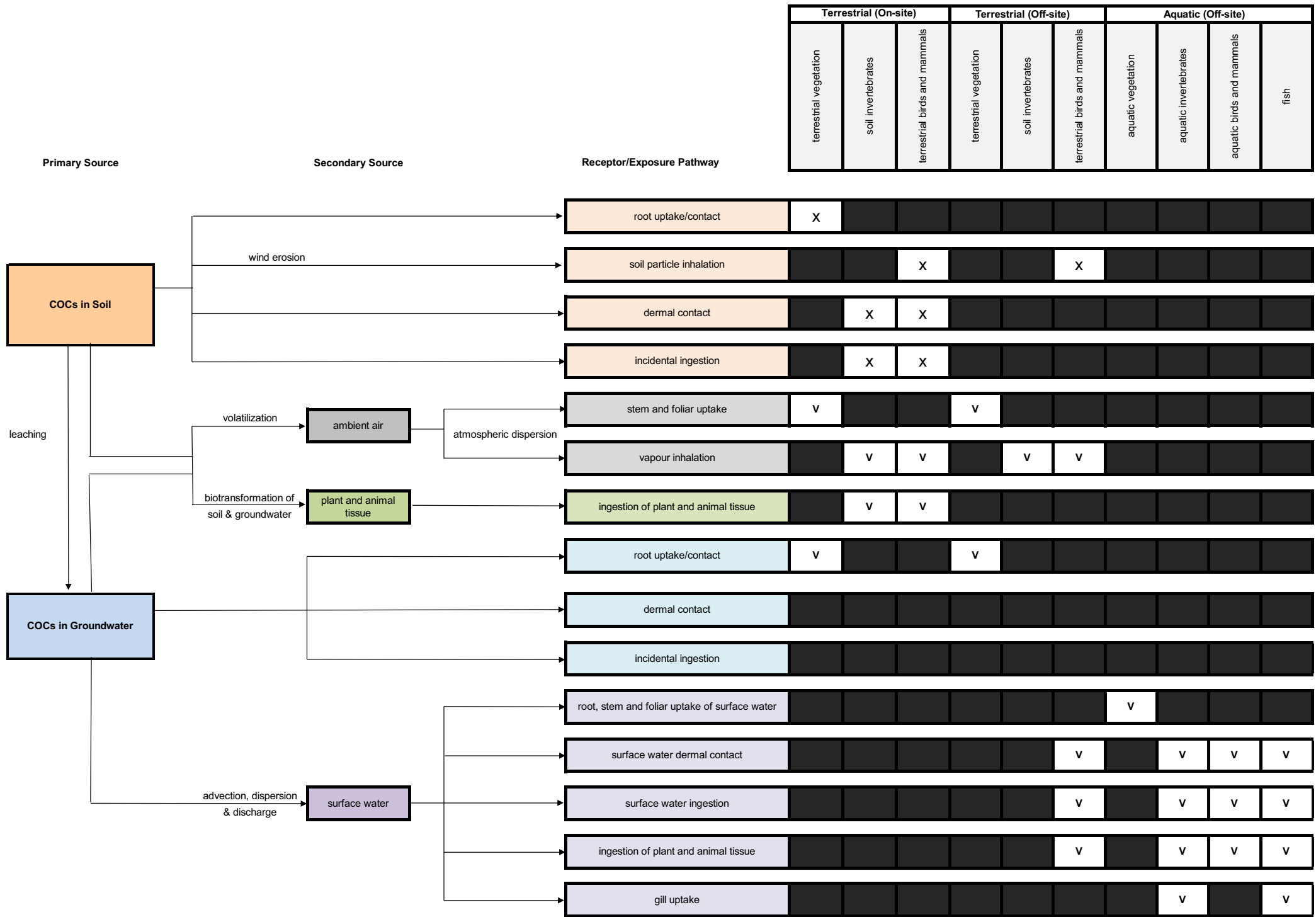
7B

985 HYDRO ROAD, AREA 3,
MISSISSAUGA, ONTARIO

PROJECT NUMBER: 243747

DATE: AUGUST 2021

	DRAWN BY	CHECKED BY
	K.G.	T.N.T.



LEGEND:

	PATHWAY IS INCOMPLETE
V	PATHWAY IS COMPLETE
x	PATHWAY IS MITIGATED BY RMM

RMMs TO BE APPLIED AT THE SITE FOR ECOLOGICAL PROTECTION INCLUDE A SOIL BARRIER AND SOIL AND GROUNDWATER MANAGEMENT PLANS.

ECOLOGICAL CONCEPTUAL SITE MODEL WITH RISK MANAGEMENT MEASURES

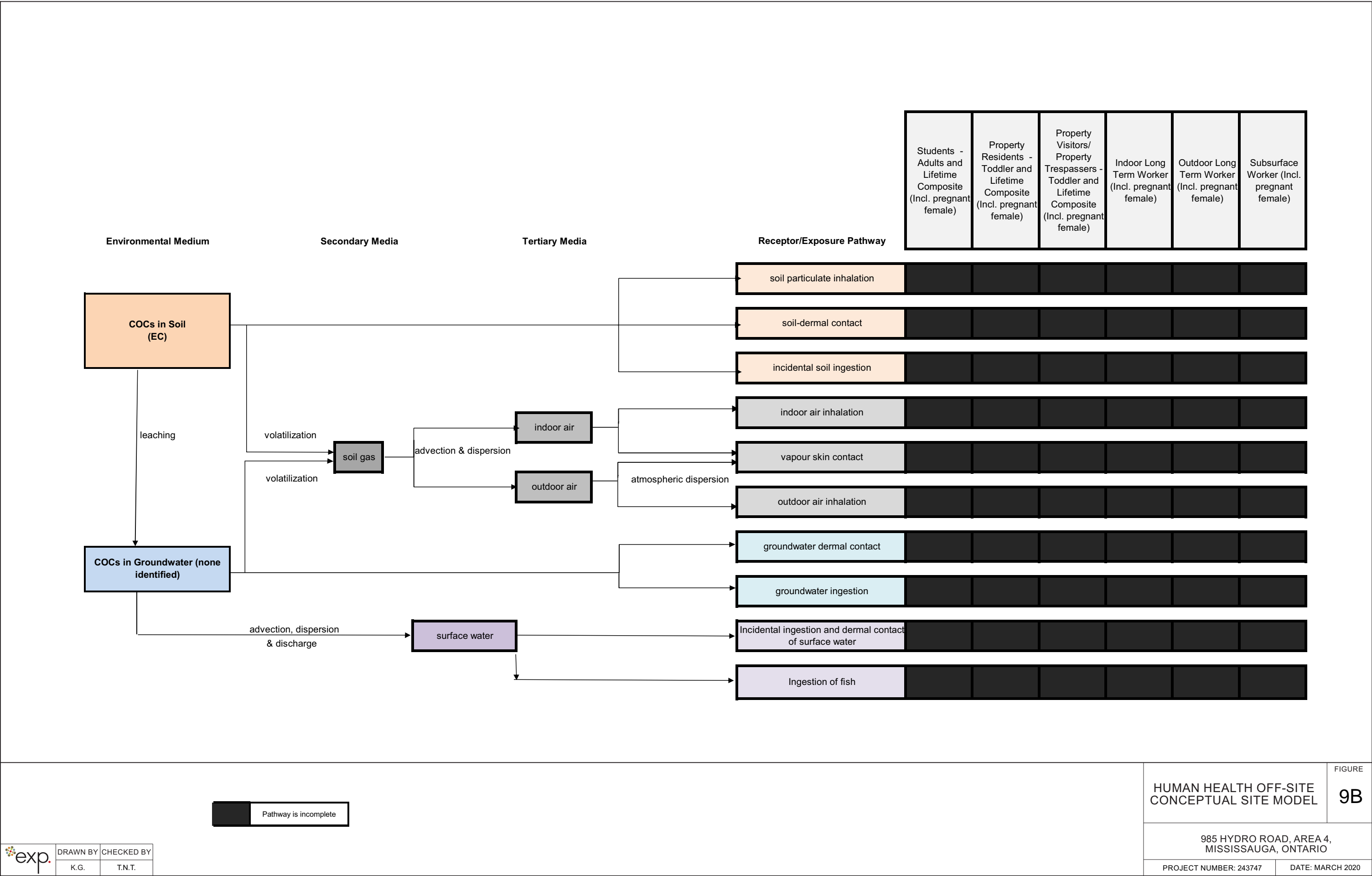
985 HYDRO ROAD, AREA 3, MISSISSAUGA, ONTARIO

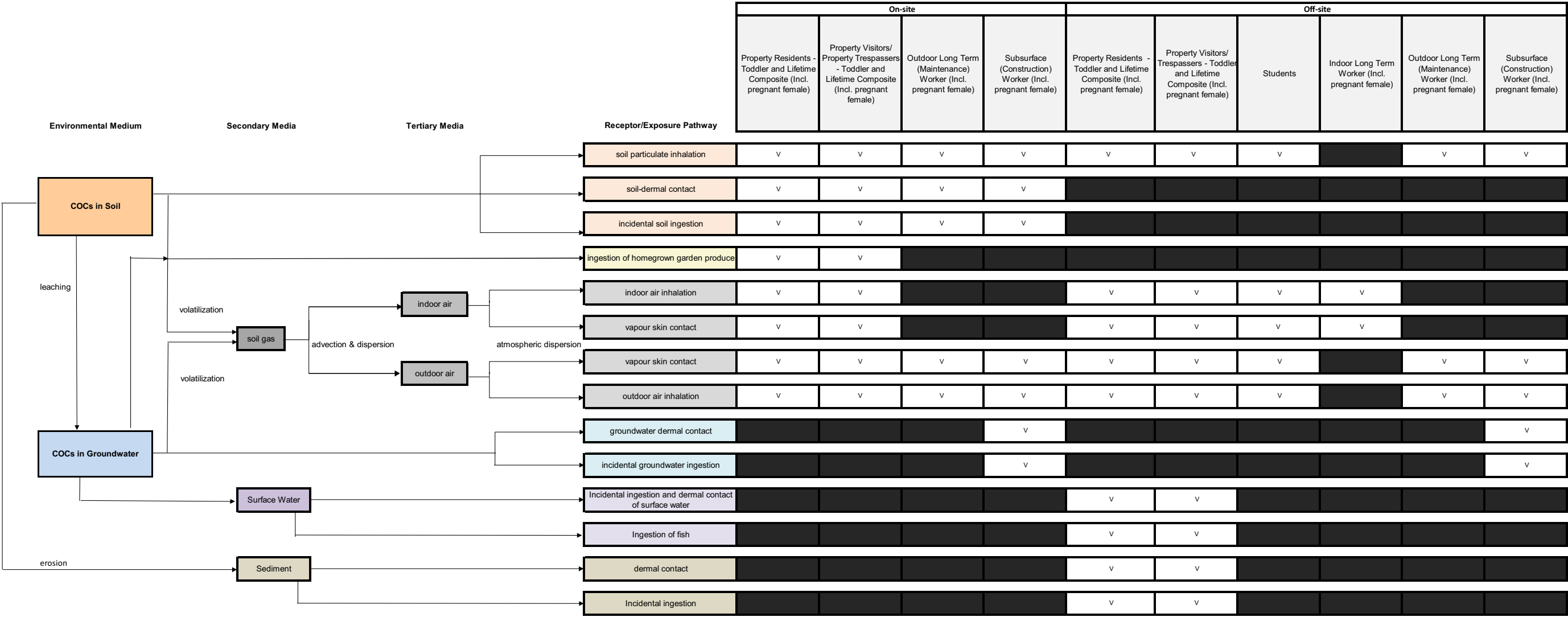
PROJECT NUMBER: 243747

DATE: AUGUST 2021

FIGURE

8B





LEGEND:

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V	PATHWAY IS COMPLETE

exp.	DRAWN BY	CHECKED BY
	K.G.	T.N.T.

243747-AREA 5A HHCSM_ECSCM-AUG21:HHCSM W/O RMM

HUMAN HEALTH
CONCEPTUAL SITE MODEL
WITHOUT RISK
MANAGEMENT MEASURES

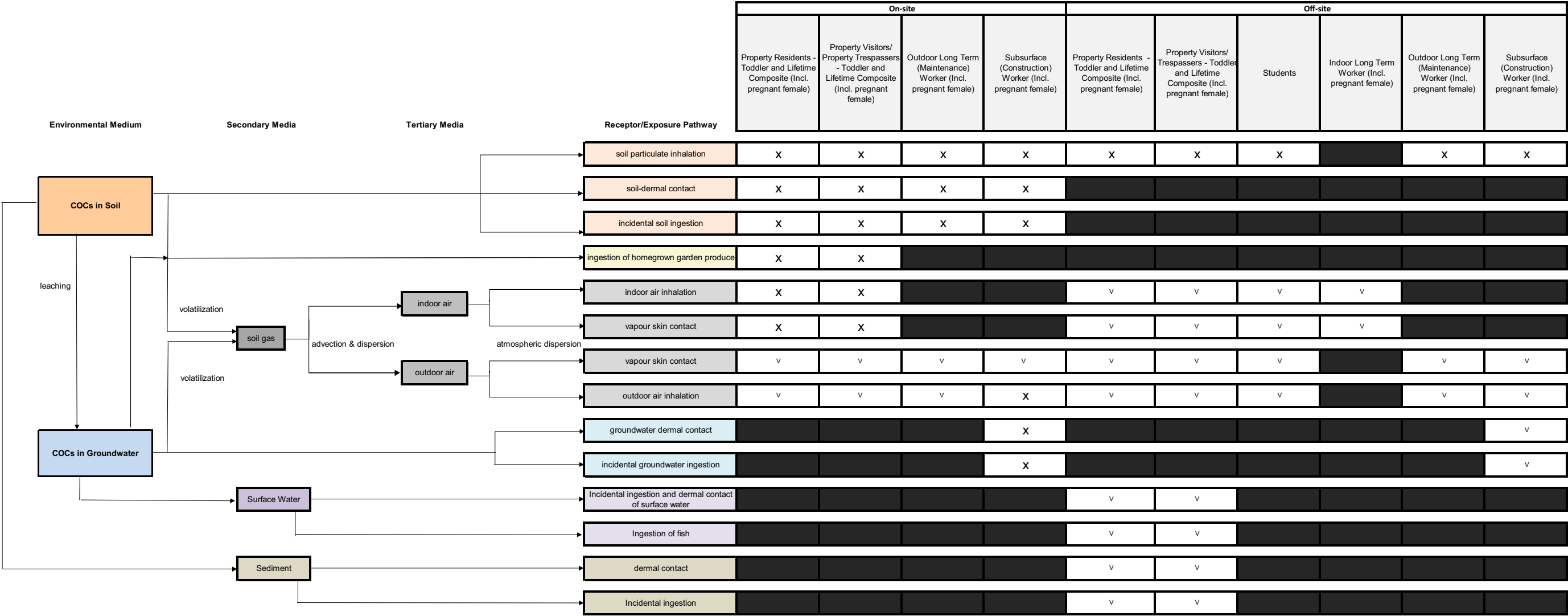
FIGURE

11A

985 HYDRO ROAD, AREA 5A,
MISSISSAUGA, ONTARIO

PROJECT NUMBER: 243747

DATE: AUGUST 2021



Legend:

LEGEND:	
	PATHWAY IS INCOMPLETE
V	PATHWAY IS COMPLETE
x	PATHWAY IS MITIGATED BY RMM

RMMs TO BE APPLIED AT THE SITE FOR HUMAN HEALTH PROTECTION INCLUDE A VAPOUR MITIGATION SYSTEM, SOIL BARRIER, SOIL EROSION CONTROL, GARDEN PRODUCE RESTRICTION, HEALTH AND SAFETY PLAN, SOIL AND GROUNDWATER MANAGEMENT PLANS.

HUMAN HEALTH
CONCEPTUAL SITE MODEL
WITH RISK MANAGEMENT
MEASURES

FIGURE

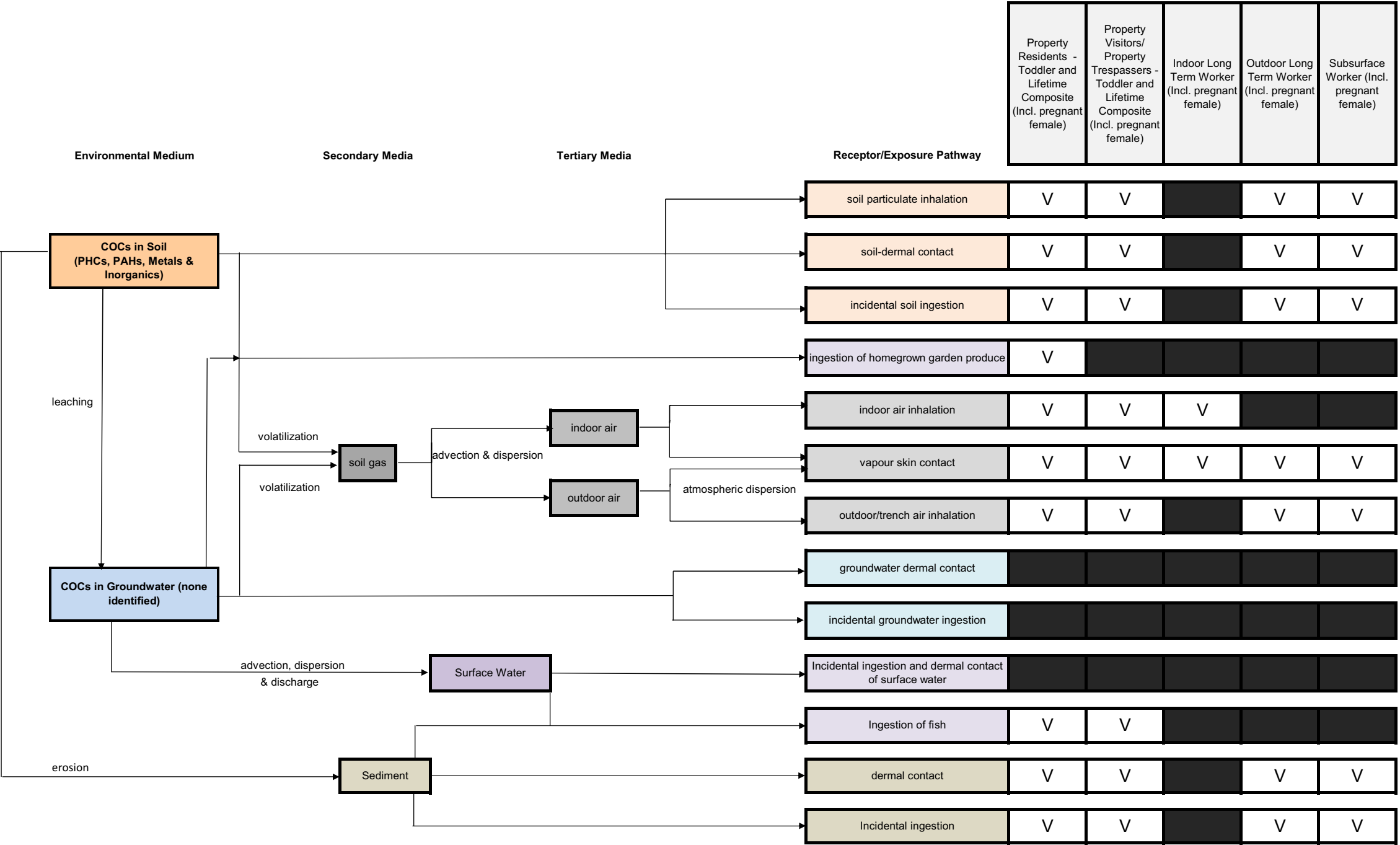
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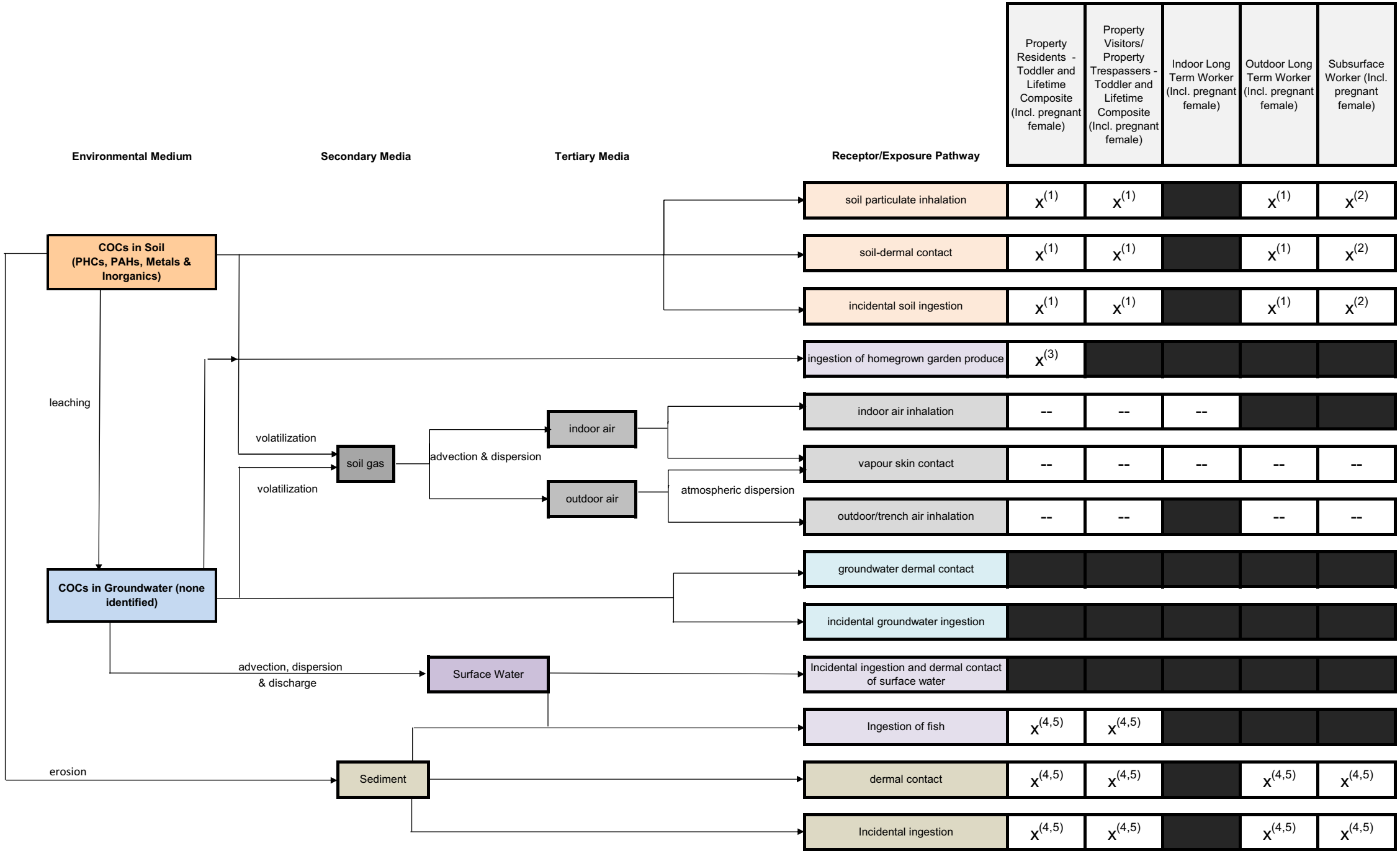
985 HYDRO ROAD, AREA 5A,
MISSISSAUGA, ONTARIO

PROJECT NUMBER: 243747

DATE: AUGUST 2021

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	K.G.	T.N.T.





LEGEND:

	PATHWAY IS INCOMPLETE
--	PATHWAY IS COMPLETE BUT POTENTIAL RISKS ARE NOT ANTICIPATED
x	PATHWAY IS BLOCKED BY RMM

RMM TO BE APPLIED AT THE SITE MAY INCLUDE:

- (1) HARD CAP/FILL CAP
- (2) HEALTH AND SAFETY PLAN
- (3) PROHIBITION ON PLANTING OF FRUIT AND VEGETABLES FOR CONSUMPTION
- (4) VAPOUR MITIGATION SYSTEM
- (5) SERSON CREEK RIFFLES AND SEDIMENT BARRIER
- (6) EROSION CONTROL MEASURES

HUMAN HEALTH ON-SITE
CONCEPTUAL SITE MODEL
WITH RISK MANAGEMENT
MEASURES

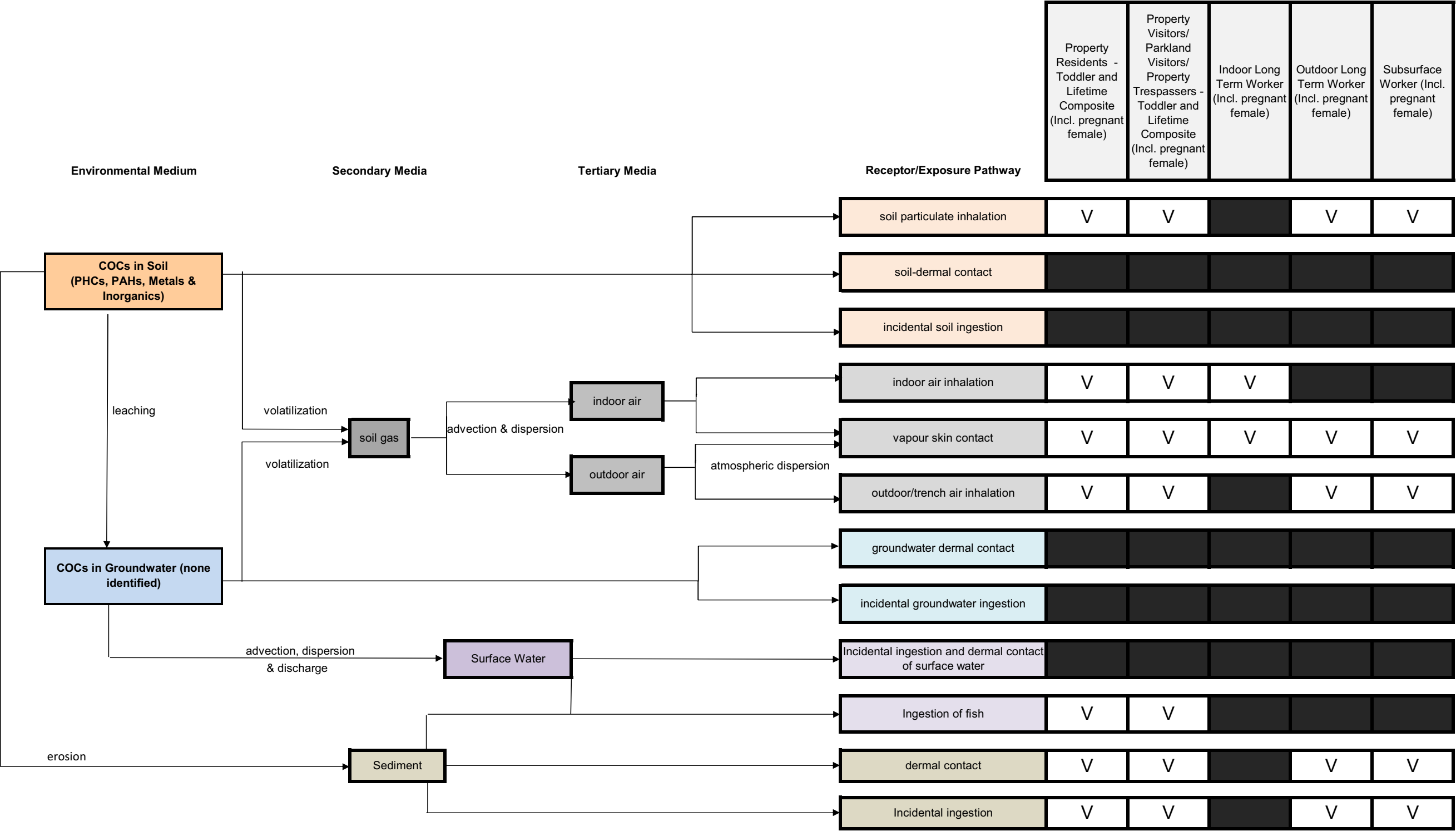
FIGURE

13B

985 HYDRO ROAD, AREA 6,
MISSISSAUGA, ONTARIO

PROJECT NUMBER: 243747

DATE: AUGUST 2021



LEGEND:

	PATHWAY IS INCOMPLETE
V	PATHWAY IS COMPLETE

exp.	DRAWN BY	CHECKED BY
	K.G.	T.N.T.

243747-AREA6 HHCSM_ECSCM-NOV20:OFF SITE HHCSM W RMM

HUMAN HEALTH OFF-SITE
CONCEPTUAL SITE MODEL
WITHOUT RISK
MANAGEMENT MEASURES

FIGURE

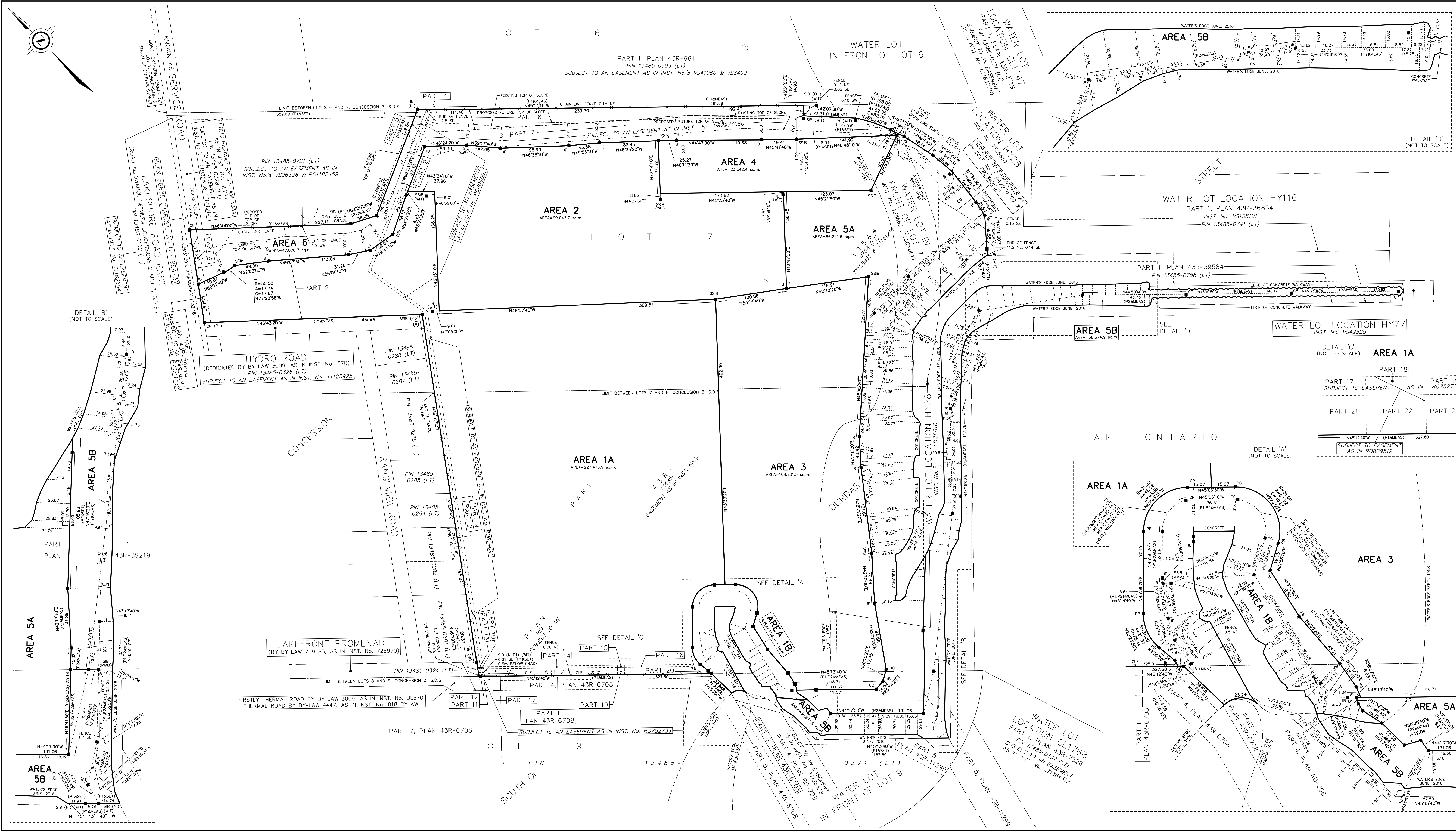
13C

985 HYDRO ROAD, AREA 6,
MISSISSAUGA, ONTARIO

PROJECT NUMBER: 243747

DATE: AUGUST 2021

Appendix A: Survey Plan



PLAN OF SURVEY OF
PART OF LOT 7, 8 AND 9, CONCESSION 3
SOUTH OF DUNDAS STREET AND
PART OF WATER LOT IN FRONT OF LOT 7
CONCESSION 3, SOUTH OF DUNDAS STREET AND
PART OF WATER LOT IN FRONT OF LOT 9
CONCESSION 3, SOUTH OF DUNDAS STREET AND
PART OF WATER LOT LOCATION HY28
IN FRONT OF LOTS 7 AND 8, CONCESSION 3
SOUTH OF DUNDAS STREET AND
PART OF WATER LOT LOCATION HY77
IN FRONT OF LOT 7, CONCESSION 3
SOUTH OF DUNDAS STREET
(GEOGRAPHIC TOWNSHIP OF TORONTO)
CITY OF MISSISSAUGA
REGIONAL MUNICIPALITY OF PEELE
SCALE 1:2000
J.D. BARNES LIMITED
© COPYRIGHT
METRIC DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN
METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NOTES
BEARINGS ARE UTM GRID, DERIVED FROM OBSERVED REFERENCE POINTS A AND B,
BY REAL TIME NETWORK (RTN) OBSERVATIONS, UTM ZONE 17, NAD83 (CSRS)
(2010.0).
DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY
THE COMBINED SCALE FACTOR OF 0.999768.

INTEGRATION DATA
OBSERVED REFERENCE POINTS (ORP): UTM ZONE 17, NAD83 (CSRS) (2010.0).
COORDINATES TO URBAN ACCURACY PER SECTION 14 (2) OF O.REG 216/10.

POINT ID	EASTING	NORTHING
ORP (A)	616 746.68	4 825 866.77
ORP (B)	616 671.99	4 825 221.39

COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH
CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.
THE RESULTANT TIE BETWEEN ORP A AND ORP B IS 649.84 N 6°36'05" E

LEGEND

SYMBOL	DESCRIPTION
■	DENOTES SURVEY MONUMENT FOUND
□	DENOTES SURVEY MONUMENT SET
SIB	DENOTES STANDARD IRON BAR
SSIB	DENOTES SHORT STANDARD IRON BAR
IB	DENOTES IRON BAR
PB	DENOTES PLASTIC BAR
CC	DENOTES CUT CROSS
CP	DENOTES CONCRETE PIN AND WASHER
WIT	DENOTES WITNESS
P1	DENOTES PLAN 43R-37701
P2	DENOTES PLAN 43R-37707
P3	DENOTES PLAN 43R-37371
P4	DENOTES PLAN 43R-30334
P5	DENOTES PLAN OF SURVEY BY J.D. BARNES LIMITED, DATED MARCH 13, 2019, REFERENCE NO. 19-30-917-03-C.
MEAS	DENOTES MEASURED
JDB	DENOTES J.D. BARNES LIMITED
MM	DENOTES METRIC GEOMATICS ONTARIO LIMITED
OH	DENOTES ONTARIO HYDRO
NI	DENOTES NOT IDENTIFIABLE
CLF	DENOTES CHAIN LINK FENCE

N=NORTH / S=SOUTH / E=EAST / W=WEST

ALL FOUND SURVEY MONUMENTS WERE ORIGINALLY SET BY J.D. BARNES LIMITED,
UNLESS NOTED OTHERWISE.
ALL UNDERLYING WATER'S EDGE HAS BEEN COMPILED FROM PLANS 43R-23371,
43R-6708 AND RD-298.

