

Proposed Residential Development

Audrey Meadows Ltd.

Township of Puslinch

**FUNCTIONAL SERVICING AND
STORMWATER MANAGEMENT REPORT**

June, 2021

A2680C



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1.0 Introduction

Triton Engineering Services Limited (TESL) has been retained by Audrey Meadows Ltd. to prepare a Functional Servicing and Stormwater Management Report (FSR) in support of an Official Plan Amendment (“OPA”) application and a Zoning By-Law Amendment (“ZBA”) application by Audrey Meadows Ltd. to round out/infill a rural settlement in the Township of Puslinch (“Township”). This report is intended to demonstrate the functionality and the conceptual framework for sanitary sewage and water servicing, and storm drainage prior to detailed design that will take place later on in the approval process.

The Applicant, successfully developed the residential property to the south of this parcel. The proposed development would include residential and open space/greenspace uses. The proposed development is located on the north side of the original development with a total property area of approximately 13 ha. The proposed development lands are bounded by an existing residential neighbourhood to the south, a wooded area to the west, agricultural lands to the north, and Victoria Road to the east. See Drawing 01 for the site location and adjacent uses.

The FSR should be read in conjunction with all other technical studies prepared and filed in support of the Planning Act applications.

2.0 Existing Conditions

The majority of the parcel had previously been used for agricultural purposes, with the western and northern boundaries being Environmental Protection lands. The existing subdivision to the south is a 48 lot subdivision, with lots ranging in size from 0.3 to 0.5 ha in size. This subdivision is serviced by private individual wells and private individual septic systems. The development setbacks from natural features have been established and are detailed in the supporting EIS prepared by Lincoln Environmental Consulting Group.

In general, the lands to be developed slope from the highpoint in the north towards the west and south, directing overland flows in both a western and southeastern direction. Geodetic onsite elevations range between 332m to 343m and the site lies within the GRCA watershed.

Geotechnical Investigations and Hydrogeological Investigations undertaken by Naylor Engineering for existing adjacent subdivision have identified that the underlying soils consist of a layer of topsoil over the overburden consisting of topsoil, overlying native deposits of silt, sand, sand and gravel, and glacial till. Stabilized groundwater table occurs at 1 to 6 m below existing grade, and the horizontal hydraulic gradient is from the north to the south. It is anticipated that the conditions of the proposed development area will be similar, however, this will be confirmed with additional geotechnical work as part of detailed design.

3.0 Proposed Land Use

The proposed development consists of approximately 29 residential lots each a minimum 0.3 hectares in size, a stormwater management block and ecological buffers. Roads will be a typical urban configuration utilizing storm sewer and curb/gutter. Private servicing (i.e. wells and septic systems) will be utilized for this development. Drawing 02 – “Proposed Residential Development Concept Plan” provides a general overview of the proposed development. Access to the

development will be provided by an extension of Old Ruby Lane on the south side of the development, and a connection to Victoria Road on the east side of the development.

4.0 Sanitary Servicing

The subdivision is to be serviced by private individual septic systems with tertiary (nitrate) treatment to improve effluent quality. The proposed minimum 0.3 ha lots provides for ample room to accommodate the proposed tertiary treatment sanitary systems in compliance with Ontario Building Code regulations. Preliminary design and confirmation of feasibility will be provided by supporting geotechnical information under separate cover.

5.0 Water Servicing

The subdivision is to be serviced by private individual wells. Preliminary background information and experience with the adjacent development indicates there is sufficient quantity and quality of potable water available to service this proposed development. The proposed 0.3 ha lots provides for ample room to accommodate the proposed well and ensure no interference with existing wells in proximity and proposed wells within the future development itself.

6.0 Stormwater Management and Site Drainage

6.1 Design Criteria

Site drainage and the management of stormwater from the site will comply with the policies and standards of the GRCA, MECP and the Township of Puslinch.

The stormwater management (SWM) strategy is to mitigate potential impacts of the development on the downstream storm drainage system. As such the following SWM criteria are proposed:

- Water Quantity Control of post development flows to pre-development flows up to and including the 100-year event.
- Quality Control: Enhanced treatment (80 percent suspended solids removal) prior to release into the existing municipal outlet.
- Storm sewers within the development designed to collect/convey the 5-year storm.
- Optimal 2% minimum lot grading slopes.
- Road Profile design to convey major overland flow toward the SWM pond with maximum depth of low points no greater than 300mm.
- Sediment and Erosion control measures to be implemented prior to and during construction until the site is established.