SURVEYOR'S CERTIFICATE
I CERTIFY THAT:
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS
ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON THE 22nd DAY OF OCTOBER, 2020.

October 22nd, 2020
DATE
R.S. QUERUBIN
ONTARIO LAND SURVEYOR

J.D. BARNES LIMITED
LAND INFORMATION SPECIALISTS
801 WHEELABRATOR WAY, SUITE A, MILTON, ON L7T 3C1
T: (905) 875-9955 F: (905) 875-9956 www.jdbarnes.com

DRAWN BY: AP/MB CHECKED BY: AB/RSO REFERENCE NO.: 16-30-917-03-H
FILE: G:\16-30-917\03\Drawing\16-30-917-03-H.dgn DATED: OCTOBER 22ND, 2020
PLOTTED: 11/12/2020

ASSOCIATION OF ONTARIO
LAND SURVEYORS
PLAN SUBMISSION FORM
2123248
THIS PLAN IS NOT VALID
UNLESS IT IS AN EMBOSSED
ORIGINAL COPY
ISSUED BY THE SURVEYOR
IN ACCORDANCE WITH
REGULATION 1026, SECTION 29(3).

Appendix B: Estimated Monitoring Costs

Appendix B: Estimated Monitoring Costs

The estimated monitoring costs associated with indoor air sampling (Areas 3 and 5A and Area 6 [in the event a building from Area 2 encroaches into Area 6 and is not constructed with a storage garage]) for buildings within the Dedication/Conveyance Lands and wind speed generation, respirators, and monitoring within trenches (Areas 3 and 5A) are presented below. It is noted that monitoring components are subject to change pending MECP final approval of the risk assessment (RA) for Areas 3 and 5A.

Indoor Air Monitoring Costs

The following assumptions were made for the indoor air monitoring program:

- The buildings within the Dedication/Conveyance Lands are washroom/storage slab-on-grade buildings (for Areas 3 and 5A) and for any building within Area 2 that has encroached to Area 6 where a parking garage has not been constructed;
- Monitoring frequency is based on a minimum two (2) year program with semi-annual sampling for the first year and annual sampling the second year and each year thereafter. The frequency is subject to change pending approval from the MECP; and,
- As the sampling plan has yet to be designed and is based on the size and configuration of the future buildings, the cost assumed two (2) to three (3) sampling locations will be required, along with associated quality assurance/quality control (QA/QC) samples (field duplicate, trip blank, and outdoor air sample).

Table B-1: Estimated Cost Per Building for Indoor Air Monitoring within Dedication/Conveyance Lands

Indoor Air Monitoring	Number of Sampling Events	Cost per Event	Cost Per Year
Year 1	2	\$6,000	\$12,000
Year 2	1		\$6,000
Total Cost Per Building (2 Years; excluding HST)			\$18,000

Narrow Trench RMM

Note that the costs are presented for implementation and monitoring of RMM while working within a narrow trench are provided based on anticipated rental costs per week or a one-time cost to purchase an anemometer and industrial fan.

Table B-2: Estimated Equipment Cost Associated with Implementation of RMM within a Narrow Trench

Item	Rental Cost Per Week	Cost to Purchase
Industrial Fan	\$140	\$500
Anemometer	\$75	\$1,000
Generator Rental (to support industrial fan use), including \$100 allowance for gasoline	\$308	\$1,100
Total (cost to rent)		\$523
Total (cost to purchase)		\$2,600

Table B-3: Estimated Labour Cost Associated with Implementation of RMM within a Narrow Trench

Item	Qualified Person Cost	City of Mississauga Worker Cost	Unit (hours)	Total Cost
Initial training for anemometer use and results interpretation	\$140 per hour	\$40 per hour	5	\$900 (this is a one time cost for training, the first week of narrow trench excavation)
Anemometer monitoring and results interpretation	-	\$40 per hour	37.5	\$1,500
Total				\$2,400

In the absence of the implementation of the above RMM, a respirator will be required while working in a narrow trench. Anticipated costs for personal protective equipment is provided in Table B-4.

Table B-4: Estimated Cost Associated with Implementation of Respiratory PPE within a Narrow Trench

Item	Qualified Person Cost	Utility Worker Cost	Unit (hours)	Total Cost*
Initial training and fit testing for respirator	\$140 per hour	\$40 per hour	5	\$900 (this is a one-time cost for training, the first week of narrow trench excavation)
Cost of respirator	-	\$300 per person	-	\$600 (assuming two (2) utility workers)
Total				\$1,500

* Anticipated costs per utility provider per narrow trench.

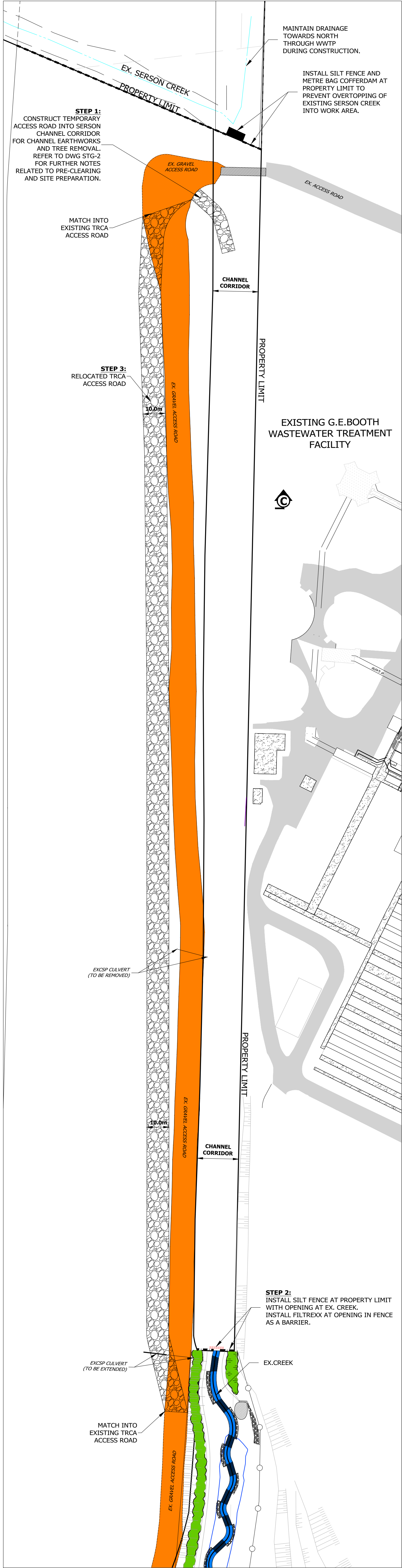
Estimated soil disposal and importation costs incremental to a narrow trench

The basic MECP trench dimensions for a narrow trench are set at 2 metres (deep) x 1 metre (wide) x 13 metre (long). By definition, a wide trench is a trench for which the width is greater than its depth and for this site the calculation has been based on a width of 2.1 metres instead of 1 metre (this is consistent with our RA calculations on all applicable RA Areas). As such, the additional soil displacement for a wide trench would constitute of 2 metres (deep) x 1.1 metre (wide) x 13 metres for a total of 28.6 m³. However, it should be noted that prior to conveyance, the top 1.5 metres of soil would be conveyed as clean, leaving a total displacement of contaminated soil of 0.5 metres (deep) x 1.1 metre (wide) x 13 metres (long) for a total of 7.15 m³. Given that this soil can be placed back into the trench following confirmatory sampling (given the small volume, no additional samples would be required on top of a narrow trench). However, it is acknowledged that a larger area would need to be capped in the trench given the increase in width. This increase in soil cap volume is calculated as follows:

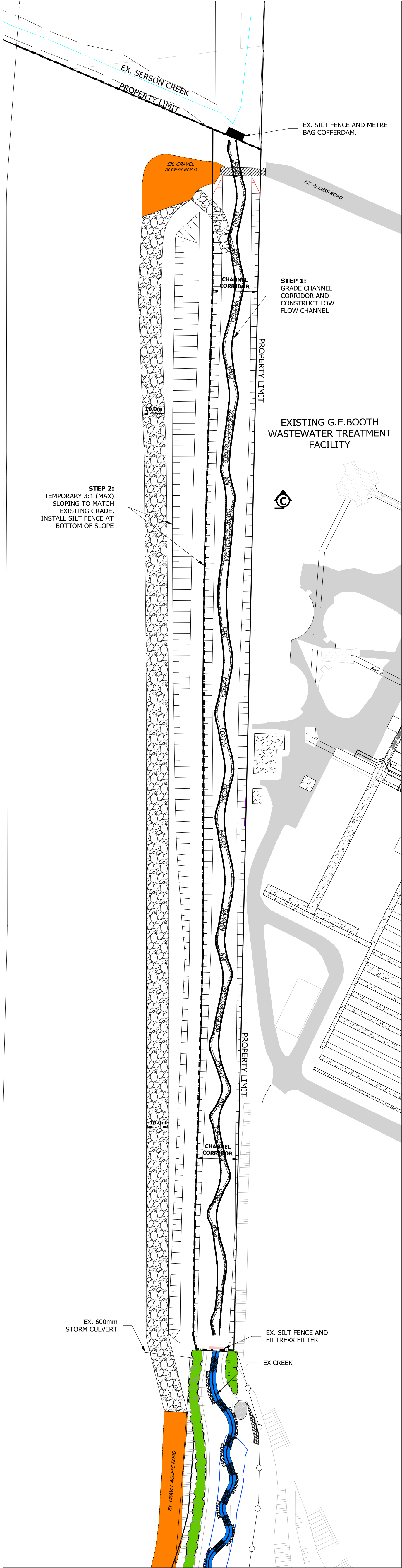
$$1.1 \text{ metres (additional trench width)} \times 0.5 \text{ metres (soil cap required under clean soil)} \times 13 \text{ metres (long)} = 7.15 \text{ m}^3$$

Soil importation costs are typically \$70 per cubic metre for clean soil and \$200 per cubic metre for disposal of extra displaced material for a total of \$1,930.5 in additional cost per trench.

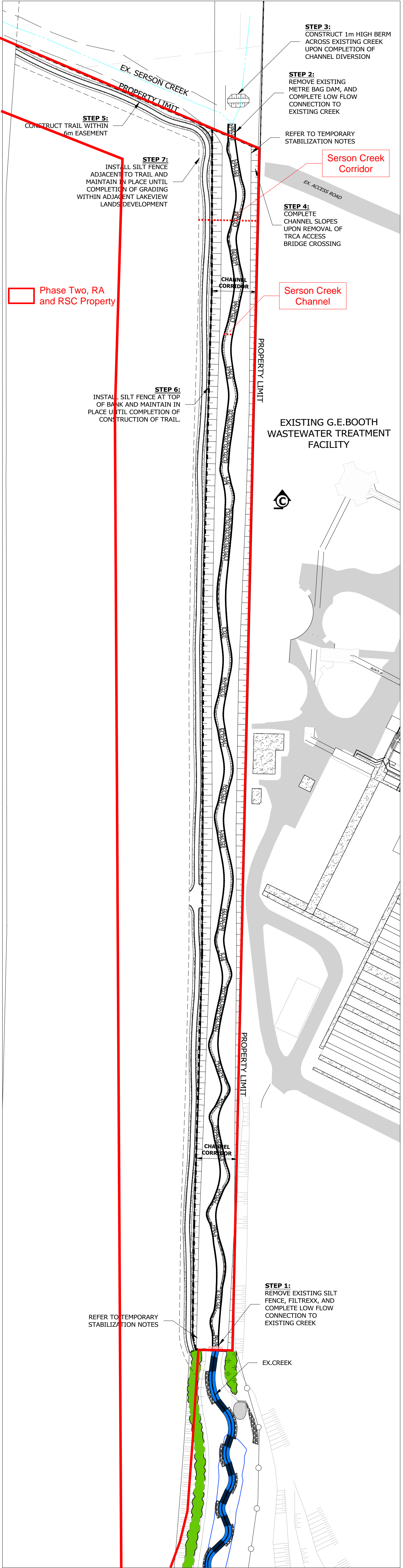
Appendix C: Serson Creek Development Drawings



STAGE 1
PRE-CONSTRUCTION



STAGE 2
CHANNEL CONSTRUCTION



STAGE 3
CHANNEL ACTIVATION

EROSION AND SEDIMENT CONTROLS

GENERAL NOTES:

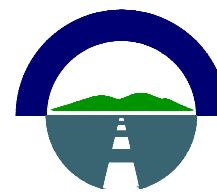
1. THIS DRAWING IS TO BE USED FOR ESC MEASURES DURING CONSTRUCTION OF SERSON CREEK.
2. ALL ESC MEASURES ARE TO BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE AND SITE IS STABILIZED.
3. THE CONTRACTOR SHALL ENDEAVOR TO PREVENT MUD TRACKING ONTO EXISTING ROADS AND SHALL PROVIDE FOR CLEAN UP AT HIS OWN EXPENSE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE TO CONTROL DUST IN THE PROJECT AND HE SHALL PROVIDE, AT HIS OWN EXPENSE, CONTROLLING MEASURES AS DIRECTED BY THE ENGINEER AND THE CITY.
4. SHOULD EXCESSIVE MUD TRACKING BE NOTED ON THE CITY/REGION ROADS, IT MAY BE DIRECTED BY THE CITY/REGION ENGINEER TO INSTALL A WHEEL WASHING DEVICE WHICH WILL BE THE RESPONSIBILITY OF THE CONTRACTOR

E&S NOTES (CREDIT VALLEY CONSERVATION):

- a. GRANTING OF CVC PERMIT DOES NOT ABSOLVE THE PROPONENT/APPLICANT AND ITS ASSIGNED AGENTS FROM ITS/THEIR RESPONSIBILITIES TO COMPLY WITH ALL APPLICABLE MUNICIPAL BY-LAWS AND PART X (SPILLS) OF THE ENVIRONMENTAL PROTECTION ACT, R.S.O., 1990.
- b. BE ADVISED THAT THE CREDIT VALLEY CONSERVATION AUTHORITY MAY, AT ANY TIME, WITHDRAW THIS PERMISSION, IF IN THE OPINION OF THE AUTHORITY, THE CONDITIONS OF THE PERMIT ARE NOT BEING COMPLIED WITH. THIS APPROVAL DOES NOT EXEMPT THE PROPERTY OWNER/APPLICANT/AGENT FROM THE PROVISIONS OF ANY FEDERAL, PROVINCIAL OR MUNICIPAL STATUTES, REGULATIONS OR BY-LAWS, OR ANY RIGHTS UNDER COMMON LAW.
- c. EROSION AND SEDIMENT CONTROL (ESC) PLAN IS A DYNAMIC DOCUMENT, WHICH MAY BE SUBJECT TO CHANGE OR MODIFICATIONS AS A RESULT OF SITE DEVELOPMENTS OR CHANGES ON SITE. ANY DEVIATION FROM APPROVED PLANS MUST BE DESIGNED BY A QUALIFIED PROFESSIONAL.
- d. IT IS EVERYONE'S RESPONSIBILITY TO PREVENT CONSTRUCTION RELATED SEDIMENT FROM IMPACTING AQUATIC RESOURCES AND OTHER NATURAL FEATURES.
- e. PLEASE REFER TO ESC GUIDELINE FOR URBAN CONSTRUCTION (DECEMBER 2006) FOR THE DESIGN AND DESIGN ALTERATION OF ESC.
- f. NO PUMPING OF SEDIMENT LADEN RUNOFF FROM TEMPORARY POND(S) TO THE CREEK IS ALLOWED AT ANY TIME.
- g. AN AFTER HOURS CONTACT NUMBER IS TO BE VISIBLY POSTED ON SITE FOR EMERGENCIES. ALL THE PLANS SHOULD HAVE NAME AND CONTACT INFO OF THE PERSON RESPONSIBLE FOR ESC MEASURES.
- h. ANY SEDIMENT SPILL FROM THE SITE SHOULD BE REPORTED TO MINISTRY OF ENVIRONMENT (SPILL ACTION CENTER) AT 1 800 268 6060.

TEMPORARY CHANNEL STABILIZATION

1. FOLLOWING COMPLETION AND STABILIZATION OF THE LOW FLOW CHANNEL SHOWN IN STAGE 2, THE CONTRACTOR IS TO PROCEED WITH RE-DIRECTION OF THE UPSTREAM FLOWS INTO THE ULTIMATE LOW FLOW CHANNEL AS PER STEPS LISTED IN STAGE 3.
2. IF REQUIRED, TEMPORARY MEASURES (EROSION BLANKETS OR APPROVED EQUAL) ARE TO BE IMPLEMENTED FOR QUICKER CHANNEL STABILIZATION PRIOR TO INTRODUCTION OF THE UPSTREAM FLOWS.
3. A SITE INSPECTION IS TO BE CONDUCTED WITH CVC STAFF PRIOR TO DETERMINING THE ACCEPTABLE METHOD OF MECHANICAL STABILIZATION, SPECIFICALLY AT THE AREAS THAT HAVE BEEN DISTURBED BY THE CONSTRUCTION ACTIVITY (LOW FLOW CHANNEL TIE IN POINTS, ETC.).



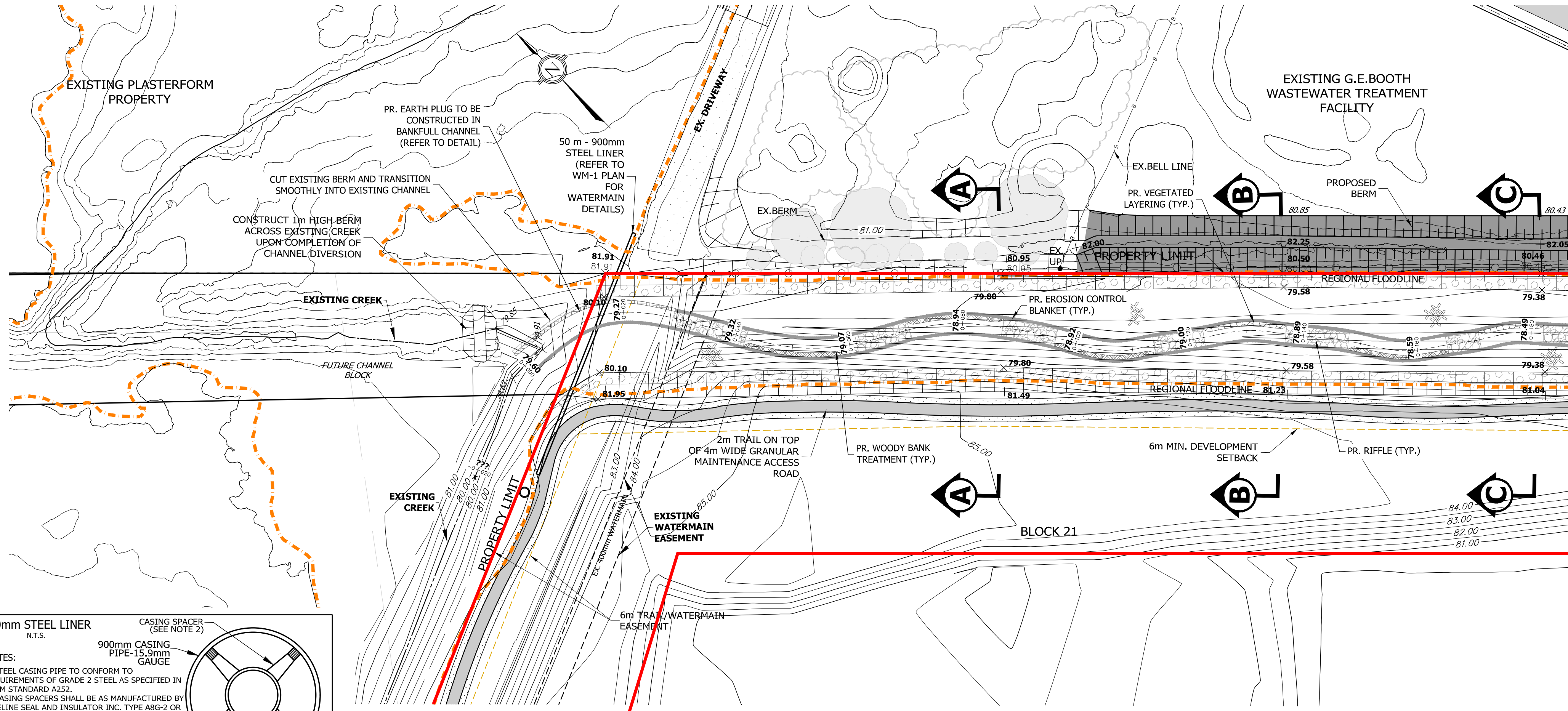
urbantech

Urbantech Consulting, A Division of Leighton-Zec Ltd.
3750 14th Ave. Suite 301, Markham, Ontario L3R 3T7
Tel: 905.946.9461 Fax: 905.946.9595
www.urbantech.com

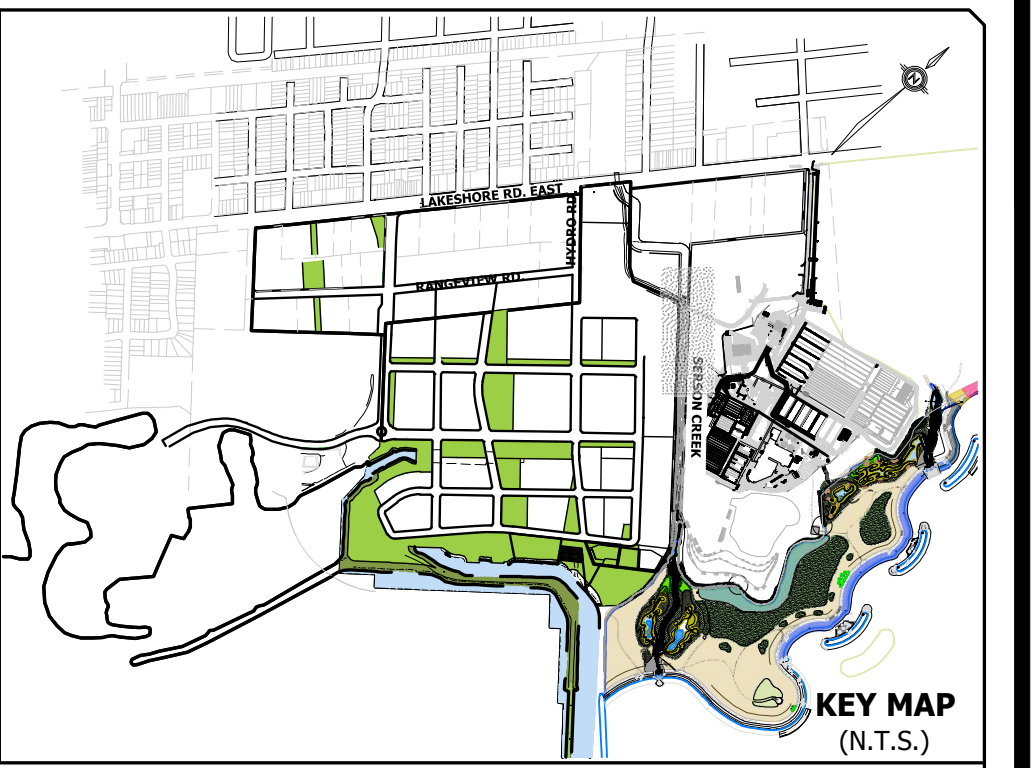
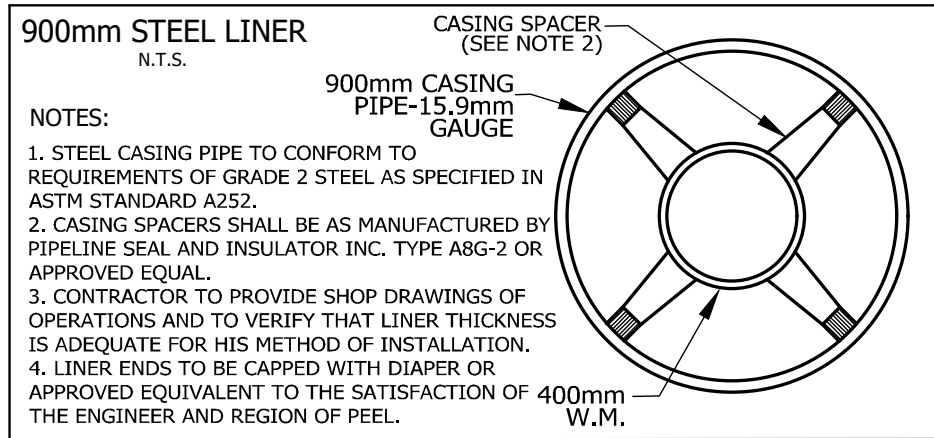
LAKEVIEW COMMUNITY PARTNERS LTD.
CITY OF MISSISSAUGA

SERSON CREEK
CONSTRUCTION STAGING AND ESC PLAN

PROJECT No.	DATE	SCALE	DWG No.
17-549	NOV. 2019	1:1500	STG-1



- GENERAL NOTES**
- A FULL SET OF DRAWINGS AND PERMITS WILL BE KEPT ON SITE DURING CONSTRUCTION.
 - ACTIVITIES WITHIN THE WATERCOURSE SHALL OCCUR FROM JULY 1 TO MARCH 31, OR AS OTHERWISE DIRECTED BY THE MNR.
 - THE CONTRACTOR SHALL PROVIDE THE CONSERVATION AUTHORITY AND DESIGNER AT LEAST 48-HOURS OF NOTICE PRIOR TO COMMENCING WORK.
 - ALL DRAWINGS SHALL BE USED FOR CONSTRUCTION. DO NOT SCALE FROM PLANFORM DRAWINGS.
 - ALL MEASUREMENTS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE INDICATED.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATES OF ALL UTILITIES.
 - LAYOUT OF WORKS SHALL BE REVIEWED AND APPROVED BY THE DESIGNER OR REPRESENTATIVE.
 - ALL WORKS SHALL BE REVIEWED AND APPROVED BY THE DESIGNER OR REPRESENTATIVE.
 - ALL GENERAL BACKFILL/SOIL SHALL BE APPROVED MATERIAL COMPACTED TO 85% STANDARD PROCTOR DENSITY, UNLESS OTHERWISE STATED.
 - THE CONTRACTOR SHALL REMOVE ALL SEDIMENT CONTROLS AFTER VEGETATION HAS ESTABLISHED. WORKS WILL NOT BE CONSIDERED COMPLETE UNTIL SEDIMENT CONTROLS ARE REMOVED.
- ENVIRONMENTAL MITIGATION NOTES**
- ALL MITIGATION AND ESC MEASURES SHALL BE INSTALLED PRIOR TO START OF CONSTRUCTION. ALL EQUIPMENT SHALL BE CLEAN AND FREE OF PETROLEUM PRODUCTS.
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 - VEHICULAR MAINTENANCE AND REFUELING SHALL BE CONDUCTED AWAY FROM WATERCOURSES.
 - CONSTRUCTION MATERIALS SHALL BE STORED AWAY FROM WATERCOURSES.
 - DURING CONSTRUCTION ALL VEGETATION ADJACENT TO THE WORK AREA IS TO BE PROTECTED, WHERE IT IS DISTURBED IT SHALL BE RESTORED TO ORIGINAL CONDITION.
 - SEDIMENT CONTROLS SHALL BE INSPECTED DAILY TO ENSURE THAT THEY ARE IN GOOD REPAIR AND FUNCTIONING AS INTENDED.
 - EROSION AND SEDIMENT CONTROLS MUST BE MAINTAINED DURING AND AFTER CONSTRUCTION UNTIL THE SITE IS DEEMED TO BE STABLE BY THE CONTRACT ADMINISTRATOR.
 - ADDITIONAL EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED IF PROPOSED CONTROLS ARE NOT ADEQUATELY PREVENTING EROSION AND RELEASE OF SEDIMENT OFF SITE.
 - RE-VEGETATE WORK SITE AS WORK PROGRESSES, OR SOON AS CONDITIONS ALLOW. APPLY A NURSE CROP OF ANNUAL RYE OR SIMILAR COVER IN AREAS TO BE EXPOSED FOR PROLONG PERIODS, PARTICULARLY WITHIN THE NEW CHANNEL CORRIDOR FOR EROSION CONTROL (RATE 30.0 KG/HA).
 - A QUALIFIED BIOLOGIST OR TECHNOLOGIST WITH A VALID PERMIT FROM MNR SHALL BE AVAILABLE TO RELOCATE DOWNSTREAM STRANDED FISH AND AMPHIBIANS AS REQUIRED.
 - THE WEATHER SHALL BE MONITORED BY THE CONTRACTOR TO ENSURE THAT WORKS ARE COMPLETE DURING DRY OR FAVOURABLE FLOW CONDITIONS.
 - ALL WORK IN THE WATERCOURSE SHALL BE COMPLETED IN THE DRY WITHIN AN ISOLATED WORK AREA DURING LOW-FLOW CONDITIONS.
 - ALL DISTURBED AREAS SHALL BE GRADED, ORGANIC SOIL SHALL BE ADDED AND SEEDING WITH PERMITTED SEED MIX. DISTURBED AREAS SHALL BE COVERED BY COIR CLOTH, JUTE MAT OR STRAW CRUMPING.
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 - VEGETATED LAYERING
 - VEGETATED ROCK BUTTRESS
 - WOODY BANK TREATMENT
 - EARTH PLUG
 - BIODEGRADABLE EROSION CONTROL BLANKET
 - WOODY DEBRIS HABITAT FEATURE
 - OFFLINE WETLAND FEATURE
 - DEEP POOL IN WETLAND
 - PROPOSED BERM
 - PROPOSED 1.8m HIGH FENCE (FINAL LOCATION AND TYPE TO BE COORDINATED WITH PEEL REGION)

NOTE:
REFER TO SEC 1 TO SEC 3 FOR CROSS SECTION DRAWINGS

BENCHMARK NOTE

ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM THE CITY OF MISSISSAUGA BENCHMARK No. 293 HAVING A PUBLISHED ELEVATION OF 87.465 METRES.

SURVEY INFORMATION TAKE FROM TOPOGRAPHIC MAP RECEIVED FROM JD BARNES AND SURVEYED DECEMBER 8, 2017.

No.	REVISIONS	DATE	BY
1			
2			
3			

**LAKEVIEW COMMUNITY PARTNERS LTD.
SERSON CREEK**



TOWN FILE No. _____ REGION FILE No. _____

MUNICIPAL
APPROVED IN PRINCIPLE SUBJECT TO DETAIL CONSTRUCTION CONFORMING TO CITY STANDARDS AND SPECIFICATIONS.

REGIONAL
DESIGN OF SANITARY AND WATER SERVICES APPROVED SUBJECT TO DETAIL CONSTRUCTION CONFORMING TO PEEL REGION STANDARDS AND SPECIFICATIONS AND LOCATION APPROVAL FROM AREA MUNICIPALITY.

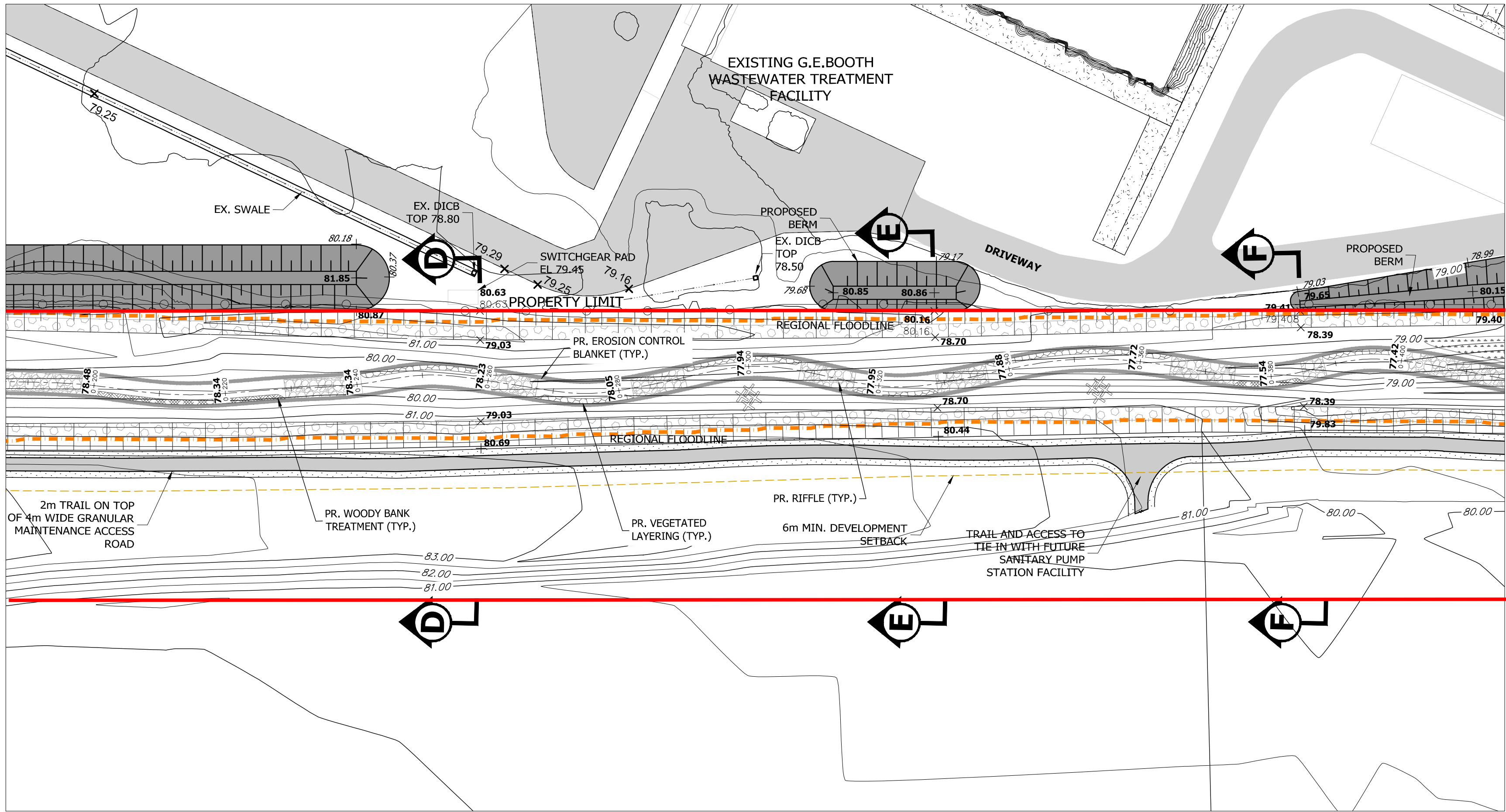
SIGNED _____ DATE _____
ENGINEERING DEPARTMENT

SIGNED _____ DATE _____
LEGISLATIVE AND PLANNING SERVICES



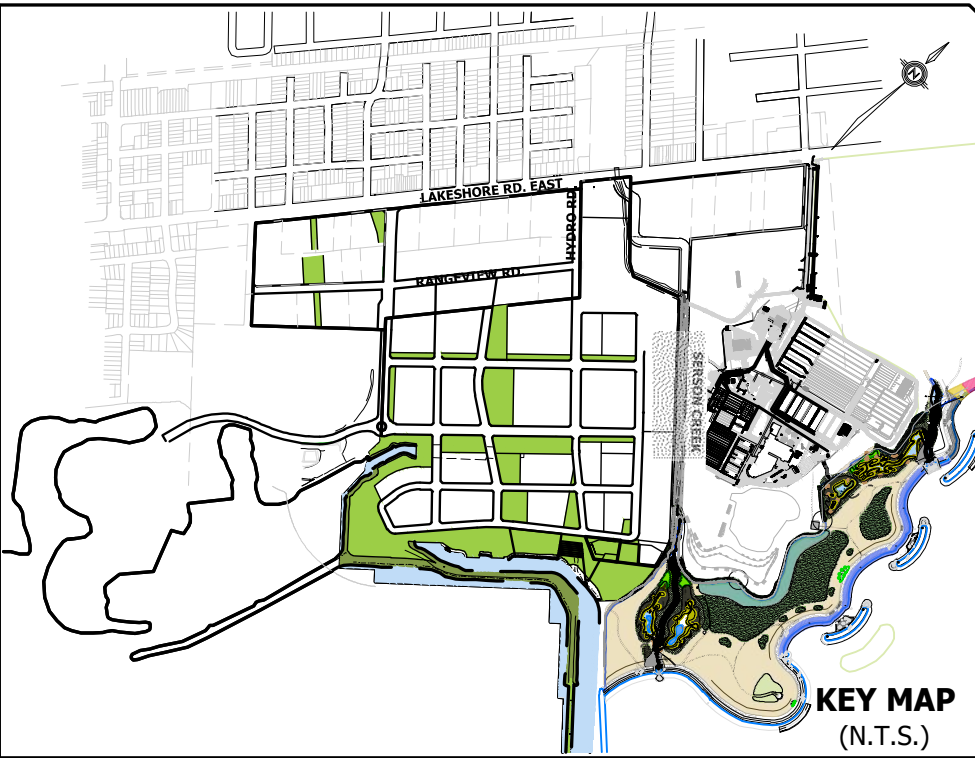
**CHANNEL PLAN & PROFILE
(STA. 0+000 TO 0+185)**

DRAWN BY: R.B. CHECKED BY: J.O. PROJECT NO: 17-549
DESIGNED BY: J.O. DATE: JULY 2020 DRAWING NO: CH-1
SCALE: H 1:500 V 1:50



Phase Two, RA and RSC Property

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SURVEY INFORMATION TAKE FROM TOPOGRAPHIC MAP RECEIVED FROM 3D BARNES AND SURVEYED DECEMBER 8, 2017.