6.2 Existing Drainage

The existing drainage patterns for the development were established via topographic survey and are illustrated on Figure 1 - "Pre Development Storm Drainage Area Map". In general, the lands to be developed currently slope from the north toward the west and south, directing overland flows in both directions as sheet flow. The western flow is directed to a wooded area, while the south

flow is directed to the rear of the existing residential lots and to the Victoria Road ditch.

6.3 Proposed Drainage and SWM Strategy

Approximately 85% of runoff from the site will be conveyed to the proposed SWM Facility (SWMF) at Block B of the proposed development via overland swales, sewer and roads. See Figure 2 - "Post Development Storm Drainage Area Map" for the proposed catchments.

Catchment 201, which includes all roads as well as the lots east of the Old Ruby Lane extension will be conveyed to the SWM facility. The flows from the SWMF will discharge to the Victoria Road ditch.

The remaining lots along the western side of the development will not be directed to the SWMF due to topography constraints. This area will generate runoff that primarily originates from roof tops and landscaped lands. Given this, the SWM strategy will be to provide sheet runoff over the rear of the lots westerly to the wooded area, thereby providing polishing and promoting infiltration.

The overall imperviousness on the proposed development is estimated to be approximately 20%.

Given the configuration of the development (i.e. low density residential) and the suitability of the site for infiltration (i.e. medium/high porosity soils), a SWM strategy which includes lot level and conveyance controls is proposed. A summary of the SWM strategy is provided below:

- Site grading will maintain runoff characteristics to the extent possible.
- Infiltration volumes and distribution will be maintained through the use of soak-a-way pits connected to roof leaders.
- A "treatment train" approach for quality treatment will be provided incorporating grassed swales, filter strips and an end-of-pipe Dry Pond facility.
- The Dry Pond facility is proposed since the minimal runoff volume expected off the site is unlikely to support a wet configuration. An Oil Grit Separator is proposed instead of a standard wet forebay for the same reason.
- Based on the low impervious level of the proposed development, the natural attenuation resulting from the proposed land use change (i.e. row crops to grassed), and the implementation of the lot level and conveyance controls, the need to provide quantity control for this development is minimal. Despite this, a Dry Pond facility is proposed in Block B to provide additional attenuation of peak flows.
- Provide sediment and erosion controls which will contain sediment on site during construction.

The proposed SWM strategy is consistent with the recommendations of the Mill Creek Subwatershed Study and the GRCA.

6.4 Hydrologic Model

A MIDUSS, hydrologic modelling software, was used to estimate runoff peak flow rates and volumes for the 5-year, 25-year and 100-year return period design storms for both existing and preliminary proposed conditions. The hydrologic modelling will be updated subsequent to Draft Plan Approval as part of detailed design once additional details of the development and SWM design are available. The purpose of the current hydrologic model is to determine the storage

requirements and outlet configuration of the SWMF to attenuate the difference in peak flow between proposed and existing conditions, thereby allowing for the preliminary sizing of the SWM Block. Output files detailing the MIDUSS results have been included in Appendix B.

6.5 Quantity Control

The Quantity Control goal for this development is to control proposed conditions (post development) peak flow runoff rates to below existing conditions (pre-development) rates. SWM design details/calculations, in accordance with MECP design guidelines presented in the Stormwater Management Planning and Design Manual (March 2003), are provided in Appendix A.

In accordance with the Township of Puslinch Municipal Development Standards, design storm events (2 to 100-year) were generated using a 3-hour Chicago rainfall distribution and were based on the City of Guelph IDF curves. The design storm parameters were extracted from Table 1 of the Guelph Development Engineering Manual (Version 2.0, 2019). The rainfall data was inputted into MIDUSS to generate the 3-hour design storm depths listed in Appendix A. It should be noted that the Guelph IDF parameters produce greater rainfall depths than those generated by the MTO IDF Curve Lookup Tool for the 3-hour design storm. For consistency and to be conservative, only the Guelph 3-hour Chicago storm was modelled, as specified in the Township of Puslinch standards.

As per the Puslinch Development Standards, the SWMF will be designed to also safely convey the Regional (Hazel) event.

MIDUSS hydrologic modeling software was utilized to determine the conceptual pre-development and controlled post-development run-off flow rates for the 5, 25 and 100-year events, as summarized in Table 1. All applicable catchment data, rainfall data, and MIDUSS input parameters for the SCS Infiltration Method of hydrology have been included in Appendix A. Note that the SWMF has not entered detailed design phase, and thus the SWMF configuration and sizing is considered preliminary. Detailed design of the facility will be completed subsequent to Draft Plan Approval. However, it has been conservatively estimated that the SWM Dry Pond will have a bottom area of 1,000m² with 4:1 side slopes. This is in accordance with Table 4.8 of the 2003 Stormwater Management Planning and Design Manual.

Table 1 – Peak Outflow Modelling Summary						
Event	Pre-Development (m ³ /s)			Post Development (m ³ /s)		
	Victoria Road	Southwesterly Wetland/Woodland	Total	Victoria Road	Southwesterly Wetland/Woodland	Total
5-Year	0.113	0.113	0.226	0.019	0.066	0.085
25-Year	0.311	0.305	0.616	0.103	0.101	0.204
100-Year	0.563	0.544	1.107	0.125	0.161	0.286
48-Hour Hazel	1.062	0.834	1.896	1.566	0.351	1.917

Based on the modelling results the SWM facility will require an approximate 2,600 m³ volume covering an area of 2,200 m². This facility can be accommodated within the proposed 0.58 ha

block providing sufficient space for maintenance access and landscaping. It should be noted that this preliminary SWM design provides a significant decrease in post development flow directed to the Victoria Road ditch.

6.6 Quality Control

As per MECP and GRCA requirements, Enhanced Treatment (i.e. 80 percent suspended solids removal) is applicable for development of the site, which will be provided by a treatment train approach including grassed swales, an Oil Grit Separator in lieu of a wet forebay, a Dry Pond facility to provide polishing and settling of solids. Preliminary design has been completed to ensure Block B is large enough to accommodate the eventual SWMF. This design includes a two-stage outlet and an Active Storage volume of at least 939m³ for quality treatment, in accordance with Table 3.2 of the 2003 SWM Planning and Design Manual. Details are included in Appendix A. The detailed design of the facility will be completed subsequent to Draft Plan Approval.

7.0 Utilities

Utility servicing to the proposed development will consist of natural gas, hydro and communications. Providers of each of these utility services have plant adjacent to the development. Coordination for expanding the services into the development will commence as the development approval process proceeds. Utilities will be constructed in a joint utility trench that follows the road alignment to provide service to each lot within the development.

8.0 Sediment and Erosion Control

Prior to commencing earthworks on the site, silt fence will be erected at strategic locations around the perimeter of the site to contain sediment laden runoff on site. Following rough grading of the site and construction of the storm drainage system, additional controls will be installed to ensure that sediment is contained and erosion minimized.

Controls may include the following:

- Cut-off swales
- Filter berms
- Silt fencing
- Straw bale checks
- Sedimentation basin

A detailed Sediment and Erosion Control Drawing will be completed as part of detailed design once grading details for the development have been finalized.

It is intended to utilize the proposed SWM facility as a sediment basin until the site has been stabilized.

9.0 Conclusions

Based on the information provided within this Functional Servicing Report, we conclude that the Proposed Residential Development can be adequately serviced as outlined in this report. The Summary is as follows:

- The site can be accessed via two entrances; new Victoria Road entrance and a road extension from Old Ruby Lane. Internal roads will be constructed to Township of Pulinch municipal standards for an urban local road on a 20m Right-of-Way.
- Private sanitary treatment systems including tertiary (nitrate) treatment can be adequately accommodated on the proposed large lots. Preliminary geotechnical background information indicates that site conditions are suitable for septic sewage systems.
- Private wells are proposed for water servicing of the development. The lot configurations are sufficient to adequately accommodate a well on each lot. Preliminary hydrogeologic background information indicates that site conditions are suitable to provide adequate potable water for the proposed development.
- The development can be fully serviced with natural gas, hydro, cable and telecommunications.
- Stormwater management controls will be implemented to provide both quality and quantity control, thereby mitigating any potential negative impacts to the existing drainage system. The proposed SWMF Block is sufficient to accommodate the foot print of the proposed facility that will have the capacity to provide Quality treatment and to attenuate post to pre development storm events up to the 100-year event.

Respectfully Submitted By,

TRITON ENGINEERING SERVICES LIMITED



Ray D. Kirtz, P. Eng.