No.	REVISIONS	DATE	BY
3			
2			
1			

**LAKEVIEW COMMUNITY PARTNERS LTD.
SERSON CREEK**



TOWN FILE No. _____ REGION FILE No. _____

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REGIONAL
DESIGN OF SANITARY AND WATER SERVICES APPROVED SUBJECT TO DETAIL CONSTRUCTION CONFORMING TO PEEL REGION STANDARDS AND SPECIFICATIONS AND LOCATION APPROVAL FROM AREA MUNICIPALITY.

SIGNED: _____ DATE: _____
ENGINEERING DEPARTMENT

SIGNED: _____ DATE: _____
LEGISLATIVE AND PLANNING SERVICES



URBANTECH
UrbanTech® Consulting
A Division of Leighton/Zeck Ltd.
3700 14th Avenue, Suite 200
Markham, ON L3R 3T7
TEL 905.946.9161 • urbantech.com

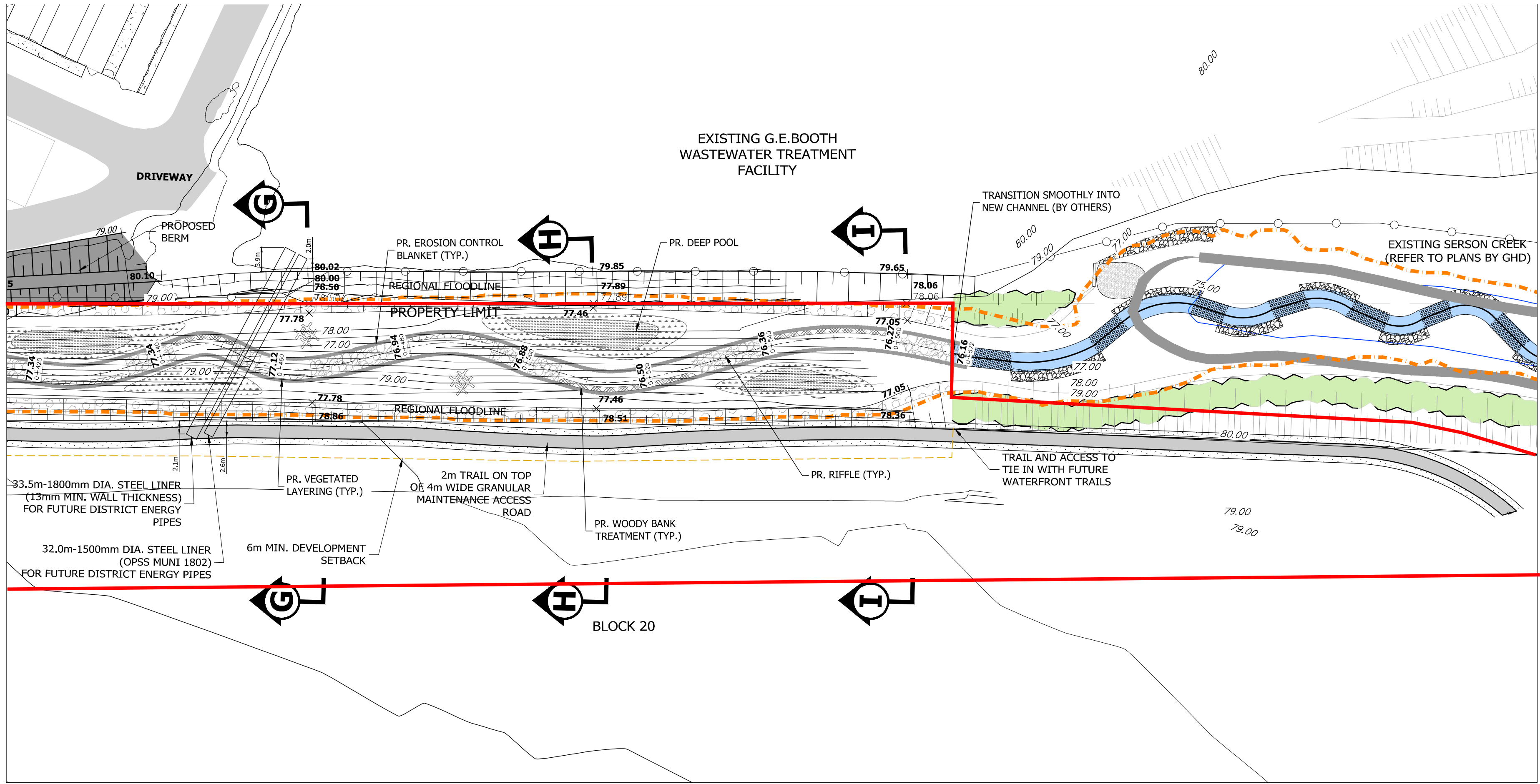
IRVAN R. KHAN
PRACTISING MEMBER
1857
JAN. 22 2021
ONTARIO

REGISTERED PROFESSIONAL ENGINEER
10085599
JAN. 22 2021
PROVINCE OF ONTARIO

**CHANNEL PLAN & PROFILE
(STA. 0+185 TO 0+415)**

DRAWN BY: R.B. CHECKED BY: J.O. PROJECT NO: 17-549
DESIGNED BY: J.O. DATE: JULY 2020 DRAWING NO: CH-2

SCALE: H 1:500 V 1:50



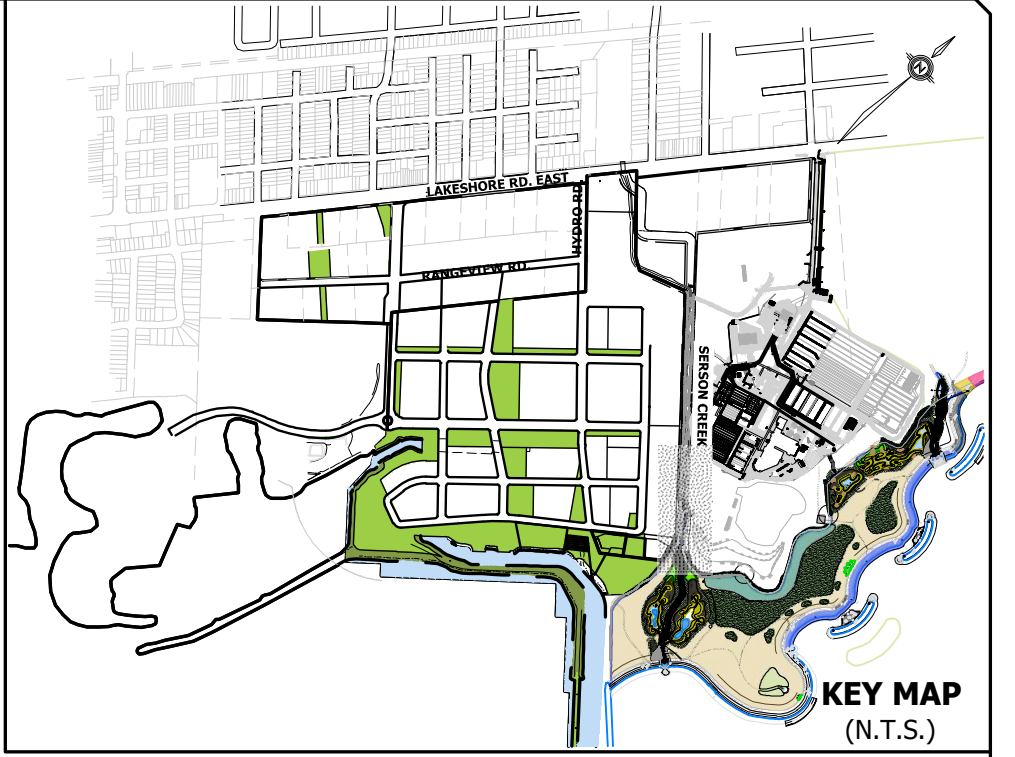
Phase Two, RA and
RSC Property

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ENVIRONMENTAL MITIGATION NOTES

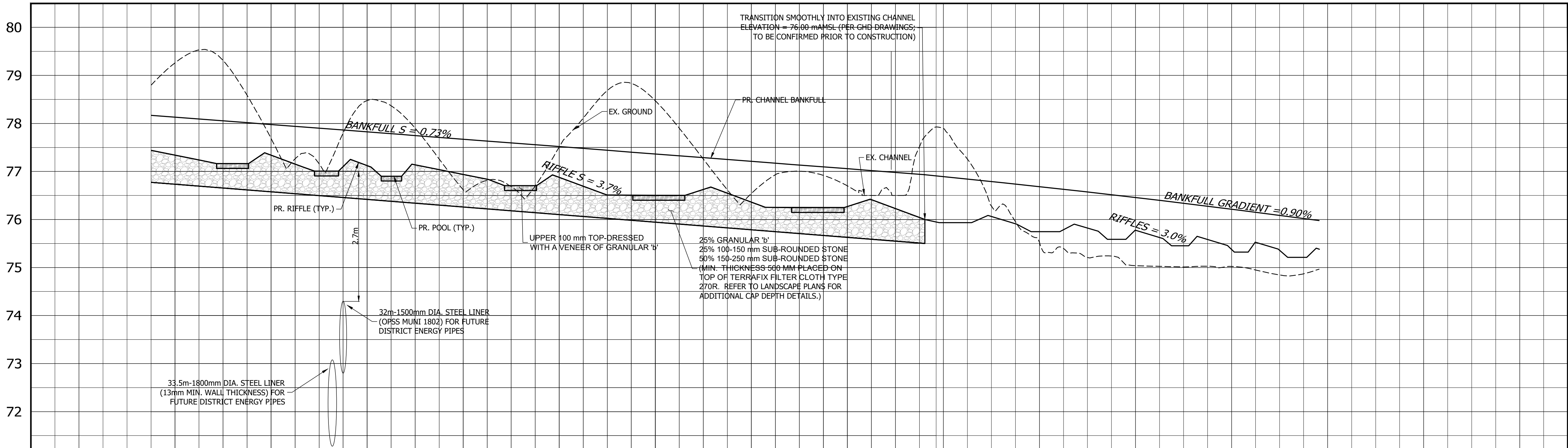
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6. SEDIMENT CONTROLS SHALL BE INSPECTED DAILY TO ENSURE THAT THEY ARE IN GOOD REPAIR AND FUNCTIONING AS INTENDED.
7. EROSION AND SEDIMENT CONTROLS MUST BE MAINTAINED DURING AND AFTER CONSTRUCTION UNTIL THE SITE IS DEEMED TO BE STABLE BY THE CONTRACT ADMINISTRATOR.
8. ADDITIONAL EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED IF PROPOSED CONTROLS ARE NOT ADEQUATELY PREVENTING EROSION AND RELEASE OF SEDIMENT OFF SITE.
9. RE-VEGETATE WORK SITE AS WORK PROGRESSES, OR SOON AS CONDITIONS ALLOW. APPLY A NURSE CROP OF ANNUAL RYE OR SIMILAR COVER IN AREAS TO BE EXPOSED FOR PROLONG PERIODS, PARTICULARLY WITHIN THE NEW CHANNEL CORRIDOR FOR EROSION CONTROL (RATE 30.0 KG/HA).
10. A QUALIFIED BIOLOGIST OR TECHNOLOGIST WITH A VALID PERMIT FROM MNRF SHALL BE AVAILABLE TO RELOCATE DOWNSTREAM STRANDED FISH AND AMPHIBIANS AS REQUIRED.
11. THE WEATHER SHALL BE MONITORED BY THE CONTRACTOR TO ENSURE THAT WORKS ARE COMPLETE DURING DRY OR FAVOURABLE FLOW CONDITIONS.
12. ALL WORK IN THE WATERCOURSE SHALL BE COMPLETED IN THE DRY WITHIN AN ISOLATED WORK AREA DURING LOW-FLOW CONDITIONS.
13. ALL DISTURBED AREAS SHALL BE GRADED, ORGANIC SOIL SHALL BE ADDED AND SEEDING WITH PERMITTED SEED MIX. DISTURBED AREAS SHALL BE COVERED BY COIR CLOTH, JUTE MAT OR STRAW CRUMPING.
14. THE CONTRACTOR SHALL REMOVE ALL SEDIMENT CONTROLS AFTER VEGETATION HAS ESTABLISHED. WORKS WILL NOT BE CONSIDERED COMPLETE UNTIL SEDIMENT CONTROLS ARE REMOVED.



LEGEND:

- 81.00 EXISTING ELEVATION
- 78.00 PROPOSED ELEVATION
- REGIONAL FLOODLINE
- RIFFLE
- VEGETATED LAYERING
- VEGETATED ROCK BUTTRESS
- WOODY BANK TREATMENT
- EARTH PLUG
- BIODEGRADABLE EROSION CONTROL BLANKET
- WOODY DEBRIS HABITAT FEATURE
- OFFLINE WETLAND FEATURE
- DEEP POOL IN WETLAND
- PROPOSED BERM
- PROPOSED 1.8m HIGH FENCE (FINAL LOCATION AND TYPE TO BE COORDINATED WITH PEEL REGION)

NOTE:
REFER TO SEC 1 TO SEC 3 FOR CROSS
SECTION DRAWINGS



BENCHMARK NOTE

ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM THE CITY OF MISSISSAUGA BENCHMARK No. 293 HAVING A PUBLISHED ELEVATION OF 87.465 METRES.

SURVEY INFORMATION TAKE FROM TOPOGRAPHIC MAP RECEIVED FROM 3D BARNES AND SURVEYED DECEMBER 8, 2017.

No.	REVISIONS	DATE	BY
3			
2			
1			

LAKEVIEW COMMUNITY PARTNERS LTD. SERON CREEK



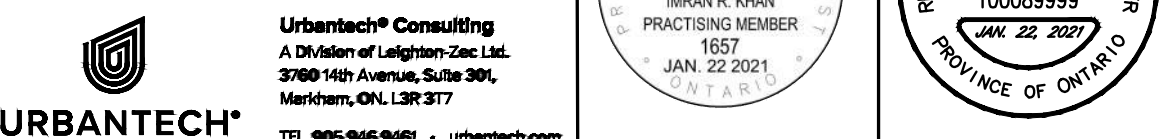
TOWN FILE No. _____ REGION FILE No. _____

MUNICIPAL
APPROVED IN PRINCIPLE SUBJECT TO DETAIL
CONSTRUCTION CONFORMING TO CITY
STANDARDS AND SPECIFICATIONS.

REGIONAL
DESIGN OF SANITARY AND WATER SERVICES
APPROVED SUBJECT TO DETAIL CONSTRUCTION
CONFORMING TO PEEL REGION STANDARDS AND
SPECIFICATIONS AND LOCATION APPROVAL FROM
AREA MUNICIPALITY.

SIGNED: _____ DATE: _____
ENGINEERING DEPARTMENT

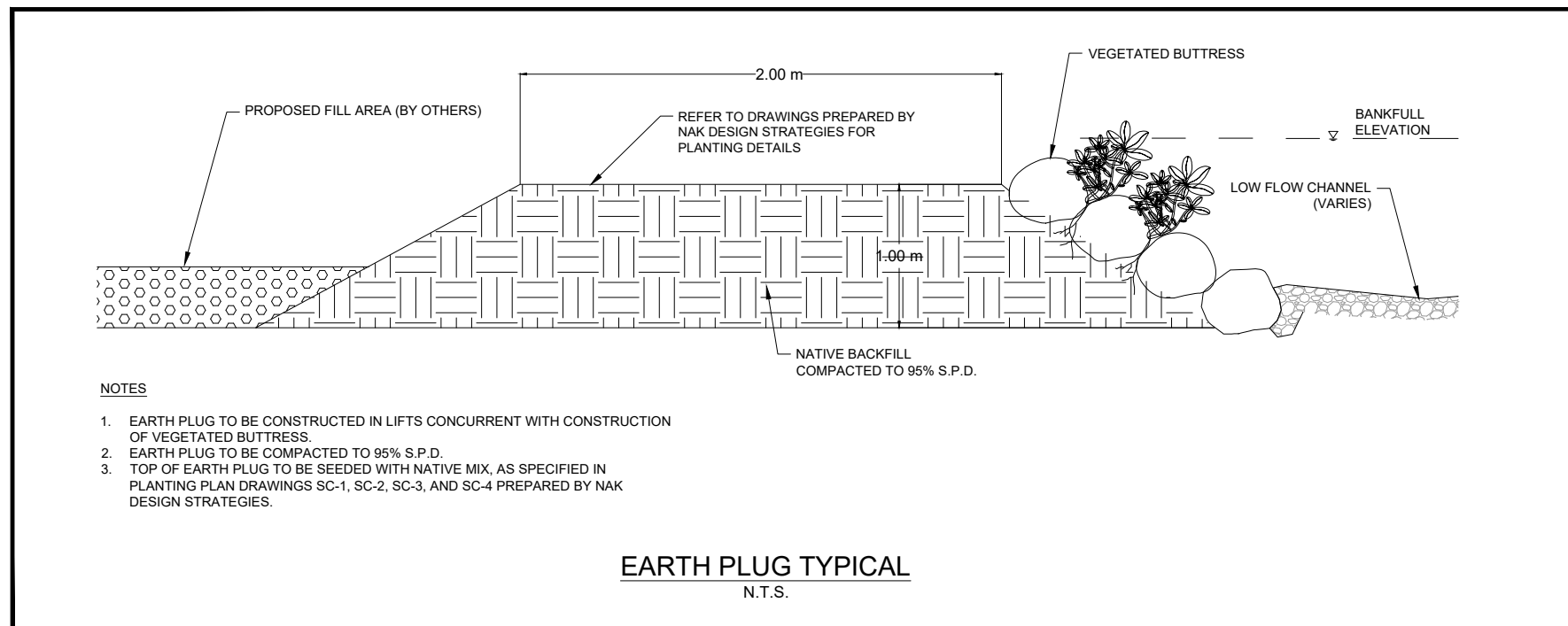
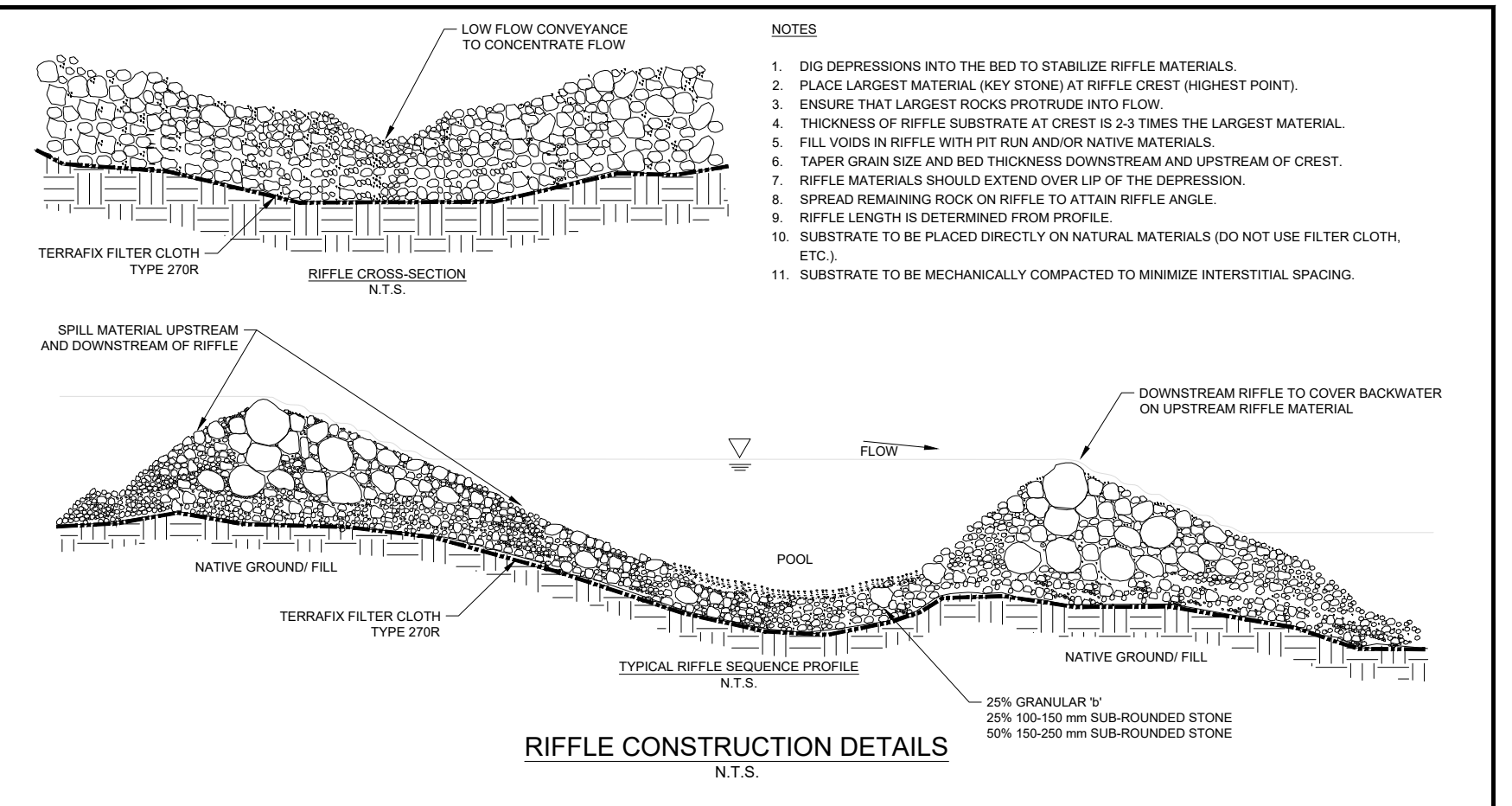
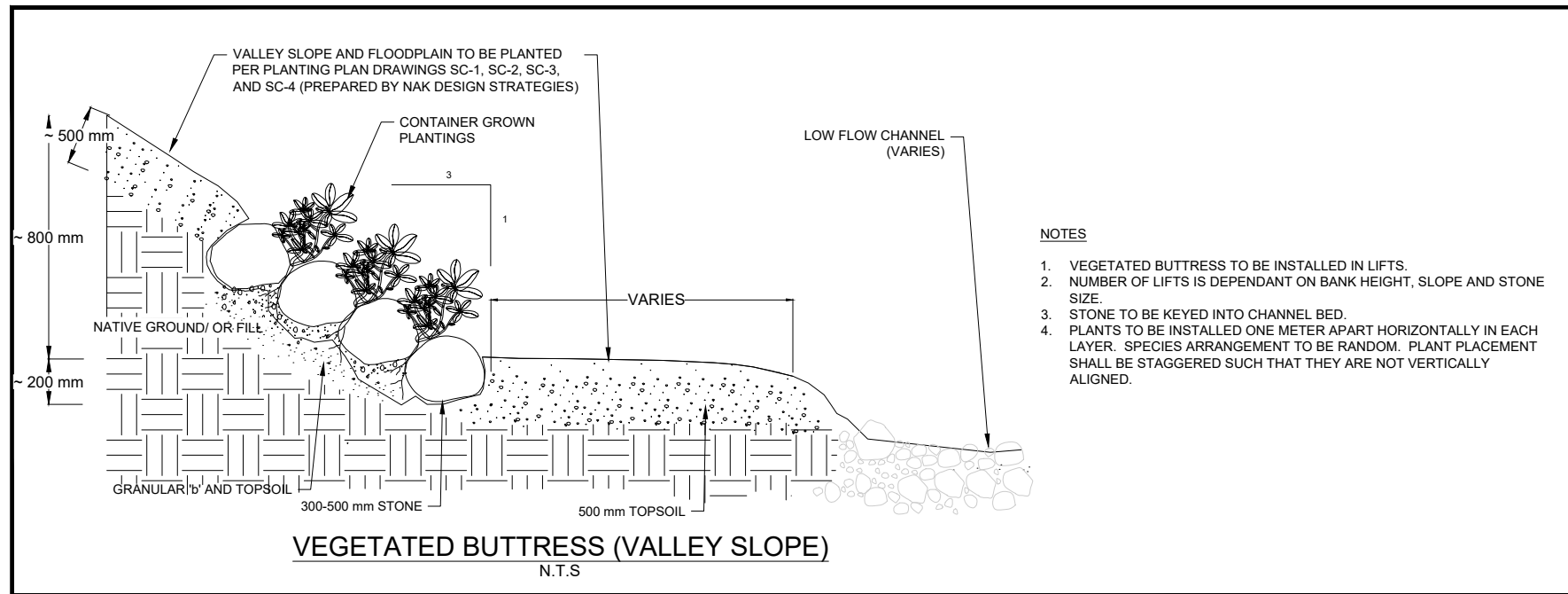
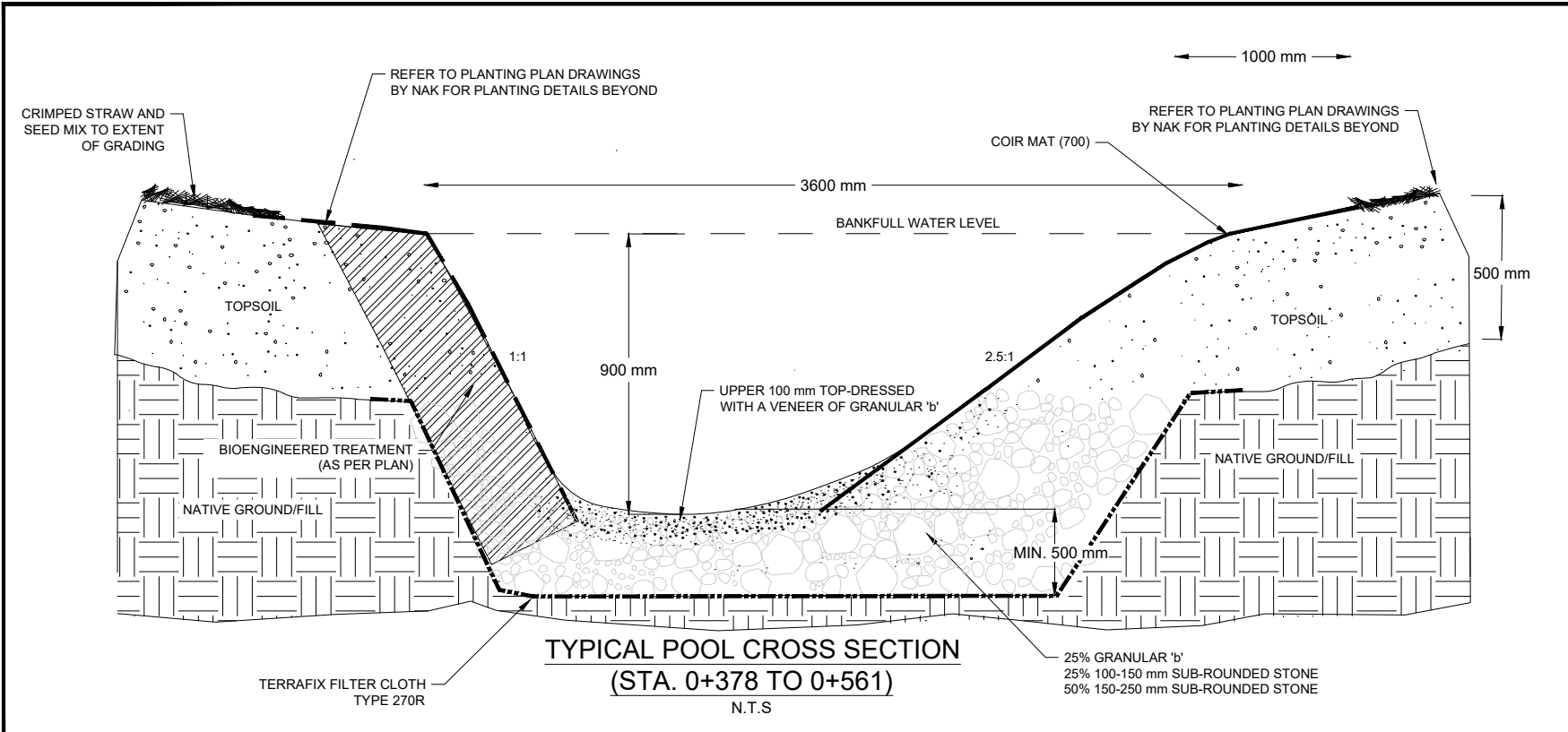
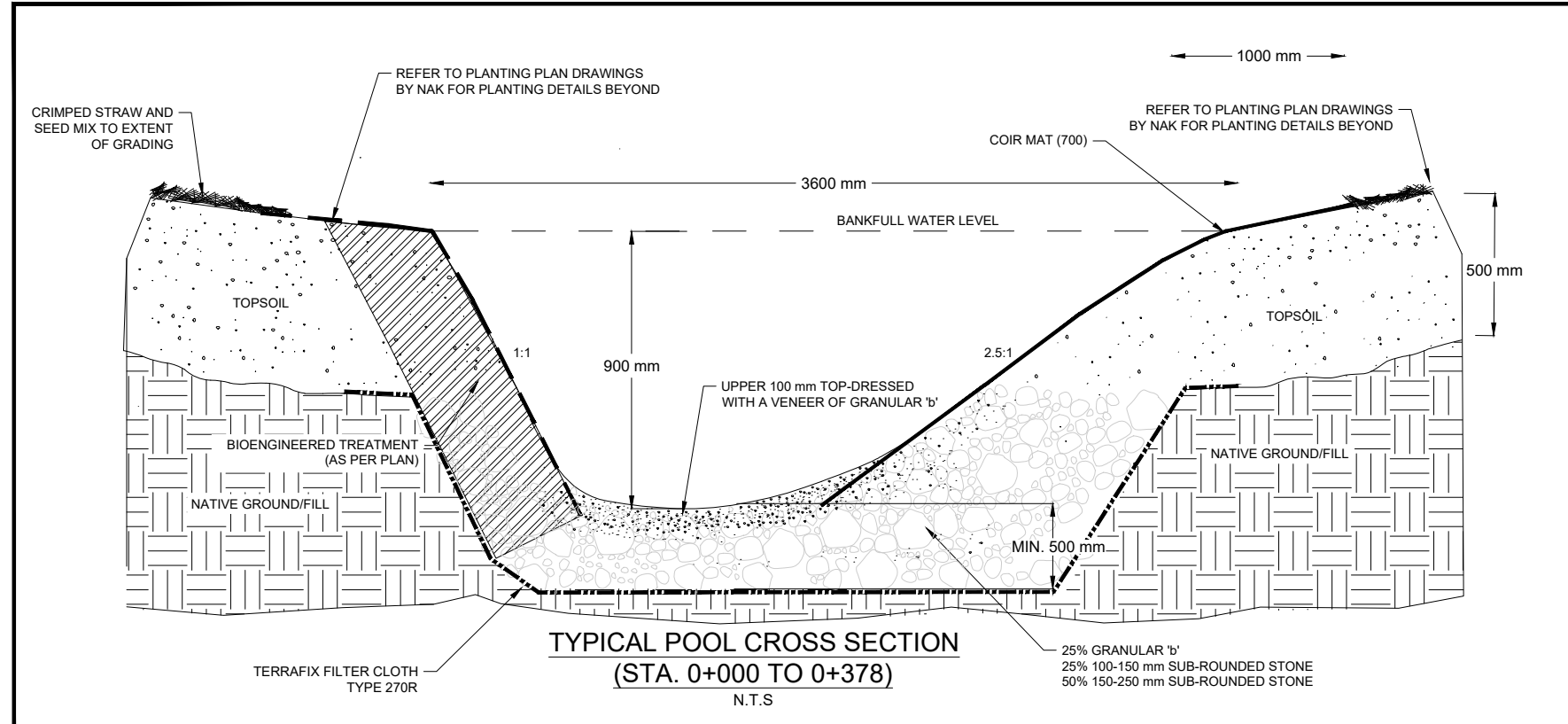
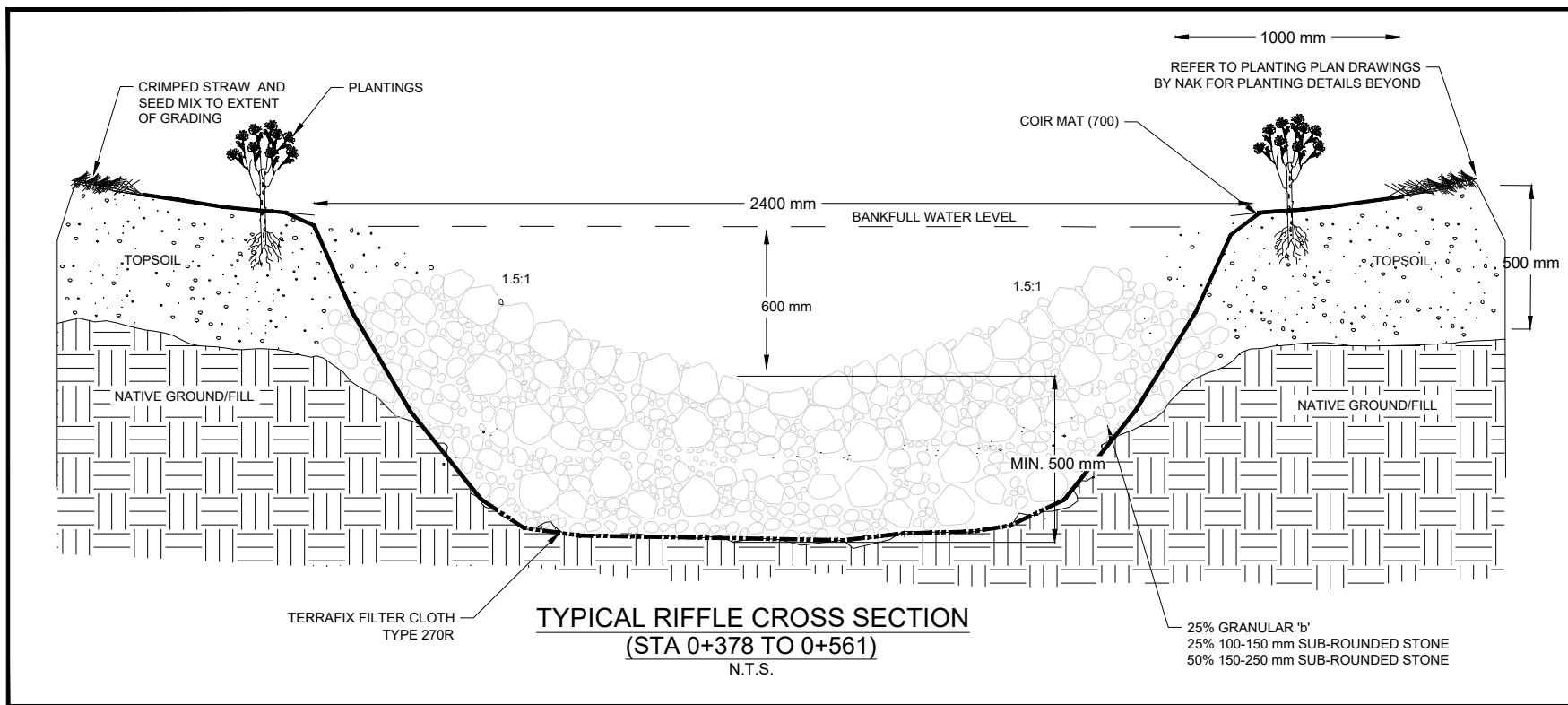
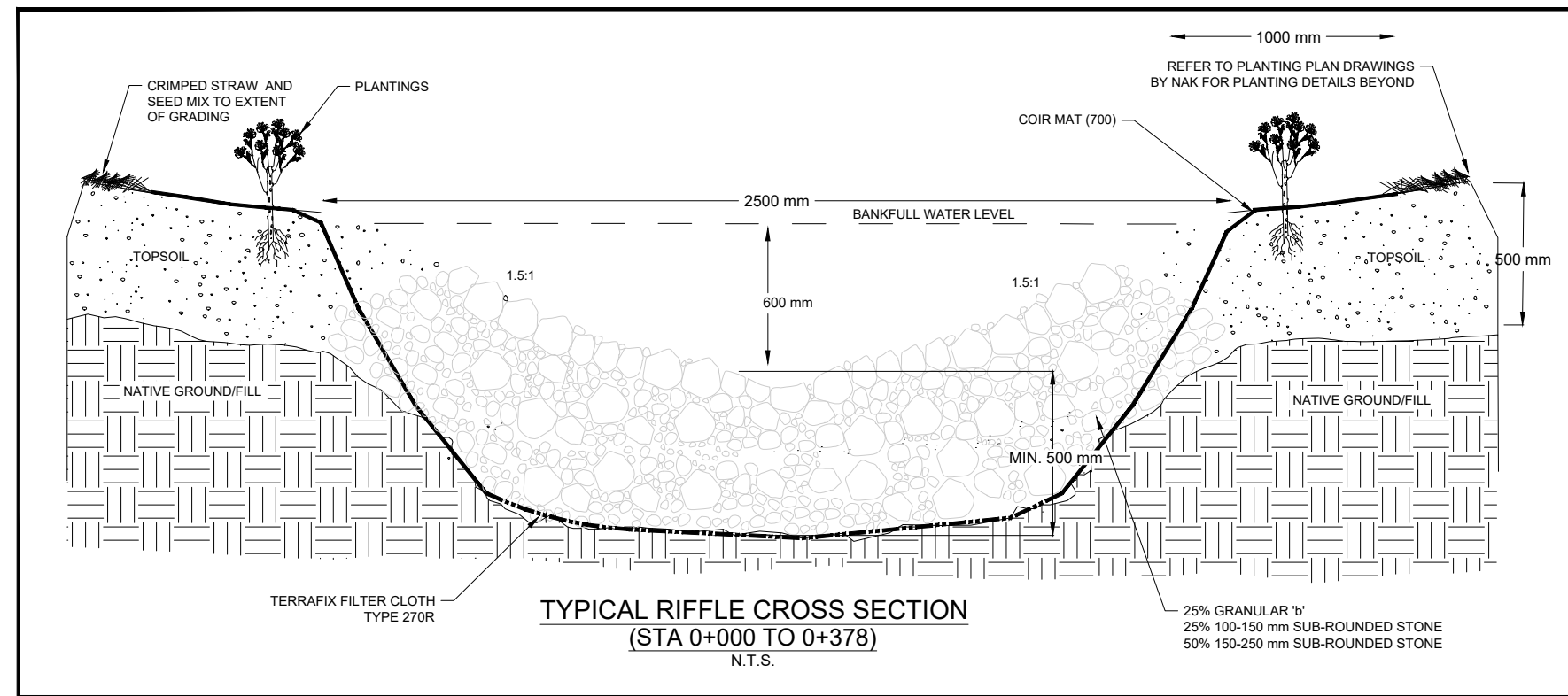
SIGNED: _____ DATE: _____
LEGISLATIVE AND PLANNING SERVICES



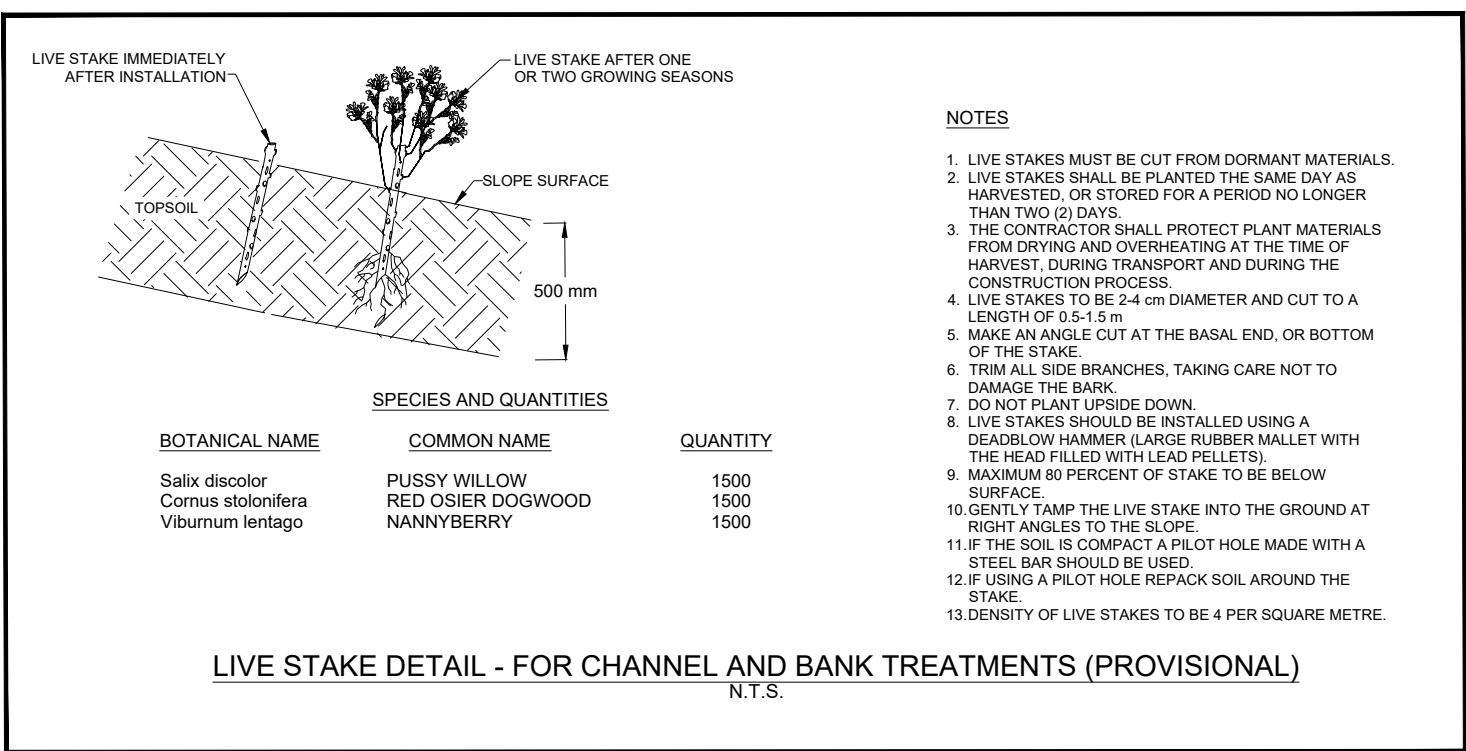
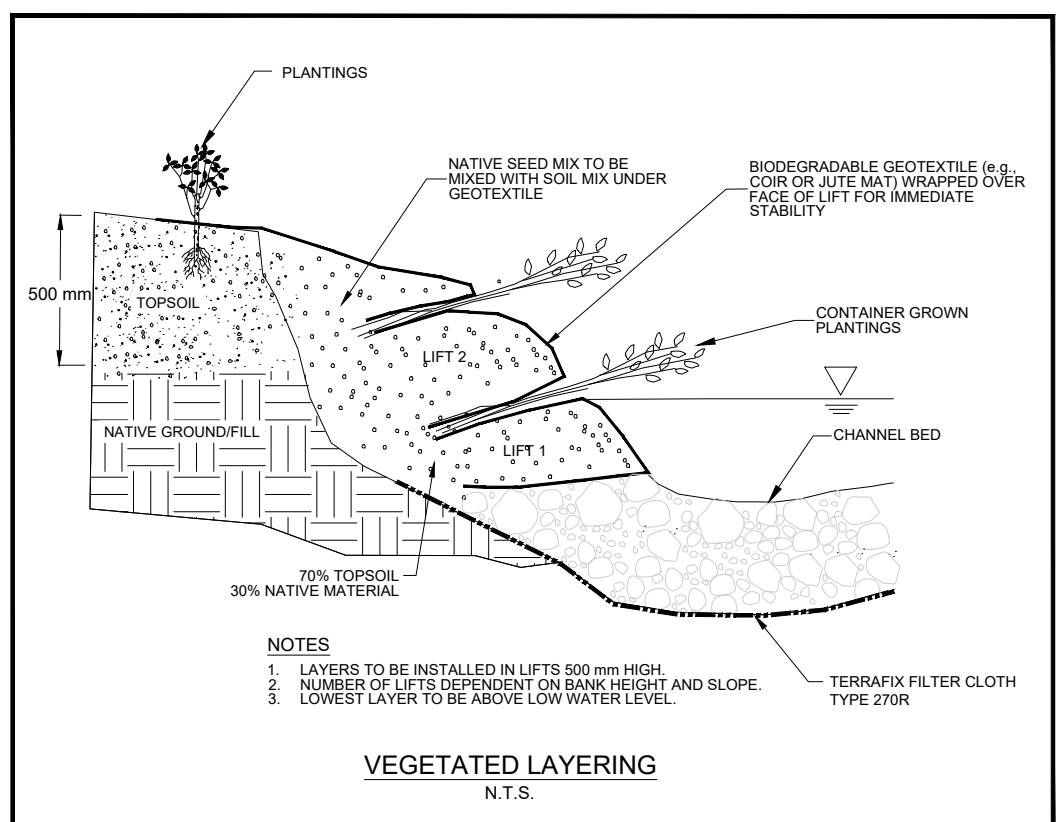
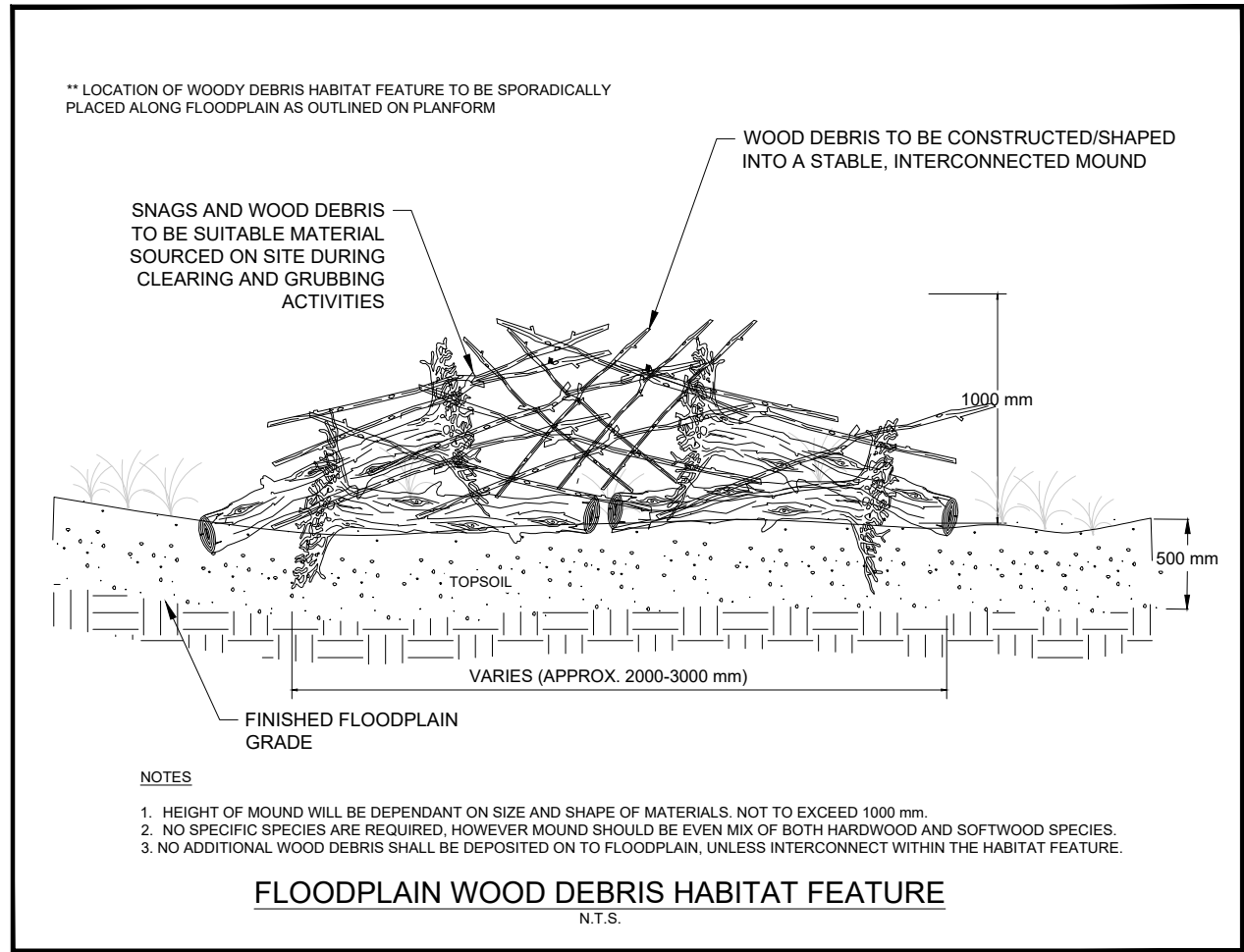
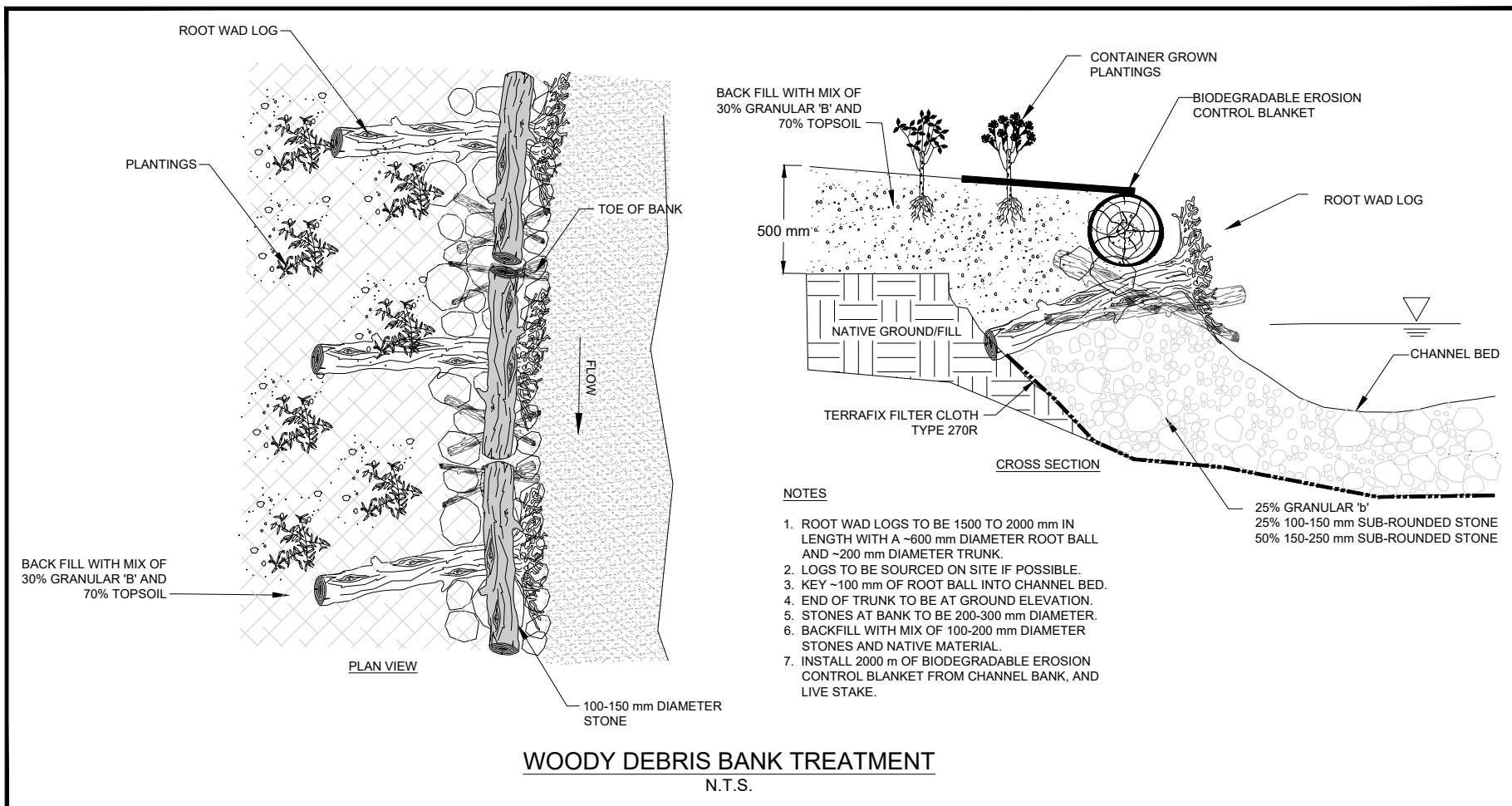
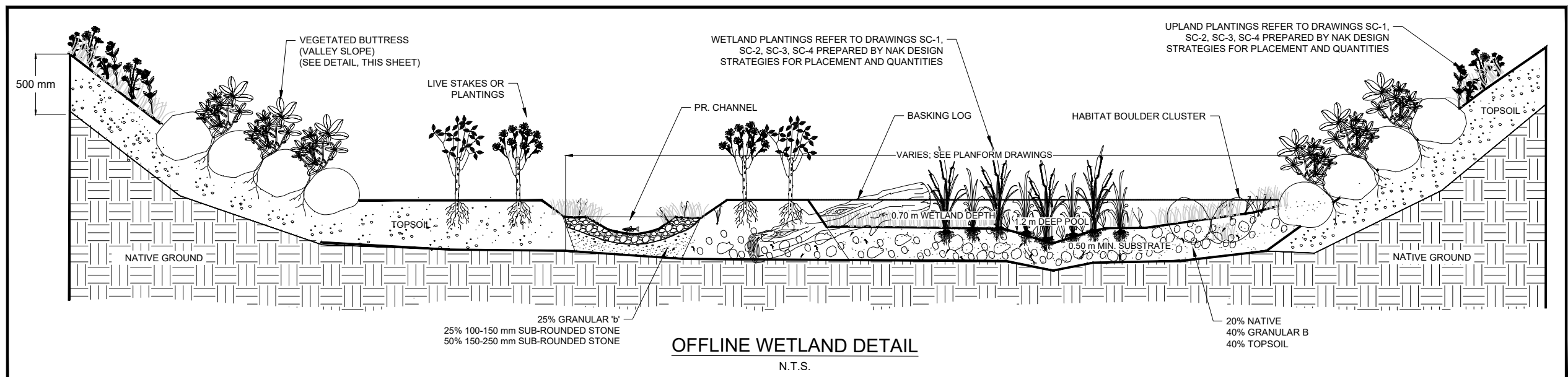
CHANNEL PLAN & PROFILE (STA. 0+415 TO 0+576)

DRAWN BY: R.B. CHECKED BY: J.O. PROJECT NO: 17-549
DESIGNED BY: J.O. DATE: JULY 2020 DRAWING NO: CH-3

SCALE: H 1:500
V 1:50



PROPOSED SEED MIXES		
REFER TO PLANTING PLAN DRAWINGS SC-1, SC-2, SC-3, AND SC-4 (PREPARED BY NAK DESIGN STRATEGIES) FOR SEED MIXES, QUANTITIES AND LOCATIONS TO BE APPLIED.		
PROPOSED CONTAINER GROWN PLANTINGS		
VEGETATED BUTTRESS SPECIES AND QUANTITIES		
BOTANICAL NAME	COMMON NAME	QUANTITY
Cornus Amomum	SILKY DOGWOOD	750
Cornus alternifolia	ALTERNATE-LEAVED DOGWOOD	750
Salix nigra	SANDBAR WILLOW	750
VEGETATED LAYERING SPECIES AND QUANTITIES		
BOTANICAL NAME	COMMON NAME	QUANTITY
Salix discolor	PUSSY WILLOW	125
Cornus stolonifera	RED OSIER DOGWOOD	125
Viburnum lentago	NANNYBERRY	125
WOOD DEBRIS BANK TREATMENT SPECIES AND QUANTITIES		
BOTANICAL NAME	COMMON NAME	QUANTITY
Salix discolor	PUSSY WILLOW	110
Cornus stolonifera	RED OSIER DOGWOOD	110
Viburnum lentago	NANNYBERRY	110
FLOODPLAIN/TOPO OF CHANNEL SPECIES AND QUANTITIES		
BOTANICAL NAME	COMMON NAME	QUANTITY
Salix discolor	PUSSY WILLOW	430
Cornus stolonifera	RED OSIER DOGWOOD	430
Viburnum lentago	NANNYBERRY	430
TYPE: 1 GAL. POTTED		



- GENERAL NOTES**
- A FULL SET OF DRAWINGS AND PERMITS WILL BE KEPT ON SITE DURING CONSTRUCTION.
 - ACTIVITIES WITHIN THE WATERCOURSE SHALL OCCUR FROM JULY 1 TO MARCH 31, OR AS OTHERWISE DIRECTED BY THE MNRF.
 - THE CONTRACTOR SHALL PROVIDE THE CONSERVATION AUTHORITY AND DESIGNER AT LEAST 48-HOURS OF NOTICE PRIOR TO COMMENCING WORK.
 - ALL DRAWINGS SHALL BE USED FOR CONSTRUCTION. DO NOT SCALE FROM PLANFORM DRAWINGS.
 - ALL MEASUREMENTS ARE IN METRES (AND/OR MILLIMETRES UNLESS OTHERWISE INDICATED).
 - VEHICULAR MAINTENANCE AND REFUELLING SHALL BE CONDUCTED AWAY FROM WATERCOURSES.
 - LAYOUT OF WORKS SHALL BE REVIEWED AND APPROVED BY THE DESIGNER OR REPRESENTATIVE.
 - ALL WORKS SHALL BE REVIEWED AND APPROVED BY THE DESIGNER OR REPRESENTATIVE.
 - ALL GENERAL BACKFILL SOIL SHALL BE APPROVED MATERIAL, COMPACTED TO 85% STANDARD PROCTOR DENSITY, UNLESS OTHERWISE STATED.
 - THE CONTRACTOR SHALL REMOVE ALL SEDIMENT CONTROLS AFTER VEGETATION HAS ESTABLISHED. WORKS WILL NOT BE CONSIDERED COMPLETE UNTIL SEDIMENT CONTROLS ARE REMOVED.
- ENVIRONMENTAL MITIGATION NOTES**
- ALL MITIGATION AND ESC MEASURES SHALL BE INSTALLED PRIOR TO START OF CONSTRUCTION.
 - ALL EQUIPMENT SHALL BE CLEAN AND FREE OF PETROLEUM PRODUCTS.
 - ALL MAINTENANCE, REFUELLING AND STORAGE OF EQUIPMENT SHALL BE CONTROLLED SO AS TO PREVENT AND DISCHARGE OF PETROLEUM PRODUCTS.
 - VEHICULAR MAINTENANCE AND REFUELLING SHALL BE CONDUCTED AWAY FROM WATERCOURSES.
 - CONSTRUCTION MATERIALS SHALL BE STORED AWAY FROM WATERCOURSES.
 - DURING CONSTRUCTION ALL VEGETATION ADJACENT TO THE WORK AREA IS TO BE PROTECTED, WHERE IT IS DISTURBED IT SHALL BE RESTORED TO ORIGINAL CONDITION.
 - SEDIMENT CONTROLS SHALL BE INSPECTED DAILY TO ENSURE THAT THEY ARE IN GOOD REPAIR AND FUNCTIONING AS INTENDED.
 - EROSION AND SEDIMENT CONTROLS MUST BE MAINTAINED DURING AND AFTER CONSTRUCTION UNTIL THE SITE IS DEEMED TO BE STABLE BY THE CONTRACT ADMINISTRATOR.
 - ADDITIONAL EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED IF PROPOSED CONTROLS ARE NOT ADEQUATELY PREVENTING EROSION AND RELEASE OF SEDIMENT OFF SITE.
 - RE-VEGETATE WORK SITE AS WORK PROGRESSES, OR SOON AS CONDITIONS ALLOW. APPLY A NURSE CROP OF ANNUAL RYE OR SIMILAR COVER IN AREAS TO BE EXPOSED FOR PROLONG PERIODS, PARTICULARLY WITHIN THE NEW CHANNEL CORRIDOR FOR EROSION CONTROL (RATE 30 KG/HA).
 - A QUALIFIED BIOLOGIST OR TECHNOLOGIST WITH A VALID PERMIT FROM MNRF SHALL BE AVAILABLE TO RELOCATE DOWNSTREAM STRANDED FISH AND AMPHIBIANS AS REQUIRED.
 - THE WEATHER SHALL BE MONITORED BY THE CONTRACTOR TO ENSURE THAT WORKS ARE COMPLETE DURING DRY OR FAVOURABLE FLOW CONDITIONS.
 - ALL WORK IN THE WATERCOURSE SHALL BE COMPLETED IN THE DRY WITHIN AN ISOLATED WORK AREA DURING LOW-FLOW CONDITIONS.
 - ALL DISTURBED AREAS SHALL BE GRADED, ORGANIC SOIL SHALL BE ADDED AND SEEDED WITH PERMITTED SEED MIX. DISTURBED AREAS SHALL BE COVERED BY CORP CLOTH, JUTE MAT OR STRAW CRIMPING.
 - THE CONTRACTOR SHALL REMOVE ALL SEDIMENT CONTROLS AFTER VEGETATION HAS ESTABLISHED. WORKS WILL NOT BE CONSIDERED COMPLETE UNTIL SEDIMENT CONTROLS ARE REMOVED.

3	OFFLINE WETLAND DETAIL REVISED PER MECP	JULY 20, 2021	I.K.
2	LIVE STAKE DETAIL REVISED PER MECP	JUNE 29, 2021	I.K.
1	REVISIONS	DATE	BY

LAKEVIEW COMMUNITY PARTNERS LTD.



TOWN FILE No. _____ REGION FILE No. _____

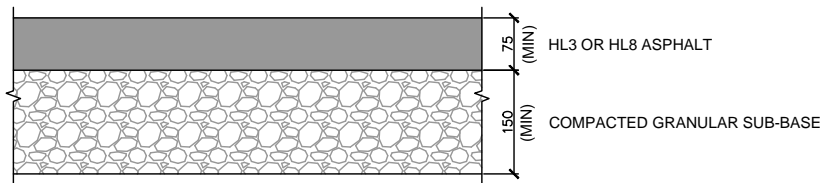
MUNICIPAL
APPROVED IN PRINCIPAL SUBJECT TO DETAIL CONSTRUCTION CONFORMING TO CITY STANDARDS AND SPECIFICATIONS.

SIGNED _____ DATE _____ SIGNED _____ DATE _____
ENGINEERING DEPARTMENT LEGISLATIVE AND PLANNING SERVICES

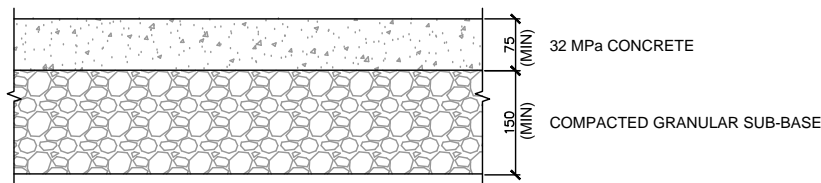


SERSON CREEK CHANNEL DETAILS

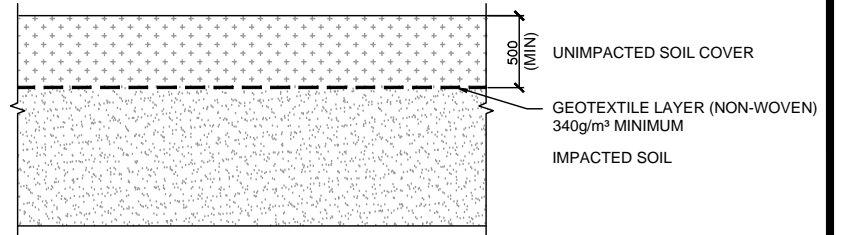
DRAWN BY:	T.L.	CHECKED BY:	J.O.	PROJECT NO:	17-549
DESIGNED BY:	J.O.	DATE:	JUNE 2021	DRAWING NO:	DET-1
SCALE:	N.T.S.				