APPENDIX A
Stormwater Management Design Calculations

Design Storm Parameters per Table 1 of the Guelph Development Engineering Manual Version 2.0 (2019)				
Scenario	a	b	c	3-Hour Depth (mm) (Guelph IDF)
2-YEAR	743	6	0.7989	34.3
5-YEAR	1593	11	0.8789	47.3
10-YEAR	2221	12	0.9080	56.3
25-YEAR	3158	15	0.9355	68.3
50-YEAR	3886	16	0.9495	77.6
100-YEAR	4688	17	0.9624	87.1

Table 2: Hazel Regional Storm Parameters		
Interval	Depth (mm)	% of 12 Hour
Hours 1-36	2.028	
Total First 36 Hours	73	
Total Last 12 Hours	212	100
1st hour	6	3
2nd hour	4	2
3rd hour	6	3
4th hour	13	6
5th hour	17	8
6th hour	13	6
7th hour	23	11
8th hour	13	6
9th hour	13	6
10th hour	53	25
11th hour	38	18
12th hour	13	6
Total Full 48 Hours	285	

SCS Infiltration Parameters					
	Impervious Area	Lawn Pervious Area	Row Crops Pervious Area	AMCIII Lawn Pervious Area	AMCIII Row Crops Pervious Area
Soil Type	B	B	B	B	B
SCS Curve No. (CN)	98	61	75	81	88
Manning's 'n'	0.015	0.25	0.35	0.25	0.35
Initial Abstraction (mm)	1.3	16.2	8.5	6.1	3.5
I _a /S Coefficient	0.25	0.10	0.10	0.10	0.10
Storage (mm) (Function of CN)	5.2	162.4	84.7	60.8	35.0

Hydrologic Modelling Parameters				
Catchment I.D.	Area (ha)	% Imp.	Flow Length (m)	Slope (%)
Pre-Development Conditions				
101 (Towards Victoria Road)	7.51	0%	269	3%
102 (Towards Southwesterly Woodland/Wetland)	5.46	0%	182	5%
TOTAL	12.97	0%		
Post-Development Conditions				
201	10.43	20%	90	2%
202	0.17	10%	25	2%
203	1.35	10%	62	2%
204	1.02	10%	79	2%
TOTAL	12.97	18%		

Water Quality Sizing Criteria, as per Table 3.2 of the SWM Planning and Design Manual (MOE, 2003)	
Service Area	10.43 ha
Catchment Imperviousness	20%
Total Storage Volume (m ³ /ha)	90
Total Volume Required (m ³)	939
Extended Detention (m ³ /ha)	40
Extended Detention Required (m ³)	939
Permanent Pool Volume Required (m ³)	0

SWMF Assumed Details	
1st Orifice dia (mm)	100
B/Pond and 1st Orifice C/L (m)	331.55
Invert of 1st 300mm Outlet Pipe	331.40
DICB Inlet (m)	332.50
DICB Orifice (mm)	200
DICB Orifice C/L (m)	331.80
Invert of DICB 300mm Outlet Pipe	331.65
Overflow (m)	333.35
Overflow Weir Width (m)	6.00
Overflow Side Slopes (H:1)	3.00
Top of Pond (m)	333.65

Pond Results				
Event	Maximum Storage Volume Used (m ³)	Peak Inflow (m ³ /s)	Peak Outflow (m ³ /s)	Ponding Elevation (m)
5-Year	1,032	0.594	0.019	332.35
25-Year	1,639	0.859	0.102	332.71
100-Year	2,527	1.127	0.124	333.16
48-Hour Hazel	3,211	1.549	1.543	333.54

Peak Outflow Modelling Summary						
Event	Pre-Development (m ³ /s)			Post Development (m ³ /s)		
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25-Year	0.311	0.305	0.616	0.103	0.101	0.204
100-Year	0.563	0.544	1.107	0.125	0.161	0.286
48-Hour Hazel	1.062	0.834	1.896	1.566	0.351	1.917

Township of Puslinch
Audrey Meadows Proposed Residential Development
SWM Facility Design Calculations
Dry Pond - Stage-Discharge Relationship

Notes:
Incremental Active Storage has been assumed based on assumed contours
Its been assumed that the pond bottom has 1,000m² area, and 4:1 slopes from Bottom/Pond to Top/Pond.
Max 3:1 slopes to be used from Top/Pond to Adjacent Existing Properties

Rating Curve			Volume Estimation			Drawdown		Notes
Elevation (m)	Discharge (m ³ /s)	Act. Storage (m ³)	Depth (m)	Volume (m ³)		Increment	Accumulated	
				Increment	Accumulated		hours	
331.55	0.0000	0.00	0.00	0	0	0.00	0.00	Bottom of Pond / Outlet Invert
331.65	0.0066	106.78	0.10	107	107	8.99	8.99	
331.75	0.0093	219.68	0.20	113	220	3.94	12.92	
331.85	0.0114	338.82	0.30	119	339	3.19	16.11	
331.95	0.0132	464.32	0.40	126	464	2.83	18.94	
332.05	0.0148	596.32	0.50	132	596	2.62	21.56	
332.15	0.0162	734.94	0.60	139	735	2.49	24.05	
332.25	0.0175	880.32	0.70	145	880	2.40	26.46	
332.35	0.0187	1032.58	0.80	152	1,033	2.34	28.80	5-Year Ponding Elevation
332.45	0.0198	1191.84	0.90	159	1,192	2.30	31.10	
332.55	0.0932	1358.24	1.00	166	1,358	0.82	31.91	
332.65	0.0989	1531.90	1.10	174	1,532	0.50	32.42	
332.75	0.1042	1712.96	1.20	181	1,713	0.50	32.91	25-Year Ponding Elevation
332.85	0.1094	1901.54	1.30	189	1,902	0.49	33.40	
332.95	0.1142	2097.76	1.40	196	2,098	0.49	33.89	
333.05	0.1189	2301.76	1.50	204	2,302	0.49	34.38	
333.15	0.1234	2513.66	1.60	212	2,514	0.49	34.86	100-Year Ponding Elevation
333.25	0.1278	2733.60	1.70	220	2,734	0.49	35.35	
333.35	0.1320	2961.70	1.80	228	2,962	0.49	35.84	Overflow weir invert
333.45	0.4706	3198.08	1.90	236	3,198	0.22	36.05	
333.55	1.1203	3442.88	2.00	245	3,443	0.09	36.14	Hazel Ponding Elevation
333.65	2.0074	3696.22	2.10	253	3,696	0.05	36.18	Top of Pond

Discharge Calculations					
Elevation (m)	Orifice (m ³ /s)	2nd Stage (Orifice) (m ³ /s)	Weir (m ³ /s)	Total (m ³ /s)	Parameters
331.55	0.0000	0.0000	0.000	0.000	First Stage
331.65	0.0066	0.0000	0.000	0.007	Orifice Invert (m) 331.50
331.75	0.0093	0.0000	0.000	0.009	Orifice C/L Elev (m) 331.55
331.85	0.0114	0.0000	0.000	0.011	Orifice dia (mm) 100
331.95	0.0132	0.0000	0.000	0.013	Orifice Coeff. 0.600
332.05	0.0148	0.0000	0.000	0.015	Pipe dia (mm) 300
332.15	0.0162	0.0000	0.000	0.016	Pipe Invert (m) 331.40
332.25	0.0175	0.0000	0.000	0.017	
332.35	0.0187	0.0000	0.000	0.019	Second Stage
332.45	0.0198	0.0000	0.000	0.020	Inlet Elevation (m) 332.50
332.55	0.0209	0.0723	0.000	0.093	Orifice Invert (m) 331.70
332.65	0.0219	0.0770	0.000	0.099	Orifice C/L Elev (m) 331.80
332.75	0.0229	0.0814	0.000	0.104	Orifice dia (mm) 200
332.85	0.0238	0.0856	0.000	0.109	Orifice Coeff. 0.600
332.95	0.0247	0.0895	0.000	0.114	Pipe dia (mm) 300
333.05	0.0256	0.0933	0.000	0.119	Pipe Invert (m) 331.65
333.15	0.0264	0.0970	0.000	0.123	
333.25	0.0272	0.1005	0.000	0.128	Overflow
333.35	0.0280	0.1039	0.000	0.132	Weir Elev. (m) 333.35
333.45	0.0288	0.1072	0.335	0.471	Weir Coeff. 1.700
333.55	0.0295	0.1105	0.980	1.120	Weir Width (m) 6.000
333.65	0.0302	0.1136	1.864	2.007	Weir Left Side Slope (x:1) 3.000
					Weir Right Side Slope (x:1) 3.000