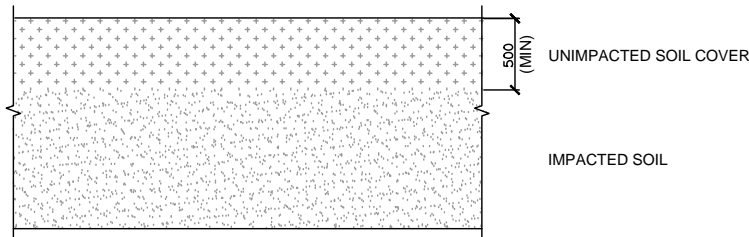
DETAIL 1-1 ASPHALT AND GRANULAR SUB-BASE CONSTRUCTION NTS



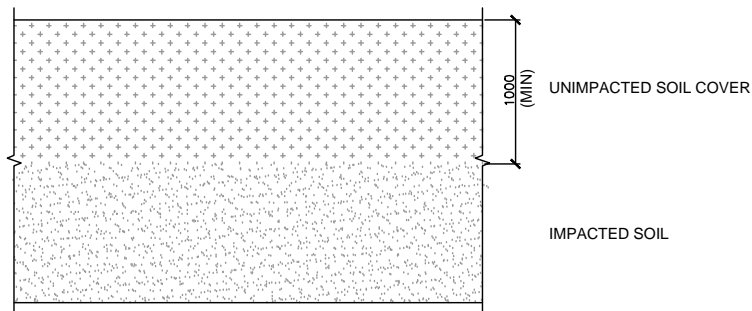
DETAIL 1-2 CONCRETE SIDEWALK/FOUNDATION AND GRANULAR SUB-BASE CONSTRUCTION NTS



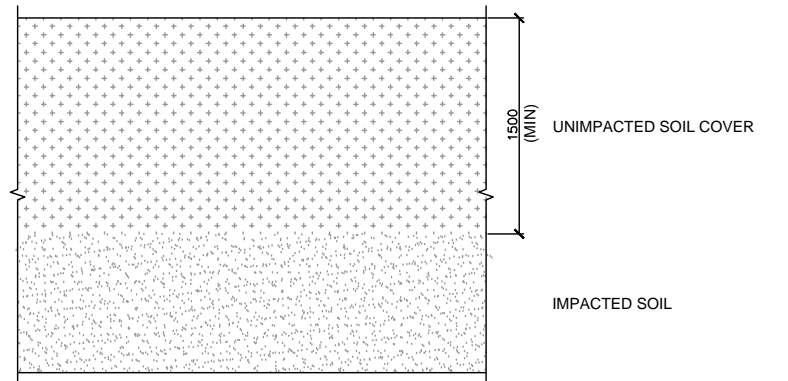
DETAIL 1-3A SOFT CAP CONSTRUCTION - SERSON CREEK CORRIDOR (CHANNEL ONLY) NTS



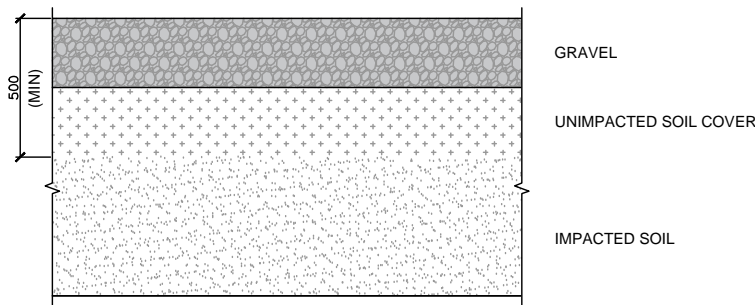
DETAIL 1-3B SOFT CAP CONSTRUCTION - SERSON CREEK CORRIDOR NTS



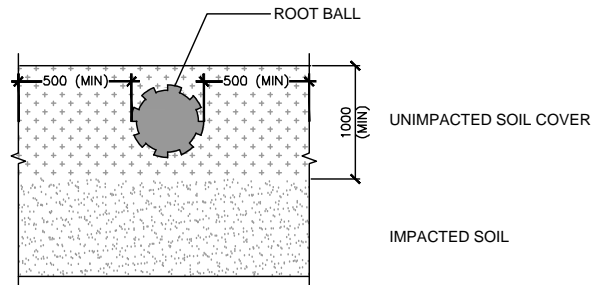
DETAIL 1-3C SOFT CAP CONSTRUCTION - LANDSCAPED AREA NTS



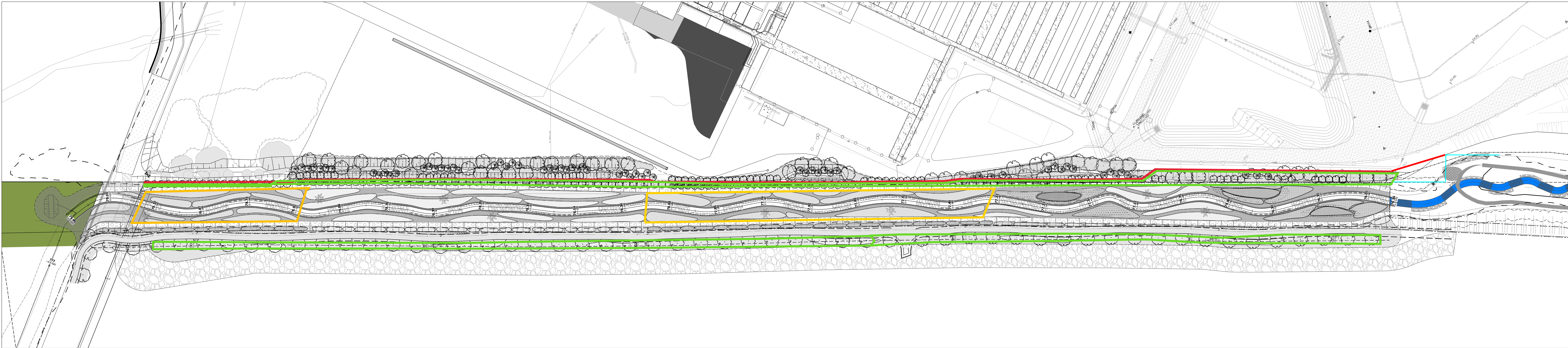
DETAIL 1-3D SOFT CAP CONSTRUCTION - CONVEYANCE AREA NTS



DETAIL 1-4 TEMPORARY GRAVEL ROADWAYS NTS

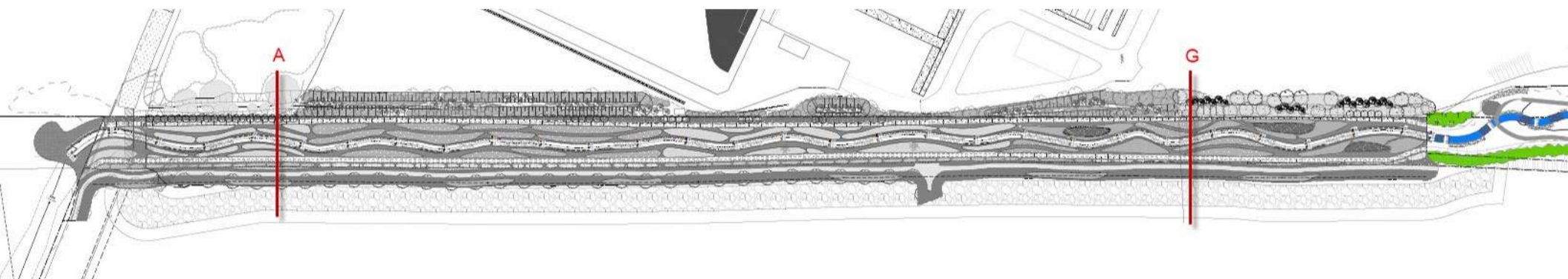


DETAIL 1-5 TREE PLANTING SPECIFICATIONS NTS



- NEW REGION FENCE
- AREAS THAT HAVE CALIPER TREES & 1m SOIL CAP AROUND / BELOW ROOTS
- AREAS THAT HAVE WHIPS (MOUNDED TO PROVIDED A 1m SOIL CAP / COMPOSED OF 100% PLANTING SOIL MIX)

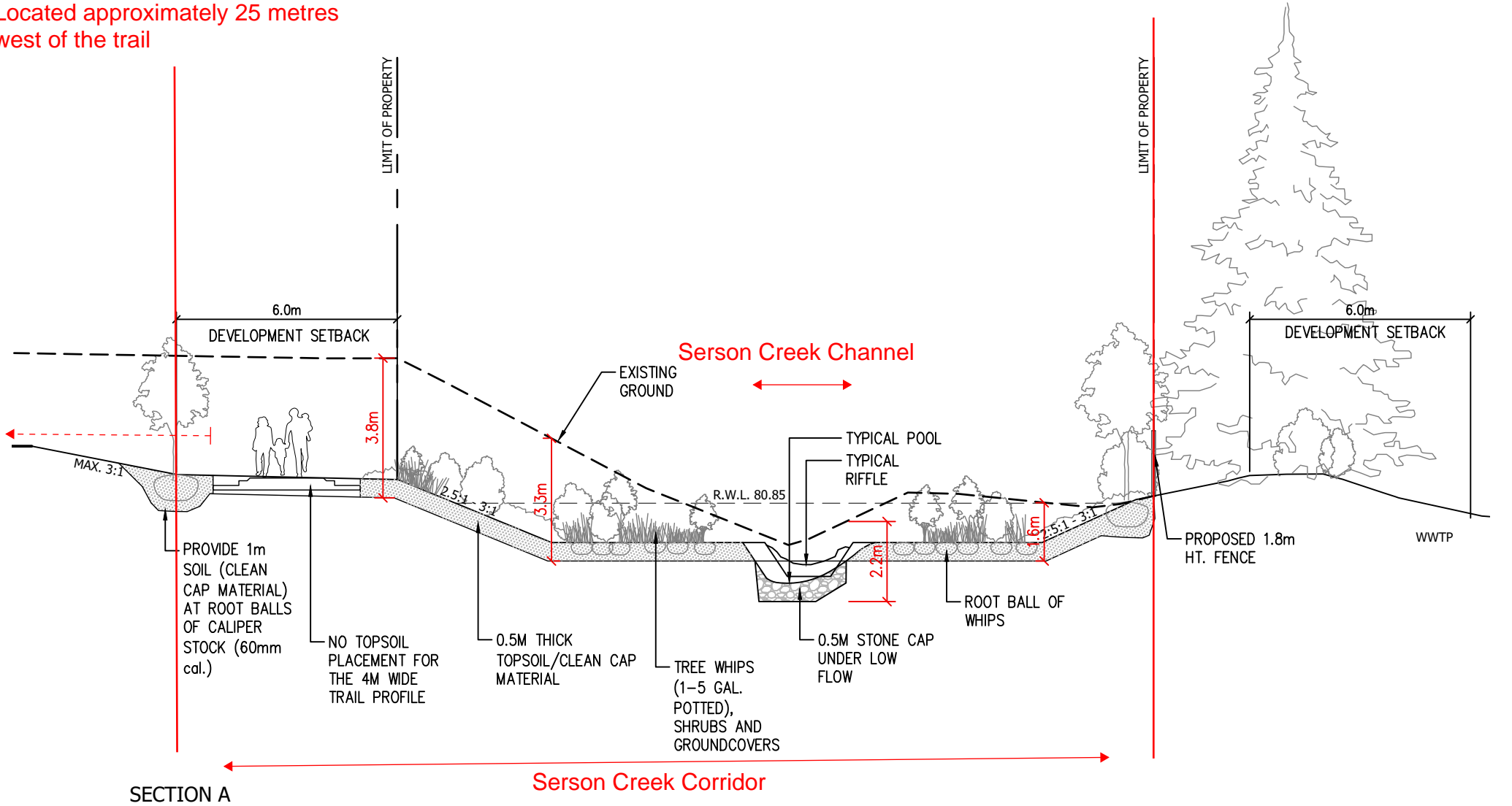
Drawing No. C-2



Drawing No. C-3

Area 6 - West Property Boundary -
Located approximately 25 metres
west of the trail

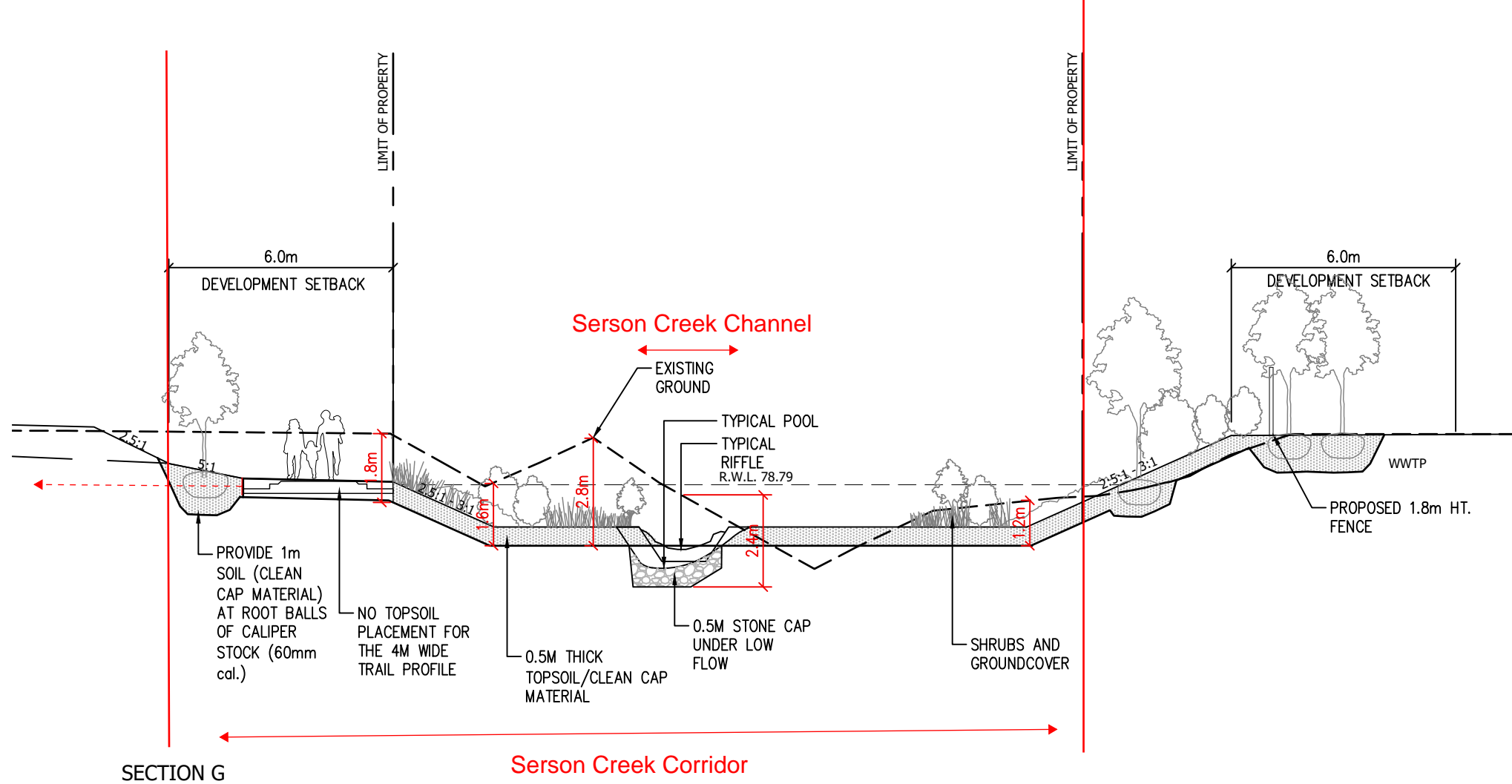
Area 6 - East Property Boundary



Drawing No. C-4

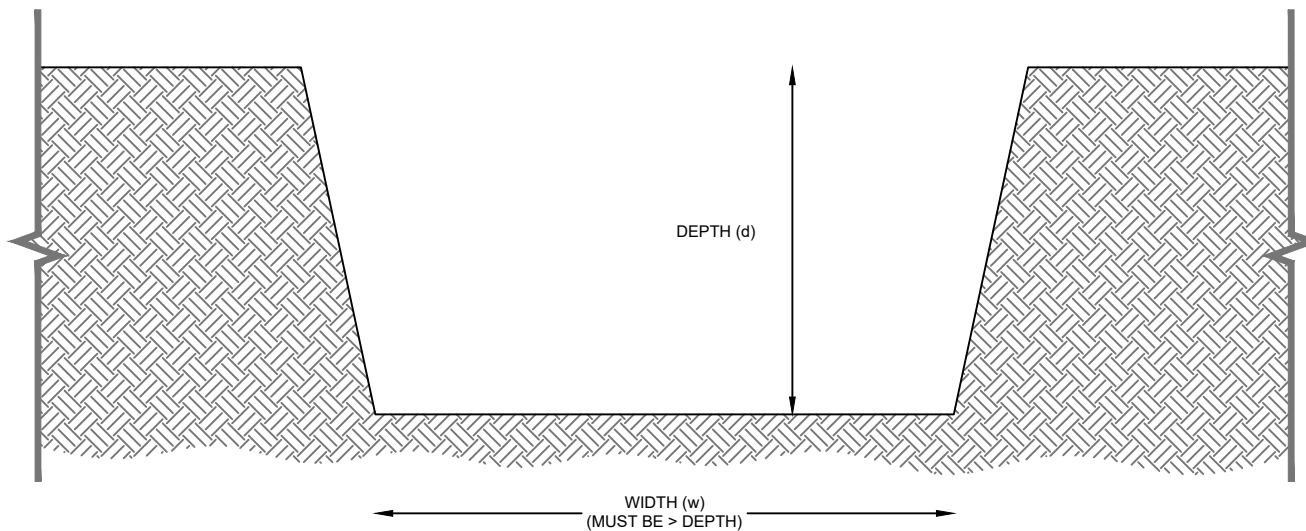
Area 6 - West Property Boundary -
Located approximately 25 metres
west of the trail

Area 6 - East Property Boundary



Drawing No. C-5

Appendix D: Wide Trench and Utility Drawings



NOTE:
OPEN CUT EXCAVATION SLOPE INCLINATION OR THE SUPPORT OF TEMPORARY TRENCH WALLS USING A TRENCH BOX AS SPECIFIED BY GEOTECHNICAL ENGINEER AT TIME OF PIPE INSTALLATION, REPAIR OR REPLACEMENT

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada

www.exp.com



• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

LEGEND:



A) A MINIMUM OF 0.5 M THICKNESS OF UNIMPACTED MATERIAL* (INCLUDING GRANULAR BEDDING) BELOW WATER, WASTEWATER, AND STORM SEWER MAIN PIPES, UTILITY CORRIDORS, TREE ROOT SOIL CELLS, AND BELOW DRAINAGE SYSTEMS OF LOW IMPACT DEVELOPMENT (LID) MEASURES WITHIN PUBLIC BOULEVARDS WILL BE PROVIDED;

B) A MINIMUM OF 0.5 M THICKNESS OF UNIMPACTED MATERIAL* (INCLUDING GRANULAR BEDDING) SURROUNDING EACH LATERAL PIPE CONNECTIONS FROM THE MUNICIPAL SERVICE MAIN PIPE TO THE PROPERTY LINE WILL BE PROVIDED; AND,

C) A MINIMUM OF 1.0 M THICKNESS OF UNIMPACTED MATERIAL* HORIZONTALLY ON EITHER SIDE OF EACH BELOW GRADE MUNICIPAL SERVICE MAIN PIPE THAT EXTENDS FROM THE INVERT ELEVATION OF EACH MAIN PIPE AND LATERAL CONNECTION TO GRADE SURFACE WILL BE PROVIDED.

*SOIL MEETING MINISTRY OF ENVIRONMENT, CONSERVATION, AND PARKS (MECP) TABLE 3 OR 9 SITE CONDITION STANDARDS (SCS) INDUSTRIAL/COMMERCIAL/COMMUNITY (ICC) IS CONSIDERED UNIMPACTED MATERIAL (SOIL TEXTURE IS AREA SPECIFIC).

TITLE AND LOCATION:

**WIDE TRENCH DETAILS
AREAS 3 AND 5A
985 HYDRO ROAD
MISSISSAUGA, ONTARIO**

PROJECT NO.:

BRM-00243747-A0

DWN.:

JA

SCALE:

AS NOTED

CK:

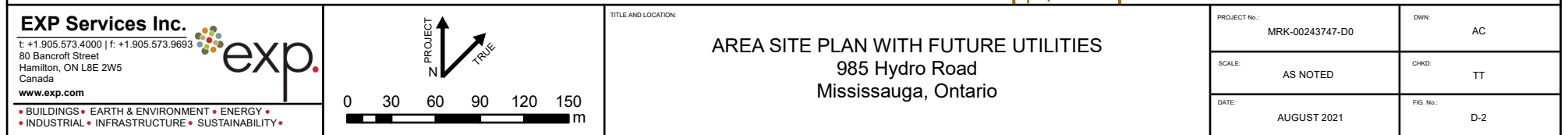
TNT

DATE:

AUGUST 2021

FIG. NO.:

D-1



Appendix E: Certificates of Property Use

Certificate of Property Use

Issued under the authority of the *Environmental Protection Act*, R.S.O. 1990, c. E.19,
sections 168.6 (CPU) and 197 (Order)

Certificate of Property use number 1323-BVHPHX
Risk Assessment number 3442-BAMJ2Z

Owner:

Registered Owner

Lakeview Community Partners Limited
2173 Turnberry Road
Burlington, Ontario L7M4P8

Beneficial Owners

Argo (Lakeview) Limited
2173 Turnberry Road
Burlington, Ontario L7M 4P8

TACC (Lakeview) Inc.
270 Chrislea Road
Woodbridge, Ontario L4L 8A8

Lydian Building Group Ltd.
8700 Dufferin Street
Concord, Ontario L4K 4S6

Branthaven Lakeshore Inc.
720 Oval Ct
Burlington, ON L7L 6A9

CCI (Lakeview) Limited Partnership by
its General Partner 2670562 Ontario Ltd.
141 Adelaide Street West, #703
Toronto, ON M5H 3L5

Site: 985 Hydro Road, Mississauga, Ontario (Area 4)

with a legal description described below:

PART OF LOT 7, CONCESSION 3, SOUTH OF DUNDAS STREET, PART OF WATER LOT IN FRONT OF LOT 7 SOUTH OF DUNDAS STREET AND PART OF WATER LOT LOCATION HY28 SOUTH OF DUNDAS STREET GEOGRAPHIC TOWNSHIP OF TORONTO, NOW IN THE CITY OF MISSISSAUGA, REGIONAL MUNICIPALITY OF PEEL, DESIGNATED BY PART OF PIN 13485-0742 (LT); SUBJECT TO EASEMENTS AS IN INSTRUMENT NUMBERS TT125865 AND TT141214, SUBJECT TO AN EASEMENT OVER PART OF PARTS 72 AND 73, PLAN 43R-39219, AS IN INSTRUMENT NUMBER PR2974060, SUBJECT TO AN EASEMENT OVER PART OF PART 11 PLAN 43R-37701, AS IN INSTRUMENT NUMBER PR3342530, AND DESCRIBED AS AREA 4 ON A PLAN OF SURVEY PREPARED BY J. D.

BARNES LIMITED DATED OCTOBER 22, 2020, REFERENCE No. 16-30-917-03-H.

Being part of PIN 13485-0758 (LT)

This Certificate of Property Use and section 197 Order set out the requirements regarding the above-noted Property and the Modified Generic Risk Assessment carried out in relation to the Property which was assigned the number noted above and is described in more detail in Part 1 below.

Refer to Part 1 of the CPU, Interpretation, for the meaning of all the defined capitalized terms that apply to the CPU.

Part 1: Interpretation

In this CPU, the following capitalized terms have the meanings described below. These terms are also defined in the Approved Model. Not all of these terms may be used in this CPU.

“Act” means the *Environmental Protection Act*, R.S.O. 1990, c. E.19.

“Active SVIMS” means a soil vapour intrusion mitigation system designed and operated to collect and remove soil vapour from below a Building and convey the soil vapour through vent risers to the outside air by means of one or more electrical fan powered vents drawing air from below the Building.

“Approved Model” has the same meaning as in subsection 1 (1) of Schedule C of O. Reg. 153/04, namely, the data file entitled “Modified Generic Risk Assessment Model” and dated October 19, 2009 as amended from time to time, that is maintained by the Ministry as part of its Brownfield initiative and is available on the Internet and may be available in such other manner as the Minister considers appropriate.

“ASTM” means the American Society for Testing and Materials.

“Barrier” means a Fill Cap Barrier, Hard Cap Barrier or Shallow Soil Cap Barrier.

“Building” means an enclosed structure occupying an area greater than ten square metres consisting of a wall or walls, roof and floor.

“Building Area” means the horizontal area of a Building at Grade within the outside surface of the exterior wall or walls.

“Building Code” means Ontario Regulation 332/12 (Building Code) as amended to January 1, 2015, made under the *Building Code Act, 1992*, S.O. 1992, c.23.

“Capping Soil” means,

- (a) soil that meets the applicable site condition standards for the Property and does not contain any contaminant for which no applicable site condition standard for soil is prescribed under Part IX (Site Condition Standards and Risk Assessment) and which is associated with any potentially contaminating activity described in the Risk Assessment, or
- (b) soil that meets any higher standards for the contaminant or contaminants as generated by the Approved Model without incorporation of Risk Management Measures, and as specified in section 7 of the Risk Assessment and in Schedule A of the CPU.

“Certificate of Property Use” or “CPU” means this certificate of property use bearing the number 1323-BVHPHX issued for the Property by the Director under section 168.6 of the Act, as it may be amended from time to time.

“Competent Person” has the same meaning as in the *Occupational Health and Safety Act*, R.S.O. 1990, c. O.1.

“Contaminants of Concern” has the same meaning as in O. Reg. 153/04, which, for the Property, means one or more contaminants found on, in or under the Property at a concentration that exceeds the applicable site condition standards for the Property, as specified in section 7 of the Risk Assessment report and in Schedule A of the CPU.

“Director” means a person in the Ministry appointed as a director for the purpose of issuing a certificate of property use under section 168.6 of the Act.

“Fill Cap Barrier” means cover, above the Contaminants of Concern, that,

- (a) is at least, the applicable of,
 - (i) 1.0 metre thick, or any greater thickness than 1.0 metre, as specified in section 7 of the Risk Assessment report, or
 - (ii) 1.5 metres thick, where the option to modify the S3 component value in the Approved Model for protection of subsurface workers from direct soil contact has been used in the Risk Assessment, as specified in section 7 of the Risk Assessment report, and

- (b) consists of at least 0.5 metres thickness of Capping Soil, and above this, cover consisting of additional Capping Soil or non-soil surface treatment such as asphalt, concrete or concrete pavers, stone pavers, brick or aggregate.

“Hard Cap Barrier” means an asphalt or concrete cover layer, above the Contaminants of Concern, that is at least 225 millimetres thick, and consists of at least 75 millimetres thickness of hot mix asphalt or poured concrete underlain by Granular “A” aggregate or equivalent material and includes a Building slab or Building foundation and floor slab meeting these specifications.

“Intrusive Activities” means any intrusive activity undertaken at the Property, such as excavating or drilling into soil or ground water, which may disturb or expose Contaminants of Concern at the Property.

“Licensed Professional Engineer” means a person who means a person who holds a licence, limited licence or temporary licence under the *Professional Engineers Act*, R.S.O. 1990, c. P.28 and has obtained the appropriate education and training and has demonstrated experience and expertise in the areas related to the work required to be carried out in this CPU.

“Minister” means the minister of the Ministry.

“Ministry” means the ministry of the government of Ontario responsible for the administration of the Act, currently named the Ministry of the Environment, Conservation and Parks.

“O. Reg. 153/04” means Ontario Regulation 153/04 (Record of Site Condition – Part XV.1 of the Act), made under the Act.

“O. Reg. 406/19” means Ontario Regulation 406/19 (On-Site and Excess Soil Management), made under the Act.

“Owner” means the owner(s) of the Property, beginning with the person(s) to whom the Certificate of Property Use for the Property is first issued by the Director under section 168.6 of the Act based on the Risk Assessment, and any subsequent owner of the Property.

“Property” means the property that is the subject of the Risk Assessment and is described in the property “Site” section on page 1 above.

“Property Specific Standards” means the standards established as the maximum allowable concentrations for the Contaminants of Concern at the Property, as generated by the Approved Model with incorporation of Risk Management Measures, as specified in section 6 of the Risk Assessment report and in Schedule A of the CPU.

“Provincial Officer” has the same meaning as in the Act, namely, a person who is designated by the Minister as a provincial officer for the purposes of the Act and the regulations.

“Qualified Person” means a person who meets the qualifications set out in subsection 5(2) of O. Reg. 153/04.

“Risk Assessment” and “MGRA” means the modified generic risk assessment number 3442-BAMJ2Z submitted with respect to the Property and accepted by a Director under section 168.5 of the Act on November 19, 2020 and set out in the following documents:

- Risk Assessment Pre-Submission Report and Modified Generic Risk Assessment Report for 800 Hydro Road (Area 4) Mississauga, Ontario, report prepared by EXP Services Inc., dated March 1, 2018
- Revised Modified Generic Risk Assessment Report for 800 Hydro Road (Area 4) Mississauga, Ontario – Addendum 1, report prepared by EXP Services Inc., dated November 4, 2019
- Area 4, 985 Hydro Road, Mississauga, Ontario - Modified Generic Risk Assessment - Addendum 2, report prepared by EXP Services Inc., dated March 9, 2020
- Area 4, 985 Hydro Road, Mississauga, Ontario - Modified Generic Risk Assessment - Addendum 3, report prepared by EXP Services Inc., dated July 14, 2020
- RE: Request for Clarification - Area 4 985 Hydro Road, Mississauga, ON [MGRA1755-19d; IDS#3442-BAMJ2Z], email from Ruxandra Côté, EXP Services Inc., received by TASDB on September 18, 2020
- Lawyer Letters for Areas 2 and 4 at 985 Hydro Road, Mississauga, email from Ruxandra Côté, EXP Services Inc., received by TASDB on November 17, 2020 with the following documents attached:
 - RSC Letter Nov 12.20 - Area 2.pdf
 - RSC Letter Nov 12.20 - Area 4.pdf

"Risk Management Measures" means the risk management measures specific to the Property described in the Risk Assessment and/or Part 4 of the CPU.

“Shallow Soil Cap Barrier” means cover, above the Contaminants of Concern, that is at least 0.5 metres thick, and consists of Capping Soil.

Part 2: Legal Authority

- 2.1 Section 19 of the Act states that a certificate of property use is binding on the executor, administrator, administrator with the will annexed, guardian of property or attorney for property of the person to whom it was directed, and on any other successor or assignee of the person to whom it was directed.
- 2.2 Subsection 168.6(1) of the Act states that if a risk assessment relating to a property has been accepted under clause 168.5(1)(a), the Director may issue a certificate of property use to the owner of the property, requiring the owner to do any of the following things:
1. Take any action specified in the certificate and that, in the Director's opinion, is

necessary to prevent, eliminate or ameliorate any adverse effect that has been identified in the risk assessment, including installing any equipment, monitoring any contaminant or recording or reporting information for that purpose.

2. Refrain from using the property for any use specified in the certificate or from constructing any building specified in the certificate on the property.
- 2.3 Subsection 168.6(2) of the Act states that a certificate of property use shall not require an owner of property to take any action that would have the effect of reducing the concentration of a contaminant on, in or under the property to a level below the level that is required to meet the standards specified for the contaminant in the risk assessment.
- 2.4 Subsection 168.6(3) of the Act states that the Director may, on his or her own initiative or on application by the owner of the property in respect of which a certificate of property use has been issued under subsection 168.6(1),
 - (a) alter any terms and conditions in the certificate or impose new terms and conditions; or
 - (b) revoke the certificate.
- 2.5 Subsection 168.6(4) of the Act states that if a certificate of property use contains a provision requiring the owner of property to refrain from using the property for a specified use or from constructing a specified building on the property,
 - (a) the owner of the property shall ensure that a copy of the provision is given to every occupant of the property; and
 - (b) the provision applies, with necessary modifications, to every occupant of the property who receives a copy of the provision; and
 - (c) the owner of the property shall ensure that every occupant of the property complies with the provision.
- 2.6 Subsection 197(1) of the Act states that a person who has authority under the Act to make an order or decision affecting real property also has authority to make an order requiring any person with an interest in the property, before dealing with the property in any way, to give a copy of the order or decision affecting the property to every person who will acquire an interest in the property as a result of the dealing.
- 2.7 Subsection 197(2) of the Act states that a certificate setting out a requirement imposed under subsection 197(1) may be registered in the proper land registry office on the title of the real property to which the requirement relates, if the certificate is in a form approved by the Minister, is signed or authorized by a person who has authority to make orders imposing requirements under subsection 197(1) and is accompanied by a registrable description of the property.

- 2.8 Subsection 197(3) of the Act states that a requirement, imposed under subsection 197(1) that is set out in a certificate registered under subsection 197(2) is, from the time of registration, deemed to be directed to each person who subsequently acquires an interest in the real property.
- 2.9 Subsection 197(4) of the Act states that a dealing with real property by a person who is subject to a requirement imposed under subsection 197(1) or 197(3) is voidable at the instance of a person who was not given the copy of the order or decision in accordance with the requirement.

Part 3: Background

- 3.1 The Risk Assessment was undertaken for the Property on behalf of the Owner to assess the human health risks and ecological risks associated with the presence or discharge of Contaminants of Concern on, in or under the Property and to identify appropriate Risk Management Measures to be implemented to ensure that the Property is suitable for the intended use: Residential Use, Parkland Use, and/or Institutional Use as defined in O. Reg. 153/04.
- 3.2 The contaminants on, in or under the Property that are present above Table 3 of the ***Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act*** published by the Ministry and dated April 15, 2011 for medium and fine textured soils are set out in the Risk Assessment and in Schedule A (Contaminants of Concern). The Standards for these Contaminants of Concern are also set out in Schedule A which is attached to and forms part of the CPU. Also attached to and forming part of the CPU is a copy of a current plan of survey of the Property and/or a site plan of the Property.
- 3.3 I am of the opinion, for the reasons set out in the Risk Assessment that the Risk Management Measures described therein and in Part 4 of the CPU are necessary to prevent, eliminate or ameliorate an Adverse Effect on the Property that has been identified in the Risk Assessment.
- 3.4 I am of the opinion, for the reasons set out in the Risk Assessment, that Contaminants of Concern require on-going pathway elimination and it is necessary to restrict the use of the Property and/or the construction of Buildings and/or the notice provisions as outlined in Part 5 of this CPU.
- 3.5 I am of the opinion, that the requirements set out in Part 6 of this CPU are necessary to supplement the Risk Management Measures described in the Risk Assessment and in Part 4 of the CPU.

- 3.6 I believe for the reasons set out in the Risk Assessment that it is also advisable to require the disclosure of this CPU and the registration of notice of the CPU on title to the Property as set out in the order requirements in Part 7 of this CPU.

Part 4: CPU Risk Management Measures and Requirements Relating to the Risk Assessment and the Property

I hereby require the Owner to do or cause to be done the following under the authority of paragraph 168.6(1)1 of the Act:

- 4.0 Implement, and thereafter maintain or cause to be maintained, the following Risk Management Measures and requirements identified in the Risk Assessment and set out in Items 4.1 to 4.15 and 5.2 as applicable.

4.1 Shallow Soil Cap Barrier Risk Management Measure: N/A

4.2 Hard Cap Barrier or Fill Cap Barrier Risk Management Measure:

- a. Cover all areas of the Property where Contaminants of Concern are present at or within 1.0 metre(s) below the soil surface such that a Hard Cap Barrier or Fill Cap Barrier is in place in these areas, so as to prevent exposure to the Contaminants of Concern at the Property, in conjunction with any existing Barriers in any other areas of the Property where Contaminants of Concern are present below the soil surface; and
- b. Before commencing development of all or any part of the Property, install fencing and implement dust control measures for any part of the Property requiring covering but which has not been covered, so as to prevent exposure to the Contaminants of Concern at the Property. Fencing and dust control measures shall be maintained until such time as the Hard Cap Barrier or Fill Cap Barrier (s) are installed.

4.3 Hard Cap Barrier or Fill Cap Barrier (modified S3 soil component value) Risk Management Measure: N/A

4.4 Inspection, maintenance and reporting requirements for all Barriers:

- a. Prepare and implement a written inspection and maintenance program, prepared by a Qualified Person and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, so as to ensure the continuing integrity of each Barrier at the Property so long as the Contaminants of Concern are present at the Property, including, at a minimum:

- i. procedures and timing for implementing the program;
- ii. semi-annual inspections, in spring and fall, of the Barrier;
- iii. noting any deficiencies in the Barrier observed during the inspections, or at any other time;
- iv. repairing promptly any such deficiencies, to the original design specifications, with written confirmation that the Barrier has been properly repaired;
- v. contingency measures, such as fencing, to be implemented if cracks, breaches or any loss of integrity of the Barrier cannot be repaired or addressed in a timely manner, to prevent exposure to the Contaminants of Concern in that area of the Property;
- vi. recording, in writing, all inspections, deficiencies, repairs and implementation of contingency measures, to be retained by the Owner and be available for inspection upon request by a Provincial Officer;

and which is,

- vii. delivered to the Owner before use of all or any part of the Property begins, or within 90 days following completion of covering of all or any part of the Property, whichever is earlier; and
- viii. updated and delivered to the Owner within 30 days following making any alteration to the program.

- b. Prepare a site plan of the entire Property, prepared by a Licensed Professional Engineer and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, showing the Property, any fencing, and the location, type and design of each Barrier at the Property, including cross-sectional drawings of the Barrier showing its design and vertical and lateral extent;

and which are,

- i. delivered to the Owner before use of all or any part of the Property begins, or within 90 days following completion of covering of all or any part of the Property, whichever is earlier; and
 - ii. updated and delivered to the Owner within 30 days following making any alteration to the location, design or extent of the Barrier, or other relevant feature shown on the site plan.
- c. Prepare and implement written procedures, prepared by a Qualified Person and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, for written and oral communication to all persons who may be involved in Intrusive Activities at the Property that may disturb a Barrier at the

Property, so as to ensure the persons are made aware of the presence and significance of the Barrier and the Contaminants of Concern at the Property and the precautions to be taken to ensure the continued integrity of the Barrier when undertaking the Intrusive Activities, and if damaged, to ensure that the Barrier is repaired promptly to the original design specifications, or, if it cannot be repaired promptly, to ensure that the contingency measures are implemented, and records kept, as specified in the inspection and maintenance program;

and which are,

- i. delivered to the Owner before any Intrusive Activities are undertaken at the Property; and
- ii. updated and delivered to the Owner within 30 days following making any alteration to the procedures.