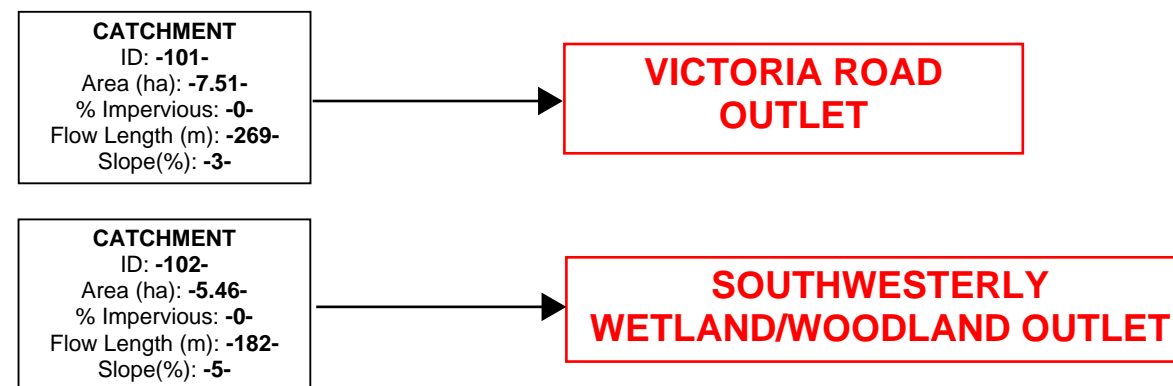
APPENDIX B

MIDUSS Modelling Outputs

- *Modelling Output (Pre-Development)*
- *Modelling Output (Post Development)*

Modelling Output (Pre-Development)

**TOWNSHIP OF PUSLINCH
AUDREY MEADOWS LTD.
PROPOSED DEVELOPMENT**



**PRE-DEVELOPMENT
MODELLING SCHEMATIC**

JUNE 2021

A2680

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"                               MIDUSS
Output ----->"
"                               MIDUSS version                               Version 2.25
rev. 473"
"                               MIDUSS created
February 7, 2010"
"                               10 Units used:
ie METRIC"
"                               Job folder:                               \\Triton-srv-ferg
\OfficeData\"
"                               Private Development\A2680-AUDREY SUB\Phase 2\SWM
Design\20210607 Rev 1\Modelling\Pre-Development\v1"
"                               Output filename:                               5-year pre-
development.out"
"                               Licensee name:
jkoolhaas"
"                               Company                               Triton Engineering
Services Limited"
"                               Date & Time last used:                               2021-06-09 at
9:29:27 AM"
" 31          TIME PARAMETERS"
"           5.000    Time Step"
"          1440.000    Max. Storm length"
"          3000.000    Max. Hydrograph"
" 32          STORM Chicago storm"
"           1    Chicago storm"
"          1593.000    Coefficient A"
"           11.000    Constant B"
"           0.879    Exponent C"
"           0.400    Fraction R"
"          180.000    Duration"
"           1.000    Time step multiplier"
"           Maximum intensity                               139.288    mm/hr"
"           Total depth                               47.265    mm"
"           6 005hyd Hydrograph extension used in this file"
" 33          CATCHMENT 101"
"           1    Triangular SCS"
"           1    Equal length"
"           1    SCS method"
"           101    Towards Victoria Road"
"           0.000    % Impervious"
"           7.510    Total Area"
"          269.000    Flow length"
"           3.000    Overland Slope"
"           7.510    Pervious Area"
"          269.000    Pervious length"
"           3.000    Pervious slope"
"           0.000    Impervious Area"
"          269.000    Impervious length"
"           3.000    Impervious slope"
"           0.350    Pervious Manning 'n'"
"           75.000    Pervious SCS Curve No."