4.5 Building with Storage Garage (intermittent 3.9 Litres/second of Ventilation) Risk Management Measure: N/A

4.6 Building with Storage Garage (continuous 3.9 Litres/second of ventilation) Risk Management Measure: N/A

4.7 Building with Storage Garage (continuous 10.0 Litres/second of ventilation) Risk Management Measure: N/A

4.8 Building Prohibition Risk Management Measure: N/A

4.9 Active soil vapour intrusion mitigation system (SVIMS) Risk Management Measure: N/A

4.10 Building with no first storey residential, institutional or parkland use Risk Management Measure: N/A

4.11 Building with minimum first storey ceiling height requirement Risk Management Measure: N/A

4.12 No ground water use Risk Management Measure: N/A

4.13 Health and Safety Plan Requirement: N/A

4.14 Soil and Ground Water Management Plan Requirement:

Prepare and implement a written soil and ground water management plan for the Property, prepared by a Qualified Person and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, for managing excavated soil or soil brought to the Property, and, if any, ground water from dewatering during Intrusive Activities at the Property, so as to prevent exposure to or uncontrolled movement or discharge of the Contaminants of Concern in soil or ground water at the Property, including, at a minimum:

- a. procedures and timing for implementing the plan, including the supervision of persons implementing the plan;
- b. measures to control dust and prevent tracking of soil by vehicles and persons from the Property, including the cleaning of equipment and vehicles;
- c. measures, in addition to any applicable measures specified in O. Reg. 153/04 or O. Reg. 406/19, to manage soil excavated at the Property and any soil brought to or removed from the Property, including:
 - i. characterizing for contaminant quality all excavated soil and any soil brought to the Property, including determining whether the soil:
 1. is Capping Soil;
 2. meets the Standards; or
 3. exceeds the Standards;
 - ii. managing excavated soil separately from any soil brought to the Property, including any excavated soil that is to be:
 1. used as Capping Soil at the Property;
 2. otherwise used as fill at the Property;
 3. removed from the Property for off-site storage or processing but is to be returned for use as fill at the Property; or
 4. removed from the Property for off-site use as fill or disposal;
 - iii. stockpiling of excavated soil and any soil brought to the Property in separate designated areas that:
 1. reflect the distinctions described in subparagraphs (c) i and ii;
 2. have been lined and covered, as appropriate, to prevent uncontrolled movement or discharge of the Contaminants of Concern;
 3. have been bermed or fenced, as appropriate, to restrict access by persons; and
 4. have storm water runoff controls in place to minimize storm water runoff contacting stockpiled soil, with provision for discharge of storm water runoff to a sanitary sewer or to other approved treatment if needed;

- d. measures to manage storm water and any ground water from dewatering at the Property to prevent the movement of entrained soil and Contaminants of Concern within and away from the Property, including, in addition to any applicable measures specified pursuant to other applicable law or other instruments, measures such as silt fences, filter socks for catch-basins and utility covers, and provision for discharge to a sanitary sewer or to other approved treatment if needed;
- e. recording, in writing, the soil, storm water and any ground water management measures undertaken, in addition to any applicable record keeping requirements specified in O. Reg. 153/04, O. Reg. 406/19, or pursuant to other applicable law or other instruments, to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, including:
 - i. dates and duration of the Intrusive Activities being undertaken;
 - ii. weather and site conditions during the Intrusive Activities;
 - iii. the location and depth of excavation activities, and dewatering activities, if any;
 - iv. dust control and soil tracking control measures, such as hauling records;
 - v. characterization results for excavated soil and any soil brought to or removed from the Property, and for any ground water from dewatering;
 - vi. soil management activities including soil quantities excavated and brought to and removed from the Property, and stockpile management and storm water runoff control;
 - vii. management activities for any ground water from dewatering;
 - viii. names and contact information for the Qualified Persons and on-site contractors involved in the Intrusive Activities;
 - ix. names and contact information for any haulers and owners or operators of receiving sites for soil and any ground water removed from the Property, and for haulers and owners or operators of project areas (as defined in O. Reg. 406/19 also known as source sites) of any soil brought to the Property;
 - x. any complaints received relating to the Intrusive Activities, including the soil, storm water and any ground water management activities;

and which is,

- xi. delivered to the Owner before any Intrusive Activities are undertaken at the Property; and
- xii. updated and delivered to the Owner within 30 days following making any alteration to the plan.

4.15 Annual Reports Requirement:

The Owner shall prepare by March 31 each year, an annual report documenting activities relating to the Risk Management Measures undertaken during the previous calendar year. A copy of this report shall be maintained on file by the Owner and shall be made available upon request by a Provincial Officer. The report shall include, but not be limited to, the following minimum information requirements as applicable:

- a. a copy of all records relating to the inspection and maintenance program for the Barrier to site soils;
- b. a copy of all records relating to the soil and ground water management plan; and
- c. a copy of signed site plans including any alterations.

Part 5: CPU Restrictions on Property Use, Building Construction and Notice Requirements

I hereby require the Owner to do or cause to be done the following under the authority of paragraph 168.6(1)2 of the Act:

5.1 Property Use Restriction

Refrain from using the Property for any of the following use(s): Agriculture or Other Property Use as defined in O. Reg. 153/04.

5.2 Building Construction Restrictions

Refrain from constructing the following Building(s): N/A

5.3 Notice of Restrictions

Pursuant to the requirements of subsection 168.6(4) of the Act, the Owner shall ensure that every occupant of the Property is given notice that the Ministry has issued this CPU and that it contains the provisions noted above in Items 5.1 and 5.2, except where noted N/A, and that every occupant complies with such provisions. For the purposes of this requirement, an occupant means any person with whom the Owner has a contractual relationship regarding the occupancy of all or part of the Property.

Part 6: Additional Requirements

I hereby require the Owner to do or cause to be done the following things under the authority of paragraph 168.6(1)1 of the Act:

6.1 Site Changes Affecting Risk Management Measures

In the event of a change in the physical site conditions or receptor characteristics at the Property that may affect the Risk Management Measures and/or any underlying basis for the Risk Management Measures, the Owner shall forthwith notify the Director of such changes and the steps taken, to implement, maintain and operate any further Risk Management Measures as are necessary to prevent, eliminate or ameliorate any Adverse Effect that will result from the presence on, in or under the Property or the discharge of any Contaminant of Concern into the natural environment from the

Property. In support of this work, a new risk assessment may need to be completed in accordance with O. Reg. 153/04 and submitted to the Ministry for acceptance. An amendment to the CPU will be issued to address the changes set out in any notice received and any future changes that the Director considers necessary in the circumstances.

6.2 Report Retention Requirements

The Owner shall retain a copy of any reports required under the CPU for a period of seven (7) years from the date the report is created and within ten (10) days of the Director or a Provincial Officer making a request for a report, provide a copy to the requesting Director or Provincial Officer.

6.3 Owner Change Notification

While the CPU is in effect, the Owner shall, forthwith report in writing to the Director any changes of ownership of the Property except that while the Property is registered under the *Condominium Act, 1998*, S.O.1998 c.19 no notice shall be given of changes in the ownership of individual condominium units or any appurtenant common elements on the Property.

Part 7: Section 197 Order (Property Notice and Certificate of Requirement Registration) Requirements

I hereby order the Owner to do or cause to be done the following under the authority of subsections 197(1) and 197 (2) of the Act:

7.1 Property Notice Requirement

For the reasons set out in the CPU and pursuant to the authority vested in me by subsection 197(1) of the Act I hereby order you and any other person with an interest in the Property, before dealing with the Property in any way, to give a copy of the CPU, including any amendments thereto, to every person who will acquire an interest in the Property as a result of the dealing,

7.2 Certificate of Requirement Registration

Within fifteen (15) days from the date of receipt of a certificate of requirement issued under subsection 197(2) of the Act completed as outlined in Schedule B register the certificate of requirement on title to the Property, in the appropriate land registry office.

7.3 Verification

Within five (5) days after registering the certificate of requirement provide to the Director a copy of the registered certificate and of the parcel register(s) for the Property confirming that registration has been completed.

Part 8: General Requirements

- 8.1 The requirements of the CPU are severable. If any requirement of the CPU or the application of any requirement to any circumstance is held invalid, such finding does not invalidate or render unenforceable the requirement in other circumstances nor does it invalidate or render unenforceable the other requirements of the CPU.
- 8.2 An application under subsection 168.6(3) of the Act to alter any terms and conditions in the CPU, or impose new terms and conditions, or revoke the CPU, shall be made in writing to the Director, with reasons for the request.
- 8.3 Failure to comply with the requirements of the CPU constitutes an offence.
- 8.4 The requirements of the CPU are minimum requirements only and do not relieve the Owner from, complying with any other applicable order, statute, regulation, municipal, provincial or federal law, or obtaining any approvals or consents not specified in the CPU.
- 8.5 Notwithstanding the issuance of the CPU, further requirements may be imposed in accordance with legislation as circumstances require.
- 8.6 In the event that, any person is, in the opinion of the Director, rendered unable to comply with any requirements in the CPU because of,
- a. natural phenomena of an inevitable or irresistible nature, or insurrections,
 - b. strikes, lockouts or other labour disturbances,
 - c. inability to obtain materials or equipment for reasons beyond your control, or
 - d. any other cause whether similar to or different from the foregoing beyond your control,
- the requirements shall be adjusted in a manner defined by the Director. To obtain such an adjustment, the Director must be notified immediately of any of the above occurrences, providing details that demonstrate that no practical alternatives are feasible in order to meet the requirements in question.
- 8.7 Failure to comply with a requirement of the CPU by a date specified does not relieve the Owner(s) from compliance with the requirement. The obligation to complete the requirement shall continue each day thereafter.
- 8.8 The Risk Management Measures identified in the Risk Assessment and also in Part 4 of the CPU and all the other requirements in the CPU shall commence upon the issuance of the CPU and continue in full force and effect in accordance with the terms and conditions of the CPU until such time as the Director alters or revokes the CPU.
- 8.9 The provisions of the CPU shall take precedence in the event of a conflict between the provisions of the CPU and the Risk Assessment.
- 8.10 In the event that the Owner complies with the provisions of Items 7.2 and 7.3 of the CPU regarding the registration of the certificate of requirement on title to the Property, and then creates a condominium corporation by the registration of a declaration and description with respect to the Property pursuant to the *Condominium Act, 1998*, S.O.

1998, c.19 and then transfers ownership of the Property to various condominium unit owners, the ongoing obligations of the Owner under this CPU can be carried out by the condominium corporation on behalf of the new Owners of the Property.

Part 9: Hearing before the Environmental Review Tribunal

With respect to those provisions relating to my authority in issuing a certificate of property use under section 168.6 and an order under section 197 of the Act:

- 9.1 Pursuant to section 139 of the Act, you may require a hearing before the Environmental Review Tribunal (the "Tribunal"), if within fifteen (15) days after service on you of a copy of the CPU, you serve written notice upon the Director and the Tribunal.
- 9.1 Pursuant to section 142 of the Act, the notice requiring the hearing must include a statement of the portions of the CPU and the grounds on which you intend to rely at the hearing. Except by leave of the Tribunal, you are not entitled to appeal a portion of the CPU, or to rely on a ground, that is not stated in the notice requiring the hearing.
- 9.2 Service of a notice requiring a hearing must be carried out in a manner set out in section 182 of the Act and Ontario Regulation 227/07: Service of Documents, made under the Act as they may be amended from time to time. The address, email address and fax numbers of the Director and the Tribunal are:

The Secretary
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, ON, M5G 1E5
Fax: (416) 326-5370
Email: ERTTribunalSecretary@ontario.ca

and

Tina Dufresne
Halton-Peel District Manager, Central Region
Ministry of the Environment, Conservation and Parks
4145 North Service Road, Suite 300
Burlington, ON L7L 6A3
Fax: (905) 319-9902
Email: Tina.Dufresne@ontario.ca

- 9.4 Unless stayed by the Tribunal under section 143 of the Act, the CPU is effective from the date of issue.

Further information on the requirements of the Tribunal regarding an appeal can be obtained directly from the Tribunal by:

Tel: (416) 212-6349

Fax: (416) 326-5370

www.elto.gov.on.ca

Issued on the 19th day of November, 2020.

A handwritten signature in black ink, appearing to read 'Tina Dufresne', with a stylized, cursive script.

Tina Dufresne
Director, section 168.6 of the Act

Schedule A

Contaminants of Concern, Property Specific Standards, and Capping Soil Concentrations

Media	Contaminants of Concern (COC)	Units	Property Specific Standards
Soil	Electrical Conductivity	mS/cm	3.2

SCHEDULE B

CERTIFICATE OF REQUIREMENT

s.197(2)

Environmental Protection Act

This is to certify that pursuant to Item 7.1 of Certificate of Property Use number 1323-BVHPHX issued by Tina Dufresne, Director of the Ministry of the Environment, Conservation and Parks, under sections 168.6 and 197 of the *Environmental Protection Act*, on November 19, 2020, being a Certificate of Property Use and order under subsection 197(1) of the *Environmental Protection Act* relating to the property municipally known as 985 Hydro Road, Mississauga, ON L5E 1H3 being part of Property Identifier Number PIN 13485-0758 (LT), namely, PART OF LOT 7, CONCESSION 3, SOUTH OF DUNDAS STREET, PART OF WATER LOT IN FRONT OF LOT 7 SOUTH OF DUNDAS STREET AND PART OF WATER LOT LOCATION HY28 SOUTH OF DUNDAS STREET GEOGRAPHIC TOWNSHIP OF TORONTO, NOW IN THE CITY OF MISSISSAUGA, REGIONAL MUNICIPALITY OF PEEL, DESIGNATED BY PART OF PIN 13485-0742 (LT); SUBJECT TO EASEMENTS AS IN INSTRUMENT NUMBERS TT125865 AND TT141214, SUBJECT TO AN EASEMENT OVER PART OF PARTS 72 AND 73, PLAN 43R-39219, AS IN INSTRUMENT NUMBER PR2974060, SUBJECT TO AN EASEMENT OVER PART OF PART 11 PLAN 43R-37701, AS IN INSTRUMENT NUMBER PR3342530, AND DESCRIBED AS AREA 4 ON A PLAN OF SURVEY PREPARED BY J. D. BARNES LIMITED DATED OCTOBER 22, 2020, REFERENCE No. 16-30-917-03-H.

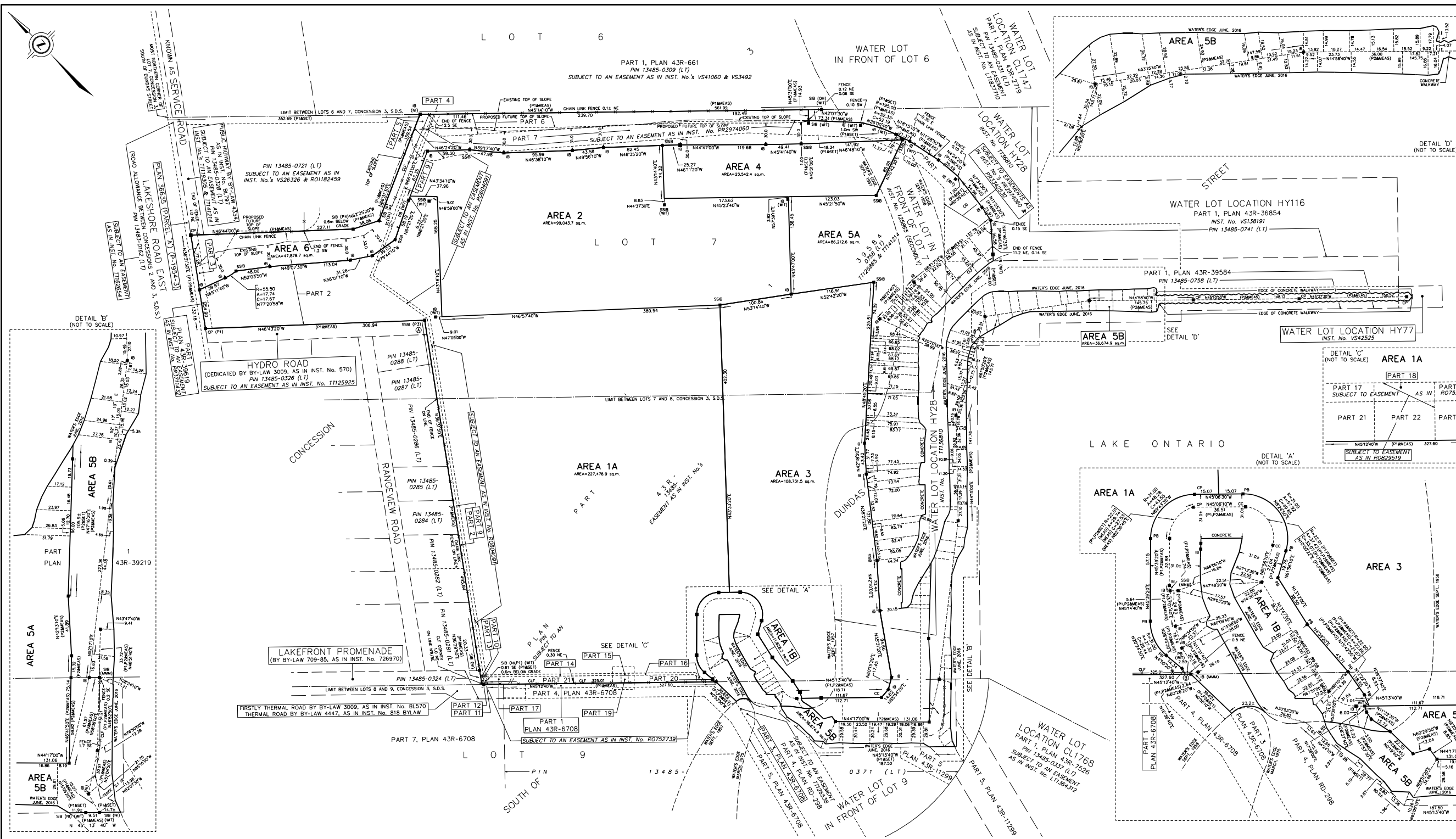
LAKEVIEW COMMUNITY PARTNERS LIMITED

and any other persons having an interest in the Property, are required before dealing with the Property in any way, to give a copy of the Certificate of Property Use, including any amendments thereto, to every person who will acquire an interest in the Property.

Under subsection 197(3) of the *Environmental Protection Act*, the requirement applies to each person who, subsequent to the registration of this certificate, acquires an interest in the Property.

SCHEDULE C

Plan of Survey of Property prepared by J.D. Barnes Limited, October 22, 2020



PLAN OF SURVEY OF
PART OF LOT 7, 8 AND 9, CONCESSION 3
SOUTH OF DUNDAS STREET AND
PART OF WATER LOT IN FRONT OF LOT 7
CONCESSION 3, SOUTH OF DUNDAS STREET AND
PART OF WATER LOT IN FRONT OF LOT 9
CONCESSION 3, SOUTH OF DUNDAS STREET AND
PART OF WATER LOT LOCATION HY28
IN FRONT OF LOTS 7 AND 8, CONCESSION 3
SOUTH OF DUNDAS STREET AND
PART OF WATER LOT LOCATION HY77
IN FRONT OF LOT 7, CONCESSION 3
SOUTH OF DUNDAS STREET
(GEOGRAPHIC TOWNSHIP OF TORONTO)
CITY OF MISSISSAUGA
REGIONAL MUNICIPALITY OF PEE
SCALE 1:2000
J.D. BARNES LIMITED
© COPYRIGHT
METRIC DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN
METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

NOTES
BEARINGS ARE UTM GRID, DERIVED FROM OBSERVED REFERENCE POINTS A AND B,
BY REAL TIME NETWORK (RTN) OBSERVATIONS, UTM ZONE 17, NAD83 (CSRS) (2010.0).
COORDINATES TO URBAN ACCURACY PER SECTION 14 (2) OF REG 216/10.
DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY
THE COMBINED SCALE FACTOR OF 0.999768.
INTEGRATION DATA
OBSERVED REFERENCE POINTS (ORP): UTM ZONE 17, NAD83 (CSRS) (2010.0).
COORDINATES TO URBAN ACCURACY PER SECTION 14 (2) OF REG 216/10.
POINT ID EASTING NORTHING
ORP (A) 616 746.68 4 825 866.77
ORP (B) 616 671.99 4 825 221.39
COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH
CORNERS OF BOUNDARIES SHOWN ON THIS PLAN.
THE RESULTANT TIE BETWEEN ORP A AND ORP B IS 649.84 N 6°36'05" E

LEGEND
B DENOTES SURVEY MONUMENT FOUND
S DENOTES SURVEY MONUMENT SET
SMB DENOTES STANDARD IRON BAR
SMB DENOTES SHORT STANDARD IRON BAR
SMB DENOTES PLASTIC BAR
SMB DENOTES CUT CROSS
CP DENOTES CONCRETE PIN AND WASHER
W DENOTES WITNESS
P1 DENOTES PLAN 43R-37701
P2 DENOTES PLAN 43R-37703
P3 DENOTES PLAN 43R-23371
P4 DENOTES PLAN 43R-9034
P5 DENOTES PLAN OF SURVEY BY J.D. BARNES LIMITED,
DATED MARCH 12, 2019, REFERENCE NO. 19-30-917-03-C.
MEAS DENOTES MEASURED
CH DENOTES J.D. BARNES LIMITED
MM DENOTES MMM GEOMATICS ONTARIO LIMITED
OH DENOTES ONTARIO HYDRO
NI DENOTES NOT IDENTIFIABLE
C/F DENOTES CHAIN LINK FENCE
N= NORTH / S= SOUTH / E= EAST / W= WEST

ALL FOUND SURVEY MONUMENTS WERE ORIGINALLY SET BY J.D. BARNES LIMITED,
UNLESS NOTED OTHERWISE.
ALL UNDERLYING WATER'S EDGE HAS BEEN COMPILED FROM PLANS 43R-23371,
43R-6708 AND RD-298.

ASSOCIATION OF ONTARIO
LAND SURVEYORS
PLAN SUBMISSION FORM
2123248
THIS PLAN IS NOT VALID
UNLESS IT IS IN CONFORMITY
WITH THE SURVEYOR'S
ORIGINAL COPY
ISSUED BY THE SURVEYOR
IN ACCORDANCE WITH
REGULATION 123, SECTION 29(3).

SURVEYOR'S CERTIFICATE
I CERTIFY THAT:
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEY'S
ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON THE 22nd DAY OF OCTOBER, 2020.

October 22nd, 2020
DATE
R.S. QUERIN
ONTOARIO LAND SURVEYOR
J.D. BARNES
LAND INFORMATION SPECIALISTS
401 WHEELABRATOR WAY, SUITE A, MILTON, ONTARIO L7T 4K1
T: (905) 875-4951 F: (905) 875-4950 www.jdbarnes.com
DRAWN BY: AP/MB CHECKED BY: AB/RSQ REFERENCE NO: 16-30-917-03-H
FILE: G:\16-30-917-03\Survey\16-30-917-03-Map.dwg DATE: OCTOBER 22ND, 2020
PLOTTER: 11/12/2020

Certificate of Property Use

Issued under the authority of the *Environmental Protection Act*, R.S.O. 1990, c. E.19,
sections 168.6 (CPU) and 197 (Order)

Certificate of Property use number 8343-BVHNF3
Risk Assessment number 6470-BAMHE8

Owner:

Registered Owner

Lakeview Community Partners Limited
2173 Turnberry Road
Burlington, Ontario L7M4P8

Beneficial Owners

Argo (Lakeview) Limited
2173 Turnberry Road
Burlington, Ontario L7M 4P8

TACC (Lakeview) Inc.
270 Chrislea Road
Woodbridge, Ontario L4L 8A8

Lydian Building Group Ltd.
8700 Dufferin Street
Concord, Ontario L4K 4S6

Branthaven Lakeshore Inc.
720 Oval Ct
Burlington, ON L7L 6A9

CCI (Lakeview) Limited Partnership by
its General Partner 2670562 Ontario Ltd.
141 Adelaide Street West, #703
Toronto, ON M5H 3L5

Site: 985 Hydro Road, Mississauga, Ontario (Area 2)

with a legal description described below:

PART OF LOT 7, CONCESSION 3, SOUTH OF DUNDAS STREET GEOGRAPHIC
TOWNSHIP OF TORONTO, NOW IN THE CITY OF MISSISSAUGA, REGIONAL
MUNICIPALITY OF PEEL, DESIGNATED BY PART OF PIN 13485-0758 (LT); SUBJECT TO
EASEMENTS AS IN INSTRUMENT NUMBERS TT125865 AND TT141214, SUBJECT TO AN
EASEMENT OVER PART OF PART 10, PLAN 43R-39219, AS IN INSTRUMENT NUMBER
PR2974060, AND DESCRIBED AS AREA 2 ON A PLAN OF SURVEY PREPARED BY J. D.
BARNES LIMITED, DATED OCTOBER 22, 2020, REFERENCE No. 16-30-917-03-H.

Being part of PIN 13485-0758 (LT)

This Certificate of Property Use and section 197 Order set out the requirements regarding the above-noted Property and the Modified Generic Risk Assessment carried out in relation to the Property which was assigned the number noted above and is described in more detail in Part 1 below.

Refer to Part 1 of the CPU, Interpretation, for the meaning of all the defined capitalized terms that apply to the CPU.

Part 1: Interpretation

In this CPU, the following capitalized terms have the meanings described below. These terms are also defined in the Approved Model. Not all of these terms may be used in this CPU.

“Act” means the *Environmental Protection Act*, R.S.O. 1990, c. E.19.

“Active SVIMS” means a soil vapour intrusion mitigation system designed and operated to collect and remove soil vapour from below a Building and convey the soil vapour through vent risers to the outside air by means of one or more electrical fan powered vents drawing air from below the Building.

“Approved Model” has the same meaning as in subsection 1 (1) of Schedule C of O. Reg. 153/04, namely, the data file entitled “Modified Generic Risk Assessment Model” and dated October 19, 2009 as amended from time to time, that is maintained by the Ministry as part of its Brownfield initiative and is available on the Internet and may be available in such other manner as the Minister considers appropriate.

“ASTM” means the American Society for Testing and Materials.

“Barrier” means a Fill Cap Barrier, Hard Cap Barrier or Shallow Soil Cap Barrier.

“Building” means an enclosed structure occupying an area greater than ten square metres consisting of a wall or walls, roof and floor.

“Building Area” means the horizontal area of a Building at Grade within the outside surface of the exterior wall or walls.

“Building Code” means Ontario Regulation 332/12 (Building Code) as amended to January 1, 2015, made under the *Building Code Act*, 1992, S.O. 1992, c.23.

“Capping Soil” means,

- (a) soil that meets the applicable site condition standards for the Property and does not contain any contaminant for which no applicable site condition standard for soil is prescribed under Part IX (Site Condition Standards and Risk Assessment) and which is associated with any potentially contaminating activity described in the Risk Assessment, or
- (b) soil that meets any higher standards for the contaminant or contaminants as generated by the Approved Model without incorporation of Risk Management Measures, and as specified in section 7 of the Risk Assessment and in Schedule A of the CPU.

“Certificate of Property Use” or “CPU” means this certificate of property use bearing the number 8343-BVHNF3 issued for the Property by the Director under section 168.6 of the Act, as it may be amended from time to time.

“Competent Person” has the same meaning as in the *Occupational Health and Safety Act*, R.S.O. 1990, c. O.1.

“Contaminants of Concern” has the same meaning as in O. Reg. 153/04, which, for the Property, means one or more contaminants found on, in or under the Property at a concentration that exceeds the applicable site condition standards for the Property, as specified in section 7 of the Risk Assessment report and in Schedule A of the CPU.

“Director” means a person in the Ministry appointed as a director for the purpose of issuing a certificate of property use under section 168.6 of the Act.

“Fill Cap Barrier” means cover, above the Contaminants of Concern, that,

- (a) is at least, the applicable of,
 - (i) 1.0 metre thick, or any greater thickness than 1.0 metre, as specified in section 7 of the Risk Assessment report, or
 - (ii) 1.5 metres thick, where the option to modify the S3 component value in the Approved Model for protection of subsurface workers from direct soil contact has been used in the Risk Assessment, as specified in section 7 of the Risk Assessment report, and
- (b) consists of at least 0.5 metres thickness of Capping Soil, and above this, cover consisting of additional Capping Soil or non-soil surface treatment such as asphalt, concrete or concrete pavers, stone pavers, brick or aggregate.

“First Storey” has the same meaning as in the Building Code.

“Grade” has the same meaning as in the Building Code.

“Hard Cap Barrier” means an asphalt or concrete cover layer, above the Contaminants of Concern, that is at least 225 millimetres thick, and consists of at least 75 millimetres thickness of hot mix asphalt or poured concrete underlain by Granular “A” aggregate or equivalent material and includes a Building slab or Building foundation and floor slab meeting these specifications.

“Intrusive Activities” means any intrusive activity undertaken at the Property, such as excavating or drilling into soil or ground water, which may disturb or expose Contaminants of Concern at the Property.

“Licensed Professional Engineer” means a person who means a person who holds a licence, limited licence or temporary licence under the *Professional Engineers Act*, R.S.O. 1990, c. P.28 and has obtained the appropriate education and training and has demonstrated experience and expertise in the areas related to the work required to be carried out in this CPU.

“Minister” means the minister of the Ministry.

“Ministry” means the ministry of the government of Ontario responsible for the administration of the Act, currently named the Ministry of the Environment, Conservation and Parks.

“O. Reg. 153/04” means Ontario Regulation 153/04 (Record of Site Condition – Part XV.1 of the Act), made under the Act.

“O. Reg. 406/19” means Ontario Regulation 406/19 (On-Site and Excess Soil Management), made under the Act.

“Owner” means the owner(s) of the Property, beginning with the person(s) to whom the Certificate of Property Use for the Property is first issued by the Director under section 168.6 of the Act based on the Risk Assessment, and any subsequent owner of the Property.

“Passive SVIMS” means a soil vapour intrusion mitigation system designed and operated to collect and remove soil vapour from below a Building and convey the soil vapour through vent risers to the outside air by means of natural forces or one or more wind turbines, or solar powered wind turbine operated vents drawing air from below the Building.

“Property” means the property that is the subject of the Risk Assessment and is described in the property “Site” section on page 1 above.

“Property Management Oversight” means management, on an ongoing basis, of all structural, mechanical, electrical, ventilation and other Building and Property services that relate to the installed Passive SVIMS, or the installed Active SVIMS, as applicable for the Property as set out in section 7 of the Risk Assessment report including oversight of operation, inspection, monitoring, maintenance and repair activities, and of operational and

reserve funding for these activities, by a property manager or management company engaged by the Owner or, in the case of collective ownership, by an authorized representative or representatives of the collective ownership of the Building and Property, such as a condominium board.

“Property Specific Standards” means the standards established as the maximum allowable concentrations for the Contaminants of Concern at the Property, as generated by the Approved Model with incorporation of Risk Management Measures, as specified in section 6 of the Risk Assessment report and in Schedule A of the CPU.

“Provincial Officer” has the same meaning as in the Act, namely, a person who is designated by the Minister as a provincial officer for the purposes of the Act and the regulations.

“Qualified Person” means a person who meets the qualifications set out in subsection 5(2) of O. Reg. 153/04.

“Risk Assessment” and “MGRA” means the modified generic risk assessment number 6470-BAMHE8 submitted with respect to the Property and accepted by a Director under section 168.5 of the Act on November 19, 2020 and set out in the following documents:

- Risk Assessment Pre-Submission and Modified Generic Risk Assessment Report for 800 Hydro Road (Area 2) Mississauga, Ontario, report prepared by EXP Service Inc., dated March 1, 2019
- Revised Modified Generic Risk Assessment Report for 800 Hydro Road (Area 2) Mississauga, Ontario - Addendum 1, report prepared by EXP Services Inc., dated November 4, 2019
- Area 2, 985 Hydro Road (formerly 800 Hydro Road), Mississauga, Ontario - Modified Generic Risk Assessment - Addendum 2 report, prepared by EXP Services Inc., dated March 9, 2020
- Area 2, 985 Hydro Road, Mississauga (formerly 800 Hydro Road), Ontario - Modified Generic Risk Assessment - Addendum 3 report, prepared by EXP Services Inc., dated July 14, 2020
- Lawyer Letters for Areas 2 and 4 at 985 Hydro Road, Mississauga, email from Ruxandra Côté, EXP Services Inc., received by TASDB on November 17, 2020 with the following documents attached:
 - RSC Letter Nov 12.20 - Area 2.pdf
 - RSC Letter Nov 12.20 - Area 4.pdf

"Risk Management Measures" means the risk management measures specific to the Property described in the Risk Assessment and/or Part 4 of the CPU.

“Shallow Soil Cap Barrier” means cover, above the Contaminants of Concern, that is at least 0.5 metres thick, and consists of Capping Soil.

“Storage Garage” has the same meaning as in the Building Code.

“SVIMS” means soil vapour intrusion mitigation system.

Part 2: Legal Authority

- 2.1 Section 19 of the Act states that a certificate of property use is binding on the executor, administrator, administrator with the will annexed, guardian of property or attorney for property of the person to whom it was directed, and on any other successor or assignee of the person to whom it was directed.
- 2.2 Subsection 168.6(1) of the Act states that if a risk assessment relating to a property has been accepted under clause 168.5(1)(a), the Director may issue a certificate of property use to the owner of the property, requiring the owner to do any of the following things:
1. Take any action specified in the certificate and that, in the Director's opinion, is necessary to prevent, eliminate or ameliorate any adverse effect that has been identified in the risk assessment, including installing any equipment, monitoring any contaminant or recording or reporting information for that purpose.
 2. Refrain from using the property for any use specified in the certificate or from constructing any building specified in the certificate on the property.
- 2.3 Subsection 168.6(2) of the Act states that a certificate of property use shall not require an owner of property to take any action that would have the effect of reducing the concentration of a contaminant on, in or under the property to a level below the level that is required to meet the standards specified for the contaminant in the risk assessment.
- 2.4 Subsection 168.6(3) of the Act states that the Director may, on his or her own initiative or on application by the owner of the property in respect of which a certificate of property use has been issued under subsection 168.6(1),
- (a) alter any terms and conditions in the certificate or impose new terms and conditions; or
 - (b) revoke the certificate.
- 2.5 Subsection 168.6(4) of the Act states that if a certificate of property use contains a provision requiring the owner of property to refrain from using the property for a specified use or from constructing a specified building on the property,
- (a) the owner of the property shall ensure that a copy of the provision is given to every occupant of the property; and
 - (b) the provision applies, with necessary modifications, to every occupant of the

property who receives a copy of the provision; and

- (c) the owner of the property shall ensure that every occupant of the property complies with the provision.
- 2.6 Subsection 197(1) of the Act states that a person who has authority under the Act to make an order or decision affecting real property also has authority to make an order requiring any person with an interest in the property, before dealing with the property in any way, to give a copy of the order or decision affecting the property to every person who will acquire an interest in the property as a result of the dealing.
- 2.7 Subsection 197(2) of the Act states that a certificate setting out a requirement imposed under subsection 197(1) may be registered in the proper land registry office on the title of the real property to which the requirement relates, if the certificate is in a form approved by the Minister, is signed or authorized by a person who has authority to make orders imposing requirements under subsection 197(1) and is accompanied by a registrable description of the property.
- 2.8 Subsection 197(3) of the Act states that a requirement, imposed under subsection 197(1) that is set out in a certificate registered under subsection 197(2) is, from the time of registration, deemed to be directed to each person who subsequently acquires an interest in the real property.
- 2.9 Subsection 197(4) of the Act states that a dealing with real property by a person who is subject to a requirement imposed under subsection 197(1) or 197(3) is voidable at the instance of a person who was not given the copy of the order or decision in accordance with the requirement.

Part 3: Background

- 3.1 The Risk Assessment was undertaken for the Property on behalf of the Owner to assess the human health risks and ecological risks associated with the presence or discharge of Contaminants of Concern on, in or under the Property and to identify appropriate Risk Management Measures to be implemented to ensure that the Property is suitable for the intended use: Residential Use, Parkland Use and/or Institutional Use as defined in O. Reg. 153/04.
- 3.2 The contaminants on, in or under the Property that are present above Table 3 of the ***Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act*** published by the Ministry and dated April 15, 2011 for medium and fine textured soils are set out in the Risk Assessment and in Schedule A (Contaminants of Concern). The Standards for these Contaminants of Concern are also set out in Schedule A which is attached to and forms part of the CPU. Also attached to

and forming part of the CPU is a copy of a current plan of survey of the Property and/or a site plan of the Property.