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"	0.258	Pervious Runoff coefficient"			
"	0.100	Pervious Ia/S coefficient"			
"	8.467	Pervious Initial abstraction"			
"	0.015	Impervious Manning 'n'"			
"	98.000	Impervious SCS Curve No."			
"	0.000	Impervious Runoff coefficient"			
"	0.250	Impervious Ia/S coefficient"			
"	1.296	Impervious Initial abstraction"			
"		0.113	0.000	0.000	0.000 c.m/sec"
"		Catchment 101	Pervious	Impervious	Total Area
"		Surface Area	7.510	0.000	7.510
hectare"					
"		Time of concentration	77.299	6.548	77.299
minutes"					
"		Time to Centroid	193.636	96.082	193.635
minutes"					
"		Rainfall depth	47.265	47.265	47.265
mm"					
"		Rainfall volume	3549.57	0.00	3549.58
c.m"					
"		Rainfall losses	35.074	6.347	35.074
mm"					
"		Runoff depth	12.191	40.917	12.191
mm"					
"		Runoff volume	915.51	0.00	915.52
c.m"					
"		Runoff coefficient	0.258	0.000	0.258
"					
"		Maximum flow	0.113	0.000	0.113
c.m/sec"					
" 40		HYDROGRAPH Add Runoff "			
"	4	Add Runoff "			
"		0.113	0.113	0.000	0.000"
" 40		HYDROGRAPH Copy to Outflow"			
"	8	Copy to Outflow"			
"		0.113	0.113	0.113	0.000"
" 40		HYDROGRAPH Combine 1"			
"	6	Combine "			
"	1	Node #"			
"		Towards Victoria Road"			
"		Maximum flow		0.113	c.m/sec"
"		Hydrograph volume		915.517	c.m"
"		0.113	0.113	0.113	0.113"
" 40		HYDROGRAPH Start - New Tributary"			
"	2	Start - New Tributary"			
"		0.113	0.000	0.113	0.113"
" 33		CATCHMENT 102"			
"	1	Triangular SCS"			
"	1	Equal length"			
"	1	SCS method"			
"	102	Towards Southwesterly Wetland/Woodland"			

"	0.000	% Impervious"			
"	5.460	Total Area"			
"	182.000	Flow length"			
"	5.000	Overland Slope"			
"	5.460	Pervious Area"			
"	182.000	Pervious length"			
"	5.000	Pervious slope"			
"	0.000	Impervious Area"			
"	182.000	Impervious length"			
"	5.000	Impervious slope"			
"	0.350	Pervious Manning 'n'"			
"	75.000	Pervious SCS Curve No."			
"	0.258	Pervious Runoff coefficient"			
"	0.100	Pervious Ia/S coefficient"			
"	8.467	Pervious Initial abstraction"			
"	0.015	Impervious Manning 'n'"			
"	98.000	Impervious SCS Curve No."			
"	0.000	Impervious Runoff coefficient"			
"	0.250	Impervious Ia/S coefficient"			
"	1.296	Impervious Initial abstraction"			
"		0.113	0.000	0.113	0.113 c.m/sec"
"		Catchment 102	Pervious	Impervious	Total Area
"					
"		Surface Area	5.460	0.000	5.460
hectare"					
"		Time of concentration	52.458	4.443	52.458
minutes"					
"		Time to Centroid	162.958	93.097	162.958
minutes"					
"		Rainfall depth	47.265	47.265	47.265
mm"					
"		Rainfall volume	2580.65	0.00	2580.65
c.m"					
"		Rainfall losses	35.075	6.318	35.075
mm"					
"		Runoff depth	12.190	40.947	12.190
mm"					
"		Runoff volume	665.58	0.00	665.58
c.m"					
"		Runoff coefficient	0.258	0.000	0.258
"					
"		Maximum flow	0.113	0.000	0.113
c.m/sec"					
"	40	HYDROGRAPH Add Runoff "			
"		4 Add Runoff "			
"		0.113	0.113	0.113	0.113"
"	40	HYDROGRAPH Copy to Outflow"			
"		8 Copy to Outflow"			
"		0.113	0.113	0.113	0.113"
"	40	HYDROGRAPH Combine 2"			
"		6 Combine "			
"		2 Node #"			