- 3.3 I am of the opinion, for the reasons set out in the Risk Assessment that the Risk Management Measures described therein and in Part 4 of the CPU are necessary to prevent, eliminate or ameliorate an Adverse Effect on the Property that has been identified in the Risk Assessment.
- 3.4 I am of the opinion, for the reasons set out in the Risk Assessment, that Contaminants of Concern require on-going pathway elimination and it is necessary to restrict the use of the Property and/or the construction of Buildings and/or the notice provisions as outlined in Part 5 of this CPU.
- 3.5 I am of the opinion, that the requirements set out in Part 6 of this CPU are necessary to supplement the Risk Management Measures described in the Risk Assessment and in Part 4 of the CPU.
- 3.6 I believe for the reasons set out in the Risk Assessment that it is also advisable to require the disclosure of this CPU and the registration of notice of the CPU on title to the Property as set out in the order requirements in Part 7 of this CPU.

Part 4: CPU Risk Management Measures and Requirements Relating to the Risk Assessment and the Property

I hereby require the Owner to do or cause to be done the following under the authority of paragraph 168.6(1)1 of the Act:

- 4.0 Implement, and thereafter maintain or cause to be maintained, the following Risk Management Measures and requirements identified in the Risk Assessment and set out in Items 4.1 to 4.15 and 5.2 as applicable.
- 4.1 **Shallow Soil Cap Barrier Risk Management Measure:** N/A
- 4.2 **Hard Cap Barrier or Fill Cap Barrier Risk Management Measure:**
 - a. Cover all areas of the Property where Contaminants of Concern are present at or within 1.0 metre(s) below the soil surface such that a Hard Cap Barrier or Fill Cap Barrier is in place in these areas, so as to prevent exposure to the Contaminants of Concern at the Property, in conjunction with any existing Barriers in any other areas of the Property where Contaminants of Concern are present below the soil surface; and

- b. Before commencing development of all or any part of the Property, install fencing and implement dust control measures for any part of the Property requiring covering but which has not been covered, so as to prevent exposure to the Contaminants of Concern at the Property. Fencing and dust control measures shall be maintained until such time as the Hard Cap Barrier or Fill Cap Barrier (s) are installed.

4.3 Hard Cap Barrier or Fill Cap Barrier (modified S3 soil component value) Risk Management Measure: N/A

4.4 Inspection, maintenance and reporting requirements for all Barriers:

- a. Prepare and implement a written inspection and maintenance program, prepared by a Qualified Person and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, so as to ensure the continuing integrity of each Barrier at the Property so long as the Contaminants of Concern are present at the Property, including, at a minimum:
 - i. procedures and timing for implementing the program;
 - ii. semi-annual inspections, in spring and fall, of the Barrier;
 - iii. noting any deficiencies in the Barrier observed during the inspections, or at any other time;
 - iv. repairing promptly any such deficiencies, to the original design specifications, with written confirmation that the Barrier has been properly repaired;
 - v. contingency measures, such as fencing, to be implemented if cracks, breaches or any loss of integrity of the Barrier cannot be repaired or addressed in a timely manner, to prevent exposure to the Contaminants of Concern in that area of the Property;
 - vi. recording, in writing, all inspections, deficiencies, repairs and implementation of contingency measures, to be retained by the Owner and be available for inspection upon request by a Provincial Officer;and which is,
 - vii. delivered to the Owner before use of all or any part of the Property begins, or within 90 days following completion of covering of all or any part of the Property, whichever is earlier; and
 - viii. updated and delivered to the Owner within 30 days following making any alteration to the program.
- b. Prepare a site plan of the entire Property, prepared by a Licensed Professional Engineer and to be retained by the Owner, and be available for inspection upon

request by a Provincial Officer, showing the Property, any fencing, and the location, type and design of each Barrier at the Property, including cross-sectional drawings of the Barrier showing its design and vertical and lateral extent;

and which are,

- i. delivered to the Owner before use of all or any part of the Property begins, or within 90 days following completion of covering of all or any part of the Property, whichever is earlier; and
 - ii. updated and delivered to the Owner within 30 days following making any alteration to the location, design or extent of the Barrier, or other relevant feature shown on the site plan.
- c. Prepare and implement written procedures, prepared by a Qualified Person and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, for written and oral communication to all persons who may be involved in Intrusive Activities at the Property that may disturb a Barrier at the Property, so as to ensure the persons are made aware of the presence and significance of the Barrier and the Contaminants of Concern at the Property and the precautions to be taken to ensure the continued integrity of the Barrier when undertaking the Intrusive Activities, and if damaged, to ensure that the Barrier is repaired promptly to the original design specifications, or, if it cannot be repaired promptly, to ensure that the contingency measures are implemented, and records kept, as specified in the inspection and maintenance program;

and which are,

- i. delivered to the Owner before any Intrusive Activities are undertaken at the Property; and
- ii. updated and delivered to the Owner within 30 days following making any alteration to the procedures.

4.5 Building with Storage Garage (intermittent 3.9 Litres/second of Ventilation) Risk Management Measure:

Refrain from constructing any Building on the Property unless the Building includes an Active SVIMS Risk Management Measure described in Item 4.9, or a Storage Garage, and:

- a. the Storage Garage is constructed at or below the Grade of the Building;
- b. the Storage Garage area covers the entire Building Area at Grade; and
- c. the Storage Garage complies with all applicable requirements of the Building Code, such as the provisions governing

- i. design of a mechanical ventilation system as set out in Division B, Article 6.2.2.3. (Ventilation of Storage and Repair Garages) of the Building Code;
- ii. interconnection of air duct systems as set out in Division B, Sentence (2) of Article 6.2.3.9. (Interconnection of Systems) of the Building Code; and
- iii. air leakage as set out in Division B, Section 5.4. (Air Leakage) of the Building Code.

4.6 Building with Storage Garage (continuous 3.9 Litres/second of ventilation) Risk Management Measure: N/A

4.7 Building with Storage Garage (continuous 10.0 Litres/second of ventilation) Risk Management Measure: N/A

4.8 Building Prohibition Risk Management Measure: N/A

4.9 Active soil vapour intrusion mitigation system (SVIMS) Risk Management Measure:

Refrain from constructing any Building on the Property unless the Building includes a Storage Garage Risk Management Measure described in Item 4.5, or an Active SVIMS, and the Active SVIMS meets the following requirements:

4.9.1 DESIGN, INSTALLATION AND OPERATION

Design, install and operate a SVIMS for the Building, designed by a Licensed Professional Engineer in consultation with a Qualified Person and installed by a person acceptable to and under the supervision of a Licensed Professional Engineer, so as to remove soil vapour from below the Building and prevent soil vapour containing the Contaminants of Concern from entering the Building air, including the following requirements and components for the SVIMS:

SYSTEM REQUIREMENTS

- a. the Active SVIMS is to;
 - i. be designed, installed and operated with the objective of achieving during all seasons at least a 6 Pascal lower air pressure differential below the foundation floor slab, relative to the indoor air pressure within the Building, across at least 90% of the Building Area; and

- ii. have in place, measures, as appropriate based on an assessment carried out in accordance with ASTM E1998;

SUB-SLAB FOUNDATION LAYER

- b. throughout the Building Area below the foundation floor slab, a sub-slab foundation layer, above soil containing the Contaminants of Concern, designed by a Licensed Professional Engineer for the Building constructor in consultation with the Licensed Professional Engineer for the SVIMS;

SOIL VAPOUR VENTING LAYER

- c. throughout the Building Area below the foundation floor slab and above the sub-slab foundation layer, a soil vapour venting layer designed for collection and venting of soil vapour from below the floor slab to vent risers for venting to the outdoor air, with the soil vapour venting layer consisting of:
 - i. perforated collection pipes or geocomposite strips of sufficient size or diameter, frequency and locations to promote efficient collection and venting, embedded in granular materials of sufficient air permeability and depth;

or,

other soil vapour collection and venting products used to construct a soil vapour venting layer with continuous open void space, such as an aerated sub-floor below the floor slab and around the exterior walls, which provides similar or greater air permeability and collection and venting efficiency;
 - ii. for a Building with isolated soil vapour venting layer areas caused by interior grade beams or areas of thickened slabs, ventilation pipes to connect the isolated areas or a soil vapour venting layer that extends below these elements of the Building foundation; and
 - iii. clean-outs, drains or openings to ensure drainage and removal of condensate or water, including any entrained dust, that may enter collection pipes, geocomposite strips or vent risers, and, if required, to ensure drainage or dewatering of the soil vapour venting layer in Property areas with a shallow ground water table;

SOIL VAPOUR BARRIER MEMBRANE

- d. throughout the Building Area, a continuous leak free soil vapour barrier membrane, such as a sheet geomembrane or spray applied membrane, below

the foundation floor slab and above the soil vapour venting layer, and below and along the walls of any subsurface structures such as a sump, and which:

- i. is of appropriate thickness and meets the appropriate gas permeability and chemical resistance specifications to be considered substantially impermeable to the soil vapour, in accordance with the appropriate ASTM standards such as D412 and D543, as applicable; and
- ii. has a suitable protective geotextile, or other suitable protective material, such as a sand layer, immediately below or above the soil vapour barrier membrane, as considered appropriate by the Licensed Professional Engineer;

VENT RISERS

- e. vent risers must be of sufficient size or diameter, frequency and locations to promote efficient venting and that terminate above the roof of the Building, to convey soil vapour from the soil vapour venting layer to the outdoor air above the roof of the Building and that discharge at an appropriate distance from Building air intakes and openable windows, doors and other openings through which exhausted vapours could be entrained in Building air and, consistent with the separation provisions in ASTM E2121 but modified as appropriate for the characteristics of the soil vapour and Building, including:
 - i. at least one vent riser per isolated section of the soil vapour venting layer caused by interior grade beams or thickened slabs, unless analysis or testing indicates a lesser number of vent risers is required;
 - ii. vent pipe riser diameter that is greater than the collection pipe diameter, to promote efficient venting;
 - iii. vent risers located within the Building, where appropriate, to promote temperature induced convective venting during colder weather; and
 - iv. an electrical powered fan on each vent riser, and an automated monitoring system of fan operation which remotely detects and indicates system malfunctions;

MONITORING DEVICES

- f. monitoring devices must be installed below the foundation floor slab across the Building Area to measure the (lower) air pressure differential, relative to the indoor air pressure within the Building, being achieved by the soil vapour venting layer, with the number and locations of the monitoring devices installed being as considered appropriate by the Licensed Professional Engineer in consultation with the Qualified Person, taking into account factors such as the Building Area and the design and configuration of the Building foundation;

LABELING OF EQUIPMENT

- g. equipment for the SVIMS must be clearly labelled, including information such as the installer's name, date of installation and identification of all visible piping, consistent with the labeling provisions in ASTM E1465 but modified as appropriate for the characteristics of the soil vapour and Building;

UTILITY SEALING

- i. where utilities or subsurface Building penetrations are a potential conduit for soil vapour migration,
 - i. utility trench dams, consisting of a soil-bentonite mixture, sand-cement slurry or other appropriate material must be installed as a precautionary measure to reduce the potential for soil vapour to migrate beneath the Building through relatively permeable trench backfill; and
 - ii. conduit seals constructed of closed cell polyurethane foam, or other inert gas-impermeable material must be installed at the termination of all utility conduits and at subsurface Building penetrations, such as sumps, to reduce the potential for vapour migration along the conduit to the interior of the Building;

4.9.2 QUALITY ASSURANCE / QUALITY CONTROL

prepare and implement a quality assurance and quality control program, prepared by a Licensed Professional Engineer and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, so as to ensure that the SVIMS is being, and has been, properly installed and the installation documented, including inspections, verification testing and documenting of the installation as it is carried out, including at a minimum:

- i. procedures and timing for implementing the program, by a person acceptable to and under the supervision of a Licensed Professional Engineer;
- ii. daily inspections of the installation of the SVIMS, including of the quality assurance and quality control measures and procedures undertaken by the installer;
- iii. undertaking, at a minimum, the following quality control measures and verification testing of the soil vapour barrier membrane:
 - 1. daily inspection reports noting any deficiencies and corrective actions taken;
 - 2. smoke testing of the soil vapour barrier membrane, or equivalent alternative testing method that provides comparable results;

3. verification of the type and thickness of the soil vapour barrier membrane through testing of representative samples of materials used, including destructive testing and repair of portions of the membranes to be conducted in a manner and at a frequency that meets or exceeds manufacturer's recommendations;
 4. verification of field seams of sheet geomembranes as being continuous and leak free, through vacuum or pressure testing, geophysical testing or other appropriate means; and
 5. verification that appropriate measures to prevent post-construction damage or degradation to the soil vapour barrier membrane have been taken, including at a minimum, appropriate preparation of the sub-slab foundation layer, placement of a protective geotextile, or other suitable protective material, below or above the soil vapour barrier membrane, if included in the design, and work practices to prevent post-construction damage;
- iv. noting any deficiencies in the materials or installation of the SVIMS;
 - v. ensuring the prompt repair of any deficiencies, to the design specifications;
 - vi. preparing a written report of all inspections, quality control measures and verification testing undertaken, and any deficiencies and repairs, prepared by the Licensed Professional Engineer and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer;
- and which are,
- vii. delivered to the Owner before installation of the SVIMS begins; and
 - viii. updated and delivered to the Owner within 30 days of making any alteration to the program;

4.9.3 AS CONSTRUCTED PLANS

prepare as constructed plans of the SVIMS, prepared by a Licensed Professional Engineer and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, showing the location of the Building and the location and specifications of the installed SVIMS, including cross-sectional drawings specifying the design and the vertical and lateral extent of the SVIMS relative to the Building and the ground surface,

and which are:

- i. delivered to the Owner before use of all or any part of the Building begins, or within 90 days following completion of installation of the SVIMS, whichever is earlier; and

- ii. updated and delivered to the Owner within 30 days following making any alteration to the SVIMS, or other relevant feature shown on the plans;

4.9.4 INSPECTION AND MAINTENANCE

prepare and implement a written inspection and maintenance program, prepared by a Licensed Professional Engineer and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, to ensure the continued integrity and effectiveness of the SVIMS, including, at a minimum:

- i. procedures and timing for implementing the program, by a person meeting the qualifications as set out in the program;
- ii. maintenance and calibration of operational, monitoring and other equipment, as appropriate;
- iii. inspections of the SVIMS including:
 - 1. semi-annual inspections, in spring and fall, of the visible areas of the foundation floor slab or subsurface walls in contact with soil, to identify any cracks, breaches or other deficiencies that may allow soil vapour to enter the Building;
 - 2. semi-annual inspections, in spring and fall, the visible components of the SVIMS, to identify any cracks, breaches or other deficiencies that may hinder the collection or venting of soil vapour from below the Building;
 - 3. additional inspections, on a more frequent basis as appropriate, of the wind turbine(s) or solar powered wind turbine(s) to determine whether they turn frequently and/or of the electrical powered fans to confirm they turn freely, to confirm the automated monitoring system of fan operation is operational and to confirm operational parameters such as amperage levels are within appropriate ranges;
 - 4. additional inspections during winter, as appropriate, to identify any significant accumulation of snow or ice requiring removal;
- iv. noting any deficiencies with the floor slab and SVIMS identified during any inspection, or at any other time; and
- v. repairing promptly any deficiencies, including under the supervision of a Licensed Professional Engineer for a deficiency referred to in subparagraph iii above;
- vi. factors and considerations for determining if additional inspections or monitoring should be undertaken;
- vii. a contingency plan to be implemented in the event the deficiencies cannot be repaired promptly, including prompt notification of the Ministry if such deficiencies, along with operational monitoring results and any additional lines of evidence suggest that soil vapour intrusion into the Building may occur, as determined by a Licensed Professional Engineer;

- viii. preparing a written report of all inspections, deficiencies, repairs and maintenance, and of implementation of the contingency plan if necessary, prepared by a Licensed Professional Engineer and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer;

and which are,

- ix. delivered to the Owner before use of all or any part of the Building begins, or within 90 days following completion of installation of the SVIMS, whichever is earlier; and
- x. updated and delivered to the Owner within 30 days following making any alteration to the program;

4.9.5 OPERATIONAL MONITORING

prepare and implement a written program for monitoring of the operation of the installed SVIMS, prepared by a Licensed Professional Engineer in consultation with a Qualified Person and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, to ensure the continued integrity and effectiveness of the SVIMS, including, at a minimum:

- i. procedures and timing for implementing the program, by a person meeting the qualifications as set out in the program;
- ii. locations and description of the devices and equipment used, or tested, for each monitoring event;
- iii. procedures for undertaking the testing, measurement and evaluation during a monitoring event, including calibration of operational, monitoring and other equipment, as appropriate;
- iv. undertaking operational monitoring, including recording of the monitoring results, in accordance with the following:
 - 1. at least once before occupancy and as considered appropriate by a Licensed Professional Engineer after occupancy has commenced, vacuum testing of the soil vapour venting system by conducting pilot testing using temporary or permanently installed electrically powered fan(s), including with respect to the soil vapour venting layer being able to achieve a 6 Pascal lower air pressure differential objective below the foundation floor slab across the Building Area, relative to the indoor air pressure within the Building; and
 - 2. at least once before occupancy, quarterly during the first two years after occupancy has commenced and semi-annually thereafter measuring of the (lower) air pressure differential below the foundation floor slab across the Building Area, relative to the indoor air pressure

within the Building, being achieved by the soil vapour venting layer, using all of the monitoring devices, including those referred to in paragraph f. of Item 4.9.1 as may be amended as required by subparagraph vi. of Item 4.9.4 above;

- v. for each year, undertaking an assessment and preparing a written monitoring report, by a Licensed Professional Engineer in consultation with a Qualified Person and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, on the operational monitoring undertaken and its results and findings with respect to the integrity and effectiveness of the installed SVIMS, including taking into account previous monitoring undertaken, and with recommendations and any follow-up actions to be taken,

such as:

1. the need to repeat or undertake additional or follow-up operational monitoring and assessment, or additional inspections;
2. changes to the frequency or nature of the monitoring; and
3. the need to make repairs or changes to the design or operation of the SVIMS; and
4. if necessary, implementation of the contingency plan in the event needed repairs or changes to the SVIMS cannot be made promptly, including notification of the Ministry if the operational monitoring results, inspections and any additional lines of evidence suggest that soil vapour intrusion into the Building may occur, as determined by a Licensed Professional Engineer;

and which are,

- vi. delivered to the Owner before use of all or any part of the Building begins, or within 90 days following completion of installation of the SVIMS, whichever is earlier; and
- vii. updated and delivered to the Owner within 30 days of following making any alteration to the program;

4.9.6 INTRUSIVE ACTIVITIES CAUTION

prepare and implement written procedures, prepared by a Qualified Person and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, for written and oral communication to all persons who may be involved in Intrusive Activities at the Property that may disturb an installed SVIMS, so as to ensure the persons are made aware of the presence and significance of the SVIMS and the Contaminants of Concern at the Property and the precautions to be taken to ensure the continued integrity of the SVIMS when undertaking the Intrusive Activities, and if damaged, to ensure the SVIMS is repaired promptly to the original design specifications, or if it cannot be repaired

promptly, to ensure the contingency measures are implemented, and records kept, as specified in the inspection and maintenance program;

and which are,

- i. delivered to the Owner before any Intrusive Activities are undertaken at the Property; and
- ii. updated and delivered to the Owner within 30 days following making any alteration to the procedures;

4.9.7 BUILDING CODE

The Building complies with all applicable requirements of the Building Code, such as the provisions governing the following:

- i. soil gas control as set out in Division B, subsection 9.13.4. (Soil Gas Control) of the Building Code;
- ii. protection against depressurization as set out in Division B, Article 9.32.3.8. (Protection Against Depressurization) of the Building Code; and
- iii. separation of air intakes and exhaust outlet openings and protection against contamination of the ventilation air by the exhaust air as set out in Division B, Article 9.32.3.12. (Outdoor Intake and Exhaust Openings) of the Building Code.

4.10 Building with no first storey residential, institutional or parkland use Risk

Management Measure: N/A

4.11 Building with minimum first storey ceiling height requirement Risk Management

Measure: N/A

4.12 No ground water use Risk Management Measure: N/A

4.13 Health and Safety Plan Requirement:

In addition to any requirements under the *Occupational Health and Safety Act*, R.S.O. 1990, c. O.1, prepare and implement a written health and safety plan for the Property, prepared by a Competent Person in consultation with a Qualified Person and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, that includes information concerning the potential hazards and safe work measures and procedures with respect to the Contaminants of Concern at the Property and the communication of this information to all persons who may be involved in Intrusive Activities at the Property, including, at a minimum:

- a. the procedures and timing for implementing the plan, including the supervision of persons implementing the plan;
- b. all relevant information concerning the presence of, human exposure to, and risk posed by, the Contaminants of Concern through dermal contact, soil or ground water ingestion and inhalation of soil particles or vapour, and concerning any biogenic gases such as methane that may be present at the Property including information in the Risk Assessment;
- c. all relevant information, measures and procedures concerning protection of the persons from exposure to the Contaminants of Concern and the precautions to be taken when undertaking Intrusive Activities, including the supervision of workers, occupational hygiene requirements, use of personal protective equipment, provision of air flow augmentation in excavations or other areas or situations of minimal air ventilation, and other protective measures and procedures as appropriate;
- d. all relevant information concerning the presence and significance of the Risk Management Measures and requirements which are being, or have been, implemented at the Property;
- e. the procedures and timing for implementing emergency response and contingency measures and procedures, including contact information, in the event of a health and safety incident;
- f. the recording, in writing, of the implementation of the plan and any health and safety incidents that occur, to be retained by the Owner and be available for inspection upon request by a Provincial Officer;

and which is,

- g. delivered to the Owner before any Intrusive Activities are undertaken at the Property; and
- h. updated and delivered to the Owner within 30 days following making any alteration to the plan.

4.14 Soil and Ground Water Management Plan Requirement:

Prepare and implement a written soil and ground water management plan for the Property, prepared by a Qualified Person and to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, for managing excavated soil or soil brought to the Property, and, if any, ground water from dewatering during Intrusive Activities at the Property, so as to prevent exposure to or uncontrolled movement or discharge of the Contaminants of Concern in soil or ground water at the Property, including, at a minimum:

- a. procedures and timing for implementing the plan, including the supervision of persons implementing the plan;
- b. measures to control dust and prevent tracking of soil by vehicles and persons from the Property, including the cleaning of equipment and vehicles;

- c. measures, in addition to any applicable measures specified in O. Reg. 153/04 or O. Reg. 406/19, to manage soil excavated at the Property and any soil brought to or removed from the Property, including:
 - i. characterizing for contaminant quality all excavated soil and any soil brought to the Property, including determining whether the soil:
 - 1. is Capping Soil;
 - 2. meets the Standards; or
 - 3. exceeds the Standards;
 - ii. managing excavated soil separately from any soil brought to the Property, including any excavated soil that is to be:
 - 1. used as Capping Soil at the Property;
 - 2. otherwise used as fill at the Property;
 - 3. removed from the Property for off-site storage or processing but is to be returned for use as fill at the Property; or
 - 4. removed from the Property for off-site use as fill or disposal;
 - iii. stockpiling of excavated soil and any soil brought to the Property in separate designated areas that:
 - 1. reflect the distinctions described in subparagraphs (c) i and ii;
 - 2. have been lined and covered, as appropriate, to prevent uncontrolled movement or discharge of the Contaminants of Concern;
 - 3. have been bermed or fenced, as appropriate, to restrict access by persons; and
 - 4. have storm water runoff controls in place to minimize storm water runoff contacting stockpiled soil, with provision for discharge of storm water runoff to a sanitary sewer or to other approved treatment if needed;
- d. measures to manage storm water and any ground water from dewatering at the Property to prevent the movement of entrained soil and Contaminants of Concern within and away from the Property, including, in addition to any applicable measures specified pursuant to other applicable law or other instruments, measures such as silt fences, filter socks for catch-basins and utility covers, and provision for discharge to a sanitary sewer or to other approved treatment if needed;
- e. recording, in writing, the soil, storm water and any ground water management measures undertaken, in addition to any applicable record keeping requirements specified in O. Reg. 153/04, O. Reg. 406/19, or pursuant to other applicable law or other instruments, to be retained by the Owner, and be available for inspection upon request by a Provincial Officer, including:
 - i. dates and duration of the Intrusive Activities being undertaken;
 - ii. weather and site conditions during the Intrusive Activities;
 - iii. the location and depth of excavation activities, and dewatering activities, if any;

- iv. dust control and soil tracking control measures, such as hauling records;
- v. characterization results for excavated soil and any soil brought to or removed from the Property, and for any ground water from dewatering;
- vi. soil management activities including soil quantities excavated and brought to and removed from the Property, and stockpile management and storm water runoff control;
- vii. management activities for any ground water from dewatering;
- viii. names and contact information for the Qualified Persons and on-site contractors involved in the Intrusive Activities;
- ix. names and contact information for any haulers and owners or operators of receiving sites for soil and any ground water removed from the Property, and for haulers and owners or operators of project areas (as defined in O. Reg. 406/19 also known as source sites) of any soil brought to the Property;
- x. any complaints received relating to the Intrusive Activities, including the soil, storm water and any ground water management activities;

and which is,

- xi. delivered to the Owner before any Intrusive Activities are undertaken at the Property; and
- xii. updated and delivered to the Owner within 30 days following making any alteration to the plan.

4.15 Annual Reports Requirement:

The Owner shall prepare by March 31 each year, an annual report documenting activities relating to the Risk Management Measures undertaken during the previous calendar year. A copy of this report shall be maintained on file by the Owner and shall be made available upon request by a Provincial Officer. The report shall include, but not be limited to, the following minimum information requirements as applicable:

- a. a copy of all records relating to the inspection and maintenance program for the Barrier to site soils and Active SVIMS;
- b. a copy of all records related to pressure monitoring of the Active SVIMS;
- c. a copy of all records relating to the soil and ground water management plan;
- d. a copy of all records relating to the health and safety plan;
- e. a copy of any signed as constructed plans for the Active SVIMS for any Building;
- f. a copy of signed site plans including any alterations; and
- g. confirmation that the Building with Storage Garage covers the entire Building footprint and is ventilated in accordance to Item 4.5.

Part 5: CPU Restrictions on Property Use, Building Construction and Notice Requirements

I hereby require the Owner to do or cause to be done the following under the authority of paragraph 168.6(1)2 of the Act:

5.1 Property Use Restriction

Refrain from using the Property for any of the following use(s): Agriculture or Other Property Use as defined in O. Reg. 153/04.

5.2 Building Construction Restrictions

Refrain from constructing the following Building(s): Any Building except as may be permitted in the CPU including by implementing on any particular Building, the Risk Management Measures as may be applicable, it being understood that Buildings must include either the Building with Storage Garage (intermittent 3.9 Litres/second of Ventilation) Risk Management Measure (Item 4.5) or the Active SVIMS Risk Management Measure (Item 4.9).

5.3 Notice of Restrictions

Pursuant to the requirements of subsection 168.6(4) of the Act, the Owner shall ensure that every occupant of the Property is given notice that the Ministry has issued this CPU and that it contains the provisions noted above in Items 5.1 and 5.2, except where noted N/A, and that every occupant complies with such provisions. For the purposes of this requirement, an occupant means any person with whom the Owner has a contractual relationship regarding the occupancy of all or part of the Property.

Part 6: Additional Requirements

I hereby require the Owner to do or cause to be done the following things under the authority of paragraph 168.6(1)1 of the Act:

6.1 Site Changes Affecting Risk Management Measures

In the event of a change in the physical site conditions or receptor characteristics at the Property that may affect the Risk Management Measures and/or any underlying basis for the Risk Management Measures, the Owner shall forthwith notify the Director of such changes and the steps taken, to implement, maintain and operate any further Risk Management Measures as are necessary to prevent, eliminate or ameliorate any Adverse Effect that will result from the presence on, in or under the Property or the discharge of any Contaminant of Concern into the natural environment from the Property. In support of this work, a new risk assessment may need to be completed in accordance with O. Reg. 153/04 and submitted to the Ministry for acceptance. An amendment to the CPU will be issued to address the changes set out in any notice received and any future changes that the Director considers necessary in the circumstances.

6.2 Report Retention Requirements

The Owner shall retain a copy of any reports required under the CPU for a period of seven (7) years from the date the report is created and within ten (10) days of the Director or a Provincial Officer making a request for a report, provide a copy to the requesting Director or Provincial Officer.

6.3 Owner Change Notification

While the CPU is in effect, the Owner shall, forthwith report in writing to the Director any changes of ownership of the Property except that while the Property is registered under the *Condominium Act, 1998*, S.O.1998 c.19 no notice shall be given of changes in the ownership of individual condominium units or any appurtenant common elements on the Property.

Part 7: Section 197 Order (Property Notice and Certificate of Requirement Registration) Requirements

I hereby order the Owner to do or cause to be done the following under the authority of subsections 197(1) and 197 (2) of the Act:

7.1 Property Notice Requirement

For the reasons set out in the CPU and pursuant to the authority vested in me by subsection 197(1) of the Act I hereby order you and any other person with an interest in the Property, before dealing with the Property in any way, to give a copy of the CPU, including any amendments thereto, to every person who will acquire an interest in the Property as a result of the dealing,

7.2 Certificate of Requirement Registration

Within fifteen (15) days from the date of receipt of a certificate of requirement issued under subsection 197(2) of the Act completed as outlined in Schedule B register the certificate of requirement on title to the Property, in the appropriate land registry office.

7.3 Verification

Within five (5) days after registering the certificate of requirement provide to the Director a copy of the registered certificate and of the parcel register(s) for the Property confirming that registration has been completed.

Part 8: General Requirements

- 8.1 The requirements of the CPU are severable. If any requirement of the CPU or the application of any requirement to any circumstance is held invalid, such finding does not invalidate or render unenforceable the requirement in other circumstances nor does it invalidate or render unenforceable the other requirements of the CPU.
- 8.2 An application under subsection 168.6(3) of the Act to alter any terms and conditions in the CPU, or impose new terms and conditions, or revoke the CPU, shall be made in writing to the Director, with reasons for the request.
- 8.3 Failure to comply with the requirements of the CPU constitutes an offence.
- 8.4 The requirements of the CPU are minimum requirements only and do not relieve the Owner from, complying with any other applicable order, statute, regulation, municipal, provincial or federal law, or obtaining any approvals or consents not specified in the CPU.
- 8.5 Notwithstanding the issuance of the CPU, further requirements may be imposed in accordance with legislation as circumstances require.
- 8.6 In the event that, any person is, in the opinion of the Director, rendered unable to comply with any requirements in the CPU because of,
- a. natural phenomena of an inevitable or irresistible nature, or insurrections,
 - b. strikes, lockouts or other labour disturbances,
 - c. inability to obtain materials or equipment for reasons beyond your control, or
 - d. any other cause whether similar to or different from the foregoing beyond your control,
- the requirements shall be adjusted in a manner defined by the Director. To obtain such an adjustment, the Director must be notified immediately of any of the above occurrences, providing details that demonstrate that no practical alternatives are feasible in order to meet the requirements in question.
- 8.7 Failure to comply with a requirement of the CPU by a date specified does not relieve the Owner(s) from compliance with the requirement. The obligation to complete the requirement shall continue each day thereafter.
- 8.8 The Risk Management Measures identified in the Risk Assessment and also in Part 4 of the CPU and all the other requirements in the CPU shall commence upon the issuance of the CPU and continue in full force and effect in accordance with the terms and conditions of the CPU until such time as the Director alters or revokes the CPU.
- 8.9 The provisions of the CPU shall take precedence in the event of a conflict between the provisions of the CPU and the Risk Assessment.
- 8.10 In the event that the Owner complies with the provisions of Items 7.2 and 7.3 of the CPU regarding the registration of the certificate of requirement on title to the Property, and then creates a condominium corporation by the registration of a declaration and description with respect to the Property pursuant to the *Condominium Act, 1998*, S.O.

1998, c.19 and then transfers ownership of the Property to various condominium unit owners, the ongoing obligations of the Owner under this CPU can be carried out by the condominium corporation on behalf of the new Owners of the Property.

Part 9: Hearing before the Environmental Review Tribunal

With respect to those provisions relating to my authority in issuing a certificate of property use under section 168.6 and an order under section 197 of the Act:

- 9.1 Pursuant to section 139 of the Act, you may require a hearing before the Environmental Review Tribunal (the "Tribunal"), if within fifteen (15) days after service on you of a copy of the CPU, you serve written notice upon the Director and the Tribunal.
- 9.1 Pursuant to section 142 of the Act, the notice requiring the hearing must include a statement of the portions of the CPU and the grounds on which you intend to rely at the hearing. Except by leave of the Tribunal, you are not entitled to appeal a portion of the CPU, or to rely on a ground, that is not stated in the notice requiring the hearing.
- 9.2 Service of a notice requiring a hearing must be carried out in a manner set out in section 182 of the Act and Ontario Regulation 227/07: Service of Documents, made under the Act as they may be amended from time to time. The address, email address and fax numbers of the Director and the Tribunal are:

The Secretary
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, ON, M5G 1E5
Fax: (416) 326-5370
Email: ERTTribunalSecretary@ontario.ca

and

Tina Dufresne
Halton-Peel District Manager, Central Region
Ministry of the Environment, Conservation and Parks
4145 North Service Road, Suite 300
Burlington, ON L7L 6A3
Fax: (905) 319-9902
Email: Tina.Dufresne@ontario.ca

- 9.4 Unless stayed by the Tribunal under section 143 of the Act, the CPU is effective from the date of issue.

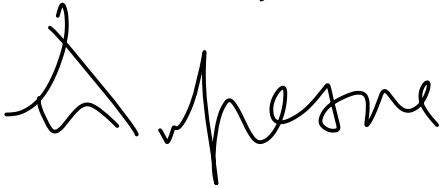
Further information on the requirements of the Tribunal regarding an appeal can be obtained directly from the Tribunal by:

Tel: (416) 212-6349

Fax: (416) 326-5370

www.elto.gov.on.ca

Issued on the 19th day of November, 2020.

A handwritten signature in black ink, appearing to read 'Tina Dufresne', with a stylized, cursive script.

Tina Dufresne
Director, section 168.6 of the Act

Schedule A

Contaminants of Concern, Property Specific Standards, and Capping Soil Concentrations

Media	Contaminants of Concern (COC)	Units	Property Specific Standards
Soil	Benzene	µg/g	3.5
Soil	Toluene	µg/g	10
Soil	Barium	µg/g	590
Soil	Selenium	µg/g	10
Soil	Thallium	µg/g	1.8
Soil	Vanadium	µg/g	120
Soil	Boron (HWS)	µg/g	17
Soil	Electrical Conductivity	mS/cm	3.1

SCHEDULE B

CERTIFICATE OF REQUIREMENT

s.197(2)

Environmental Protection Act

This is to certify that pursuant to Item 7.1 of Certificate of Property Use number 8343-BVHNF3 issued by Tina Dufresne, Director of the Ministry of the Environment, Conservation and Parks, under sections 168.6 and 197 of the *Environmental Protection Act*, on November 19, 2020, being a Certificate of Property Use and order under subsection 197(1) of the *Environmental Protection Act* relating to the property municipally known as 985 Hydro Road, Mississauga, ON L5E 1H3 being part of Property Identifier Number PIN 13485-0758 (LT), namely, PART OF LOT 7, CONCESSION 3, SOUTH OF DUNDAS STREET GEOGRAPHIC TOWNSHIP OF TORONTO, NOW IN THE CITY OF MISSISSAUGA, REGIONAL MUNICIPALITY OF PEEL, DESIGNATED BY PART OF PIN 13485-0758 (LT); SUBJECT TO EASEMENTS AS IN INSTRUMENT NUMBERS TT125865 AND TT141214, SUBJECT TO AN EASEMENT OVER PART OF PART 10, PLAN 43R-39219, AS IN INSTRUMENT NUMBER PR2974060, AND DESCRIBED AS AREA 2 ON A PLAN OF SURVEY PREPARED BY J. D. BARNES LIMITED, DATED OCTOBER 22, 2020, REFERENCE No. 16-30-917-03-H. (the "Property") with respect to a Risk Assessment and certain Risk Management Measures and other preventive measure requirements on the Property

LAKEVIEW COMMUNITY PARTNERS LIMITED

and any other persons having an interest in the Property, are required before dealing with the Property in any way, to give a copy of the Certificate of Property Use, including any amendments thereto, to every person who will acquire an interest in the Property.

Under subsection 197(3) of the *Environmental Protection Act*, the requirement applies to each person who, subsequent to the registration of this certificate, acquires an interest in the Property.

SCHEDULE C

Plan of Survey of Property prepared by J.D. Barnes Limited, October 22, 2020

Appendix F: Maximum Concentrations

Table 1: SOIL MAXIMUM CONTAMINANTS OF CONCERN

Area 2, 985 Hydro Road, Mississauga, Ontario

Contaminant	Units	Maximum Measured Concentration
Benzene	µg/g	3.2
Toluene	µg/g	8.6
Barium	µg/g	490
Selenium	µg/g	8.4
Thallium	µg/g	1.5
Vanadium	µg/g	100
Boron (HWS)	µg/g	14
Electrical Conductivity EC)	mS/cm	2.6

Notes:

Standards are Table 3 SCS for a residential/parkland/institutional land use with medium to fine textured soil.



243747

Table 2a: SOIL MAXIMUM CONTAMINANTS OF CONCERN

Area 3, 985 Hydro Road, Mississauga, Ontario

Contaminant	Units	Maximum Measured Concentration
PHC fraction F1	µg/g	510
PHC fraction F2	µg/g	8,700
PHC fraction F3	µg/g	23,000
PHC fraction F4	µg/g	7,000
Benzene	µg/g	1.4
Toluene	µg/g	2.8
Xylenes	µg/g	4.2
Acenaphthene	µg/g	11
Acenaphthylene	µg/g	<1.0
Anthracene	µg/g	2.1
Benzo(a)anthracene	µg/g	5.3
Benzo(a)pyrene	µg/g	3.2
Benzo(b/j)fluoranthene	µg/g	4.4
Benzo(k)fluoranthene	µg/g	1.7
Dibenz(a,h)anthracene	µg/g	0.71
Fluoranthene	µg/g	13
Indeno(1,2,3-cd)pyrene	µg/g	2.2
1- and 2-Methylnaphthalene	µg/g	72
Naphthalene	µg/g	<2.8
Phenanthrene	µg/g	16
Arsenic	µg/g	34
Beryllium	µg/g	52
Boron (HWS)	µg/g	7.52
Cadmium	µg/g	8.9
Cobalt	µg/g	28
Lead	µg/g	200
Mercury	µg/g	1.5
Molybdenum	µg/g	18
Selenium	µg/g	25
Thallium	µg/g	17
Vanadium	µg/g	112
Zinc	µg/g	1,500
Electrical Conductivity (EC)	mS/cm	2.5
Sodium Adsorption Ratio (SAR)	unitless	15
Polychlorinated Biphenyls	µg/g	25

Notes:

Standards are Table 3 SCS for a residential/parkland/institutional land use with medium to fine textured soil.
Maximum concentrations are subject to change based on additional sampling (if required by MECP) and soil movement within the larger property for site grading.

Table 2b: GROUNDWATER MAXIMUM CONTAMINANTS OF CONCERN

Area 3, 985 Hydro Road, Mississauga, Ontario

Contaminant	Units	Maximum Measured Concentration
PHC fraction F2	ug/L	1,800
PHC fraction F3	ug/L	1,600
Benzene	ug/L	15
Selenium	ug/L	131

Notes:

Standards are Table 3 SCS for a residential/parkland/institutional land use with medium to fine textured soil.

Maximum concentrations are subject to change based on additional sampling (if required by MECP) and soil movement within the larger property for site grading.



243747

Table 3: SOIL MAXIMUM CONTAMINANTS OF CONCERN

Area 4 985 Hydro Road, Mississauga, Ontario

Contaminant	Units	Maximum Measured Concentration
Electrical Conductivity (EC)	mS/cm	2.7

Notes:

Standards are Table 3 SCS for a residential/parkland/institutional land use with medium to fine textured soil.



243747

Table 4a: SOIL MAXIMUM CONTAMINANTS OF CONCERN		
Area 5A, 985 Hydro Road, Mississauga, Ontario		
Contaminant	Units	Maximum Measured Concentration
PHC fraction F1	µg/g	1,900
PHC fraction F2	µg/g	11,000
PHC fraction F3	µg/g	6,800
PHC fraction F4	µg/g	3,900
Benzene	µg/g	0.55
Toluene	µg/g	2.9
Ethylbenzene	µg/g	1
Xylenes	µg/g	7.9
Acetone	µg/g	1.6
Hexane	µg/g	0.68
Tetrachloroethylene	µg/g	0.061
Acenaphthene	µg/g	0.88
Acenaphthylene	µg/g	<0.2
Anthracene	µg/g	2.1
Benzo(a)anthracene	µg/g	3.7
Benzo(a)pyrene	µg/g	3.1
Benzo(b/j)fluoranthene	µg/g	3.6
Benzo(g,h,i)perylene	µg/g	2
Benzo(k)fluoranthene	µg/g	1.1
Chrysene	µg/g	2.9
Dibenz(a,h)anthracene	µg/g	0.5
Fluoranthene	µg/g	9.2
Fluoranthene	µg/g	0.98
Indeno(1,2,3-cd)pyrene	µg/g	2.4
1- and 2-Methylnaphthalene	µg/g	1.8
Naphthalene	µg/g	0.54
Phenanthrene	µg/g	7.5
Pyrene	µg/g	6.7
Antimony	µg/g	2.3
Arsenic	µg/g	70
Beryllium	µg/g	25
Boron (Total)	µg/g	43
Boron (HWS)	µg/g	6.5
Chromium	µg/g	71
Cobalt	µg/g	23
Copper	µg/g	99
Lead	µg/g	1,020
Molybdenum	µg/g	11
Selenium	µg/g	12
Silver	µg/g	0.84
Thallium	µg/g	1.1
Zinc	µg/g	360
Electrical Conductivity (EC)	mS/cm	2.9
Polychlorinated Biphenyls	µg/g	1.7
Notes:		
Standards are Table 9 SCS for a residential/parkland/institutional/industrial/commercial/community land use.		
Maximum concentrations are subject to change based on additional sampling (if required by MECP) and soil movement within the larger property for site grading.		

Table 4b: GROUNDWATER MAXIMUM CONTAMINANTS OF CONCERN

Area 5A, 985 Hydro Road, Mississauga, Ontario

Contaminant	Units	Maximum Measured Concentration
PHC fraction F1	ug/L	1,100
PHC fraction F2	ug/L	18,000
PHC fraction F3	ug/L	7,500
PHC fraction F4	ug/L	1,600
Benzene	ug/L	10
1,2-Dichloroethane	ug/L	0.79
1,4-Dichlorobenzene	ug/L	1.6

Notes:

Standards are Table 9 SCS for a residential/parkland/institutional/industrial/commercial/community land use.

Maximum concentrations are subject to change based on additional sampling (if required by MECP) and soil movement within the larger property for site grading.

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Table 5a: SOIL MAXIMUM CONTAMINANTS OF CONCERN

Area 5B, 985 Hydro Road, Mississauga, Ontario

Contaminant	Units	Maximum Measured Concentration
PHC fraction F1	µg/g	100
PHC fraction F2	µg/g	230
PHC fraction F3	µg/g	850
PHC fraction F4	µg/g	280
Benzene	µg/g	0.3
Toluene	µg/g	1.7
Ethylbenzene	µg/g	0.62
Xylenes	µg/g	5.1
Acenaphthene	µg/g	11
Fluoranthene	µg/g	0.2
1- and 2-Methylnaphthalene	µg/g	11
Naphthalene	µg/g	2.8
Phenanthrene	µg/g	3
Antimony	µg/g	11
Arsenic	µg/g	52
Barium	µg/g	290
Boron (Total)	µg/g	63
Cadmium	µg/g	7.1
Chromium	µg/g	87
Molybdenum	µg/g	4.9
Selenium	µg/g	87
Zinc	µg/g	1,500

Notes:

Standards are Table 9 SCS for a residential/parkland/institutional/industrial/commercial/community land use.
Maximum concentrations are subject to change based on additional sampling (if required by MECP) and soil movement within the larger property for site grading.

Table 5b: GROUNDWATER MAXIMUM CONTAMINANTS OF CONCERN

Area 5B, 985 Hydro Road, Mississauga, Ontario

Contaminant	Units	Maximum Measured Concentration
Benzene	ug/L	0.82

Notes:

Standards are Table 9 SCS for a residential/parkland/institutional/industrial/commercial/community land use.
Maximum concentrations are subject to change based on additional sampling (if required by MECP) and soil movement within the larger property for site grading.

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Table 6: SOIL MAXIMUM CONTAMINANTS OF CONCERN

Area 6, 985 Hydro Road, Mississauga, Ontario

Contaminant	Units	Maximum Measured Concentration
PHC fraction F1	µg/g	170
PHC fraction F2	µg/g	220
PHC fraction F3	µg/g	1,300
PHC fraction F4	µg/g	11,000
Benzene	µg/g	2.7
Toluene	µg/g	12
Ethylbenzene	µg/g	2.5
Xylenes	µg/g	19
Acenaphthene	µg/g	0.27
Acenaphthylene	µg/g	<0.10
Anthracene	µg/g	0.73
Benzo(a)anthracene	µg/g	1.1
Benzo(a)pyrene	µg/g	0.87
Benzo(b/j)fluoranthene	µg/g	1
Dibenz(a,h)anthracene	µg/g	0.13
Fluoranthene	µg/g	2.6
Fluoranthene	µg/g	0.42
Indeno(1,2,3-cd)pyrene	µg/g	0.49
1- and 2-Methylnaphthalene	µg/g	7.3
Naphthalene	µg/g	2.8
Phenanthrene	µg/g	2.4
Pyrene	µg/g	2
Antimony	µg/g	2.2
Arsenic	µg/g	89
Barium	µg/g	440
Beryllium	µg/g	3.1
Boron (Total)	µg/g	89
Boron (HWS)	µg/g	2.5
Molybdenum	µg/g	4.8
Selenium	µg/g	5.5
Thallium	µg/g	1.5
Uranium	µg/g	3
Zinc	µg/g	580

Notes:

Standards are Table 1 SCS for a residential/parkland/institutional/industrial/commercial/community land use.

Maximum concentrations are subject to change based on additional sampling (if required by MECP) and soil movement within the larger property for site grading.

Appendix G: City of Mississauga - Topsoil and Finish Grading Document

PART I - GENERAL**1.1 Description**

1. This Section specifies the requirements for topsoil, construction of topsoil fills, placement of topsoil, construction of soccer field soil mixes and fine grading within the tolerances for finished surfaces.

1.2 Related Work

1. Environmental Protection: Section 01560
2. Site Preparation, Demolition and Removals: Section 02070
3. Site Protection: Section 02104
4. Site Clearing and Disposal: Section 02111
5. Rough Grading: Section 02211

1.3 References

1. General Specifications for Management and Disposal of Waste: OPSS 180
2. Construction Specification for Grading: OPSS 206
3. Construction Specification for Compacting: OPSS 501
4. Construction Specification For The Protection of Trees: OPSS 565
5. Construction Specification for Topsoil: OPSS 570
6. Material Specifications for Aggregates - Miscellaneous OPSS 1004
7. Material Specifications for Aggregates - OPSS 1010

1.4 Scope of Work

1. Furnish all labour, materials and equipment necessary to test for and provide proper soil conditions for the intended purposes, construct and fine grade the finished grade and finished surfaces of the site all in accordance with the lines, grades, levels and dimensions shown on the drawings and in accordance with the construction details and specifications herein.
2. The work may involve soil and existing turf renovations including fine grading.
3. Coordinate work in this section with work in all other sections.
4. The Contractor is responsible for providing all site layouts required for the execution of the Work including grade stakes indicating finished elevations on the site.

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5. When the work is governed by City control benchmarks or is governed by working drawings illustrating elevations and surface contours for establishing vertical control on the site or involves the installation of underground services, final approval of the finished grade by the City will require the Contractor to submit a grading certificate, stamped by a certified O.L.S., verifying that all finished grades are in accordance with the approved working drawings and grade controls.

1.5 Product Delivery, Storage and Handling

1. All materials delivered to the site shall be stored in a dry weatherproof storage place, and shall be protected from damage by heat, moisture, rodents or weather until the time of installation.
2. Deliver and store fertilizer, lime, sulphur and any other soil amendments or additives in waterproof bags showing weight, analysis and name of manufacturer. Review storage areas for approval by the Community Services Representative prior to delivery of materials to the site.
3. Use imported topsoil or topsoil mixes as specified and as per drawings and details.

1.6 Job Conditions

1. All work in this section shall be undertaken in suitable weather conditions and at a time that is approved by the Community Services Representative.
2. Schedule working of topsoil and finished grading to permit sodding and planting operations under optimum conditions.
3. Schedule applications of soil amendments in accordance with the project soil testing analysis and report and ensure all conditions for placement prior to placing sod or after placing sod are met. All soil amendment applications are to be performed in the presence of the Community Services Representative.
4. All ice and snow shall be removed from any active portion of the work area. Frozen earth materials shall not be incorporated into grading. Materials shall not be placed over either frozen earth or ice surfaces.
5. Fine Grading - Developer Sites: Where the work involves construction of park sites which have been previously pre-graded with topsoil by others or have been pre-graded and have existing topsoil stockpiles located on site intended for use at the site, the Work shall involve:
 - i. Survey verification of existing topsoiled or pre-graded condition and site grading to determine that the grades are within working tolerances.
 - ii. Report any discrepancies to the Community Services Representative prior to commencing work.
 - iii. Commencement shall denote acceptance of the conditions and no additional claims for compensation by the Contractor will be permitted.
 - iv. The Contractor shall be required to perform fine grading in accordance with the specifications drawings and details. Fine grading may involve grade adjustments or topsoil filling of up to 100mm to suit the final grading requirements and drawings.

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- v. Carry out fine grading work in accordance with the specifications herein and as directed by the Community Services Representative.
- vi. Existing site topsoil stockpiles may require incorporation into the site including loading, hauling placement, spreading and fine grading in accordance with the specifications drawings and details.
- vii. Deficiencies in topsoil quantities shall be supplemented by importing topsoil.
- viii. The prices bid in the Schedule of Contract Items and Prices shall be submitted and include for the above.

1.7 Quality Assurance

1. Constructed earth fills, placed fill and sub-bases incorporated into the Work to be tested for compaction to latest ASTM D698-00ae1 for Standard Proctor Maximum Dry Density by an independent Geotechnical testing Consultant provided by the Contractor. Provide adequate notice to permit scheduling of testing operations. Ensure work is ready for testing procedures.
2. In utilizing site topsoil for the work, the Contractor accepts all responsibility for satisfying the provisions, conditions and specification requirements to provide topsoil surfaces which are free of stone, rubble and debris and any other deleterious materials and capable of sustaining healthy and vigorous growth as required by the intended use of the Contract works.
3. All topsoil whether stockpiled on site or stripped and stockpiled from the site or re-graded from its original state and location or imported to the site shall be tested. Arrange and pay for testing to be carried out by a reputable independent testing company and a Soil Fertility Specialist as approved by the Community Services Representative. Test for clay, sand and silt content (percentage and particle size), dry density, drainage coefficient, growth inhibitors, soil sterilants, trace elements, Atrazine, N.P.K., Mg., soluble salt contents, organic matter content and pH value.
4. Schedule topsoil testing well in advance to permit finished grading and the application of soil amendments required by the testing analysis and recommendations to occur without delay and under the recommended schedule for application. Alterations to the recommended schedule and timing for application of soil nutrient and amendments due to delays by the Contractor in coordinating the required testing in advance of the topsoil operations will not be accepted.
5. Provide a minimum of 3 test samples for existing stripped site topsoil and 5 test samples for imported topsoil from each topsoil source. Obtain recommendations for the quantities, application rates, and type of fertilizers needed to eliminate the deficiencies for the intended use made evident by the testing.
 - i. Stockpile approved imported topsoil on site in a designated area and perform testing a second time to meet the conditions indicated above. The on site testing to verify the delivered material meets the requirements for topsoil requires a minimum of 2 test samples.
6. Communicate the intended use of the topsoil to the testing laboratory. Clearly itemize all differing landscape areas, naturalization or sports field uses to ensure thorough analyses for the intended uses.

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7. Submit the results of soil testing and fertilizer recommendations to the Community Services Representative for review and approval before commencing with the installation work.
8. Do not use topsoil from a new source until it has been tested and approved for use in accordance with the procedures above.
9. Provide topsoil results at least 3 weeks prior to delivery to the site of imported topsoil.
10. Provide existing site topsoil results at least 1 week prior to installation.
11. Be responsible for and make allowances for adjusting topsoil to meet the above requirements.
12. The following Agronomic Service is pre-approved for use as a testing agency for all specific tests indicated above:
 - i. DCS Turf & Soil Fertility Specialists
Attention: David Smith
185 Oriole Crescent, Gravenhurst, ON
Tel: 705-687-7645, Fax: 705-687-3518

1.8 Warranty and Replacement

1. Warranty all material and workmanship in this section from slipping, sinking, eroding, or any other change in grade for a period of one year from date of the Substantial Performance of Work.

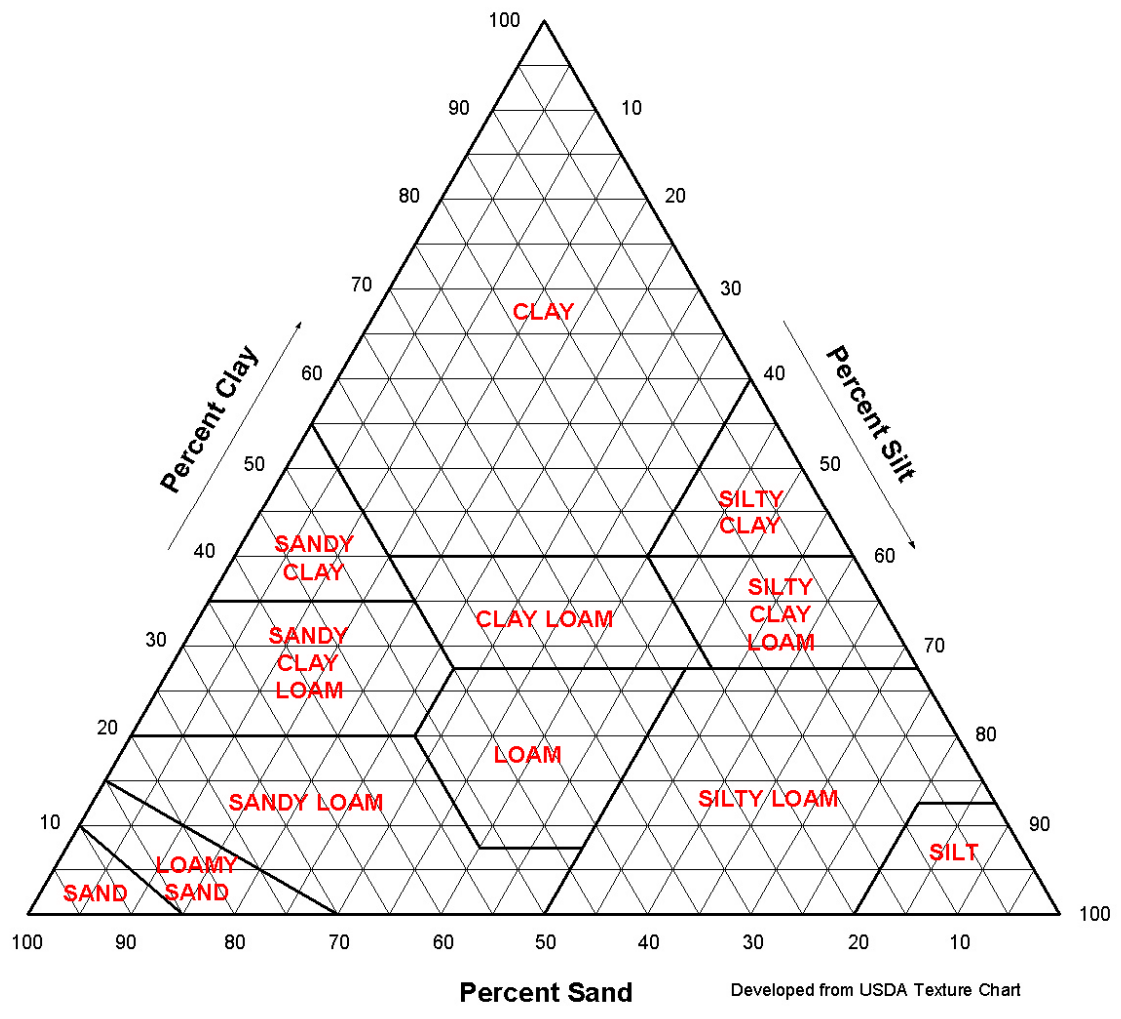
PART II - PRODUCTS

2.1 Materials

1. Existing Topsoil - Redevelopment Sites: Where the work involves the redevelopment of existing park sites in part (i.e. playground redevelopments), that are sodded and designated for site demolition, the existing site topsoil shall be used for work of this section. Deficiencies in topsoil quantities shall be supplemented by importing topsoil.
2. Existing Topsoil - Developer Sites: Where the work involves construction of park sites which have been previously pre-graded with topsoil by others or have existing topsoil stockpiles located on site, the existing site topsoil shall be used for work of this section. Deficiencies in topsoil quantities shall be supplemented by importing topsoil.

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3. Imported Topsoil: A fertile, friable, natural loam; (specification as defined by the USDA Soil Textural Chart) containing between 4% and 8% organic matter, and capable of sustaining vigorous plant growth, free of subsoil contamination, roots and stones over 25mm diameter, free of weeds (as determined by the Community Services Representative), having a pH ranging from 6.0 to 7.0. and containing less than 25% content of clay and less than 40% content of silt (with the remainder sand and organic matter). (See USDA Soil Textural Chart below for texture definitions). All topsoil shall be screened using a maximum 35mm (1 ½") size screen. This applies to all topsoil whether acquired from the job site or imported from off site.



4. Topsoil Mixes (excluding planting soils)

- i. Type 1 Topsoil Mix
 - a) 50% Topsoil Base
 - b) 50% Brick Sand
- ii. Type 2 Topsoil Mix
 - a) 20% Topsoil
 - b) 80% Brick Sand
- iii. Type 3 Topsoil Mix
 - a) 30% Topsoil

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- b) 50% Brick Sand
 - c) 20% Peat Moss
- iv. Brick Sand: as supplied by D&L Robinson Sand & Gravel 519-940-9273 or approved equal. Provide 1m³ sample on site for approval by the Community Services Representative prior to making full order. Provide physical analysis report containing confirmation that the sand mix meets the USGA specifications and including Particle Size Analysis, Sand Fractions, Soil Moisture Measurements, Soil Pore Space, and Soil Density.

a) USGA SPECIFICATIONS:

SAND PARTICLE SIZE		
Name	Particle Diameter	Recommendation (by weight)
Fine Gravel	2.0 - 3.4 mm	Not more than 10% of the total particles in this range, including a maximum of 3% fine gravel (preferably none)
Very coarse sand	1.0 - 2.0 mm	
Coarse sand	0.5 - 1.0 mm	Minimum of 60% of the particles must fall in this range
Medium sand	0.25 - 0.50 mm	
Fine sand	0.15 - 0.25 mm	Not more than 20% of the particles may fall within this range
Very Fine Sand	0.05 - 0.15 mm	Not more than 5%
Silt	0.002 - 0.05 mm	Not more than 5%
Clay	less than 0.002 mm	Not more than 3%
Total Fines	Very fine sand + silt + clay	Less than or equal to 10%
Total Porosity	35% - 55%	
Air-filled Porosity	15% - 30%	
Capillary Porosity	15% - 25%	
Saturated Conductivity	30-60 cm/hr	

5. Peat Moss: Derived from partially decomposed fibrous or cellular stems and leaves of species Sphagnum Moss. Elastic and homogeneous in colour. Free of wood and deleterious materials which could inhibit growth and of a shredded particle size minimum 5mm.
6. Fertilizer: TurfMaize Organic Fertilizer 10-0-0 with Corn Gluten Meal: Supplied by Environmental Factor Inc. 8-133 Tauton Road West, Oshawa, ON 905-571-5047, or approved equal. Include in the prices bid for a minimum of one application of TurfMaize Organic Fertilizer over the entire site during optimum conditions and season. Additional soil amendment fertilizers as per Soil Fertility Specialist recommendations and results of topsoil testing agency.
7. Limestone: Ground agricultural limestone containing minimum 85% of total carbonates. Gradation requirements: percentage passing by weight - 90% passing 1.0mm sieve, 50% passing 0.125mm sieve.
8. Sulphur: Finely crushed agricultural elemental sulphur, free of impurities.
9. Bonemeal: Raw steamed bonemeal, finely ground with a minimum analysis of 3% nitrogen and 20% phosphoric acid.
10. Soil Mulches and Organic Amendments: Mulches are restricted to paper and wood residues. Organic amendments may include manure, compost or sewerage sludge.

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PART III - EXECUTION

3.1 General

1. The Contractor shall submit independent soil tests to Community Services Representative prior to acceptance of topsoil. Should the existing native topsoil not meet the requirements herein, imported topsoil will be used or the native topsoil will be amended, prior to planting, to meet the above specifications and in accordance with the soils analysis. Do not commence work until topsoil has been tested and the recommendations have been reviewed and approved by the Community Services Representative.
2. Be responsible for making soil adjustments and amendments to existing native or imported topsoil in accordance with the specifications herein and the requirements for soil testing reports and recommendations. Make allowances for soil adjustments and amendments in the prices bid for the Work contained in the Schedule of Contract Items and Prices.

3.2 Preparation

1. Grade subgrade, eliminating uneven areas and low spots, ensuring positive drainage. Remove debris, roots, branches, stones in excess of 25 mm diameter, and other deleterious materials. Remove subsoil that has been contaminated with oil, gasoline, calcium chloride or any other deleterious elements. Dispose of removed materials off site.
2. Cultivate and scarify entire area which is to receive topsoil to depth of 75 mm. Repeat cultivation in those areas where equipment used for hauling and spreading has compacted the subgrade.
3. Schedule meeting and review prepared rough grade with the Community Services Representative prior to spreading any topsoil.

3.3 MERI Crushing and Rototilling – Renovations

1. When required by the Work in accordance with the drawings and details provide mechanical equipment to pulverize and prepare existing soils for replanting. Use MERI Crushers capable of pulverize the hardest soils to a minimum depth of 250mm (10"). Supplement crushing operation with drag type rototillers and scarifiers to provide a broken down soil particle size that is well macerated and consistent.
2. Remove debris, roots, branches, stones in excess of 25 mm diameter, and other deleterious materials.
3. Fine grade and blade prepared area in accordance with the drawings and as directed by the Community Services Representative to blend into the existing and surrounding drainage patterns and consolidate grades. Compact grades to 90% SPD.
4. Avoid using equipment that will over compact and modify the texture of the prepared soils.

3.4 Spreading of Topsoil

1. Spread topsoil stockpiled on site or stripped and stockpiled from the site only after the Community Services Representative has inspected and approved prepared rough grade.

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2. Spread imported topsoil or topsoil mixes only after the Community Services Representative has inspected and approved prepared rough grade
3. Topsoil that has been spread prior to the rough grade approval by the Community Services Representative may be subject to removal and reinstallation to permit the specified inspection and approval to be conducted. All associated costs to correct or to verify the rough grade preparation including any removal and reinstallation will be borne by the Contractor.
4. Spread topsoil with adequate moisture in uniform layers over prepared subgrades or backfill only during dry weather when conditions are dry and unfrozen.
5. Unless otherwise indicated apply 150 mm minimum layer of topsoil (measured after compaction) to all park surfaces intended for sodding, seeding, planting, or naturalizing (excluding planting pit and planting beds)
6. Keep topsoil below finished grade for sodded areas to allow for thickness of sod after placement and compaction.
7. Manually spread topsoil around trees and obstacles where necessary to prevent damage.
8. Notification of fertilizer application to be given to the Community Services Representative a minimum of 48 hours prior to work commencing.
9. Work fertilizers or soil amendments based on recommendations of the topsoil test reports into the top 100mm of the topsoil.
10. Apply fertilizer in the presence of the Community Services Representative and as per soil test results, fertility specialist recommendations and manufacturer's recommendations. Fertilizer to be distributed evenly into the topsoil by discing, raking or harrowing a minimum of 48 hours prior to laying of sod or as directed otherwise by the soils analysis.

3.5 Soccer Fields Spreading and Fine Grading

1. Sand/Topsoil Mix:
 - i. Use Sand/Topsoil Mix as per topsoil specifications and as indicated on drawings and details.
 - ii. Do not spread sand/topsoil mixture until sand base is approved by the Community Services Representative.
 - iii. Spread sand/topsoil mixture to a uniform depth of over the entire soccer field area as per drawings and specifications. Compact to 90% S.P.D. or as per drawings.
 - iv. Install irrigation system prior to fine grading when called for on drawings.
 - v. Fine grade topsoiled area to contours and elevations indicated on drawings. Leave surface smooth, uniform, firm against footprints with a fine loose texture.

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- vi. Fine grading shall be completed and trimmed to the specified lines and levels to a vertical tolerance of 12mm +/- (1/2") under a 3.0m (10') straight edge. Should the Contractor exceed these tolerance he shall bring the grades and lines of all surfaces within the specified tolerance at his own expense.
- vii. The Completed grade shall be uniform with no inconsistencies or irregularities in the finished surface. Final grade to be approved by the Community Services Representative prior to sodding or seeding.

3.6 Construction of Earth Fills

- 1. Where designated on the drawings or when directed by the Community Services Representative the Contractor shall construct landscape fill areas (sodded, seeded or planted) with topsoil to finished grade in accordance with the contours and elevations shown on the drawings or in accordance with the directions provided by the Community Services Representative.
- 2. Fine grading of earth fills shall be completed and trimmed to the specified lines and levels to a vertical tolerance of 25mm +/- . Should the Contractor exceed these tolerance he shall bring the grades and lines of all surfaces within the specified tolerance at his own expense.
- 3. Where the subgrade is to be raised with topsoil greater than the specified 150mm topsoil depth, place and compact topsoil in progressive lifts of 150mm and compact each lift to 90% SPD.
- 4. The Completed grade shall be uniform with no inconsistencies or irregularities in the finished surface. Final grade to be approved by the Community Services Representative prior to sodding or seeding.

3.7 Finish Grading

- 1. Fine Grade mechanically and by hand, all work areas to the contours and elevations as indicated on the drawings or in accordance with the directions provided by the Community Services Representative with allowances for depths of materials to be installed above the fine grade. Eliminate rough spots and low areas to ensure positive drainage. Make all grade transitions smooth, consistent and uniform.
- 2. Fine grading shall be completed and trimmed to the specified lines and levels to a vertical tolerance of 25mm +/- . Should the Contractor exceed these tolerance he shall bring the grades and lines of all surfaces within the specified tolerance at his own expense.
- 3. Fine grade and loosen topsoil. Eliminate rough spots and low areas to ensure positive drainage. Prepare loose friable bed by means of cultivation and subsequent raking.
- 4. Roll to consolidate topsoil for areas to be grassed leaving surface smooth, uniform, clean from sticks and stones over 25mm in diameter, firm against deep foot printing, and with a fine loose texture. Roll topsoil with a 50kg roller to compact and retain surface. Finished depth of prepared topsoil to be minimum 150mm for all general areas of the project, and/or deeper if specified for specialty sports fields as indicated on the drawings.
- 5. The Completed grade shall be uniform with no inconsistencies or irregularities in the finished surface.

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6. Finished grades for topsoil to be approved by the Community Services Representative prior to fertilizing, sodding or seeding.
7. Sodding/seeding that has been installed prior to the finished grade approval by the Community Services representative may be subject to removal and reinstallation to permit the specified inspection and approval to be conducted. All associated costs with the removal and reinstallation will be borne by the Contractor. All cost for verifying, checking and certifying that the grades have been installed in accordance with the approved working drawings are to be included in the prices bid for the Work.
8. Record surveyed as-built information in preparation for grading certificate as required by the nature of the work.

3.8 Testing

1. Inspection and testing will be required of all materials and works as called for in the technical specification sections and is the responsibility of the Contractor. The testing Consultants will be required to provide quality control of the Work and all materials incorporated into the Work to ensure compliance of the work with the requirements of the drawings, details and construction specifications.
2. In addition to the technical specifications for testing of the work of this section the following shall apply:
 - i. Compaction testing required by the work of this section shall be performed:
 - a) at no less than a 30m grid for cross section construction for pavements or hard landscape areas;
 - b) at no less than a 20m grid for cross section construction for sportsfields;
 - c) at no less than a 50 m grid for cross section construction for general soft landscape areas;
 - d) at no less than 10 lineal metre intervals for cross section and backfill construction for all service trenching;
 - e) at no less than 20 lineal metre intervals for cross section construction for all pathway and walkways;
 - f) for each lift and change in material cross section of the grade or base being constructed at the same applicable spacing specified above;
 - g) foundation work to be site and structure specific to be determined on site;
 - ii. The Contractor shall provide proof rolling in the presence of the Geotechnical Consultant. Additional compaction testing may be required depending on the results of the proof rolling and the review and recommendations of the Geotechnical Consultant.
3. The Community Services Department reserves the right to have additional soil compaction tests undertaken to verify compliance with the drawings and specifications

3.9 Maintenance

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1. Maintain all grades until final acceptance of completed parks works. Avoid damaging completed finished grades including that of subtrades accessing the site.
2. Maintenance shall include all filling and regrading to retain grades at required elevations.

3.10 Clean up

1. Promptly as the work proceeds and upon completion, clean up and remove from the site rubbish and surplus material resulting from the work in this section.
2. Any areas which have been rutted, damaged or disturbed are to be reinstated to the condition required by the specification without delay. The method of repair will be to the discretion of Community Services Department to ensure the site is restored to no less than the approved condition.
3. Surplus and excavated materials shall be removed immediately from site by the Contractor.
4. Spills and over filling shall be cleaned and removed without delay from work areas and any other surfaces around the work site.
5. Coordinate and verify that all related work in other sections has been completed and that all trades still requiring access to the site will not disturb the completed fine grades. Ensure the construction access for remaining operations is clearly understood and all damage including over compaction caused by equipment required to access the construction is corrected to meet specifications.

END OF SECTION 02212