"	Towards Southwesterly Wetland/Woodland"			
"	Maximum flow		0.113	c.m/sec"
"	Hydrograph volume		665.583	c.m"
"		0.113	0.113	0.113 0.113"

```

"                                MIDUSS
Output ----->"
"                                MIDUSS version                                Version 2.25
rev. 473"
"                                MIDUSS created
February 7, 2010"
"                                10 Units used:
ie METRIC"
"                                Job folder:                                \\Triton-srv-ferg
\OfficeData\"
"                                Private Development\A2680-AUDREY SUB\Phase 2\SWM
Design\20210607 Rev 1\Modelling\Pre-Development\25-year"
"                                Output filename:                                25-year pre-
development.out"
"                                Licensee name:
jkoolhaas"
"                                Company                                Triton Engineering
Services Limited"
"                                Date & Time last used:                                2021-06-09 at
12:23:00 PM"
" 31                                TIME PARAMETERS"
"                                5.000 Time Step"
"                                1440.000 Max. Storm length"
"                                3000.000 Max. Hydrograph"
" 32                                STORM Chicago storm"
"                                1 Chicago storm"
"                                3158.000 Coefficient A"
"                                15.000 Constant B"
"                                0.936 Exponent C"
"                                0.400 Fraction R"
"                                180.000 Duration"
"                                1.000 Time step multiplier"
"                                Maximum intensity                                191.557 mm/hr"
"                                Total depth                                68.266 mm"
"                                6 025hyd Hydrograph extension used in this file"
" 33                                CATCHMENT 101"
"                                1 Triangular SCS"
"                                1 Equal length"
"                                1 SCS method"
"                                101 Towards Victoria Road"
"                                0.000 % Impervious"
"                                7.510 Total Area"
"                                269.000 Flow length"
"                                3.000 Overland Slope"
"                                7.510 Pervious Area"
"                                269.000 Pervious length"
"                                3.000 Pervious slope"
"                                0.000 Impervious Area"
"                                269.000 Impervious length"
"                                3.000 Impervious slope"
"                                0.350 Pervious Manning 'n'"
"                                75.000 Pervious SCS Curve No."

```

"	0.362	Pervious Runoff coefficient"			
"	0.100	Pervious Ia/S coefficient"			
"	8.467	Pervious Initial abstraction"			
"	0.015	Impervious Manning 'n'"			
"	98.000	Impervious SCS Curve No."			
"	0.000	Impervious Runoff coefficient"			
"	0.250	Impervious Ia/S coefficient"			
"	1.296	Impervious Initial abstraction"			
"		0.311	0.000	0.000	0.000 c.m/sec"
"		Catchment 101	Pervious	Impervious	Total Area
"		Surface Area	7.510	0.000	7.510
hectare"					
"		Time of concentration	57.064	5.709	57.064
minutes"					
"		Time to Centroid	165.773	93.097	165.773
minutes"					
"		Rainfall depth	68.266	68.266	68.266
mm"					
"		Rainfall volume	5126.79	0.01	5126.79
c.m"					
"		Rainfall losses	43.521	6.473	43.521
mm"					
"		Runoff depth	24.745	61.794	24.745
mm"					
"		Runoff volume	1858.33	0.00	1858.34
c.m"					
"		Runoff coefficient	0.362	0.000	0.362
"					
"		Maximum flow	0.311	0.000	0.311
c.m/sec"					
" 40		HYDROGRAPH Add Runoff "			
"	4	Add Runoff "			
"		0.311	0.311	0.000	0.000"
" 40		HYDROGRAPH Copy to Outflow"			
"	8	Copy to Outflow"			
"		0.311	0.311	0.311	0.000"
" 40		HYDROGRAPH Combine 1"			
"	6	Combine "			
"	1	Node #"			
"		Towards Victoria Road"			
"		Maximum flow	0.311		c.m/sec"
"		Hydrograph volume	1858.339		c.m"
"		0.311	0.311	0.311	0.311"
" 40		HYDROGRAPH Start - New Tributary"			
"	2	Start - New Tributary"			
"		0.311	0.000	0.311	0.311"
" 33		CATCHMENT 102"			
"	1	Triangular SCS"			
"	1	Equal length"			
"	1	SCS method"			
"	102	Towards Southwesterly Wetland/Woodland"			

"	0.000	% Impervious"			
"	5.460	Total Area"			
"	182.000	Flow length"			
"	5.000	Overland Slope"			
"	5.460	Pervious Area"			
"	182.000	Pervious length"			
"	5.000	Pervious slope"			
"	0.000	Impervious Area"			
"	182.000	Impervious length"			
"	5.000	Impervious slope"			
"	0.350	Pervious Manning 'n'"			
"	75.000	Pervious SCS Curve No."			
"	0.363	Pervious Runoff coefficient"			
"	0.100	Pervious Ia/S coefficient"			
"	8.467	Pervious Initial abstraction"			
"	0.015	Impervious Manning 'n'"			
"	98.000	Impervious SCS Curve No."			
"	0.000	Impervious Runoff coefficient"			
"	0.250	Impervious Ia/S coefficient"			
"	1.296	Impervious Initial abstraction"			
"		0.305	0.000	0.311	0.311 c.m/sec"
"		Catchment 102	Pervious	Impervious	Total Area
"					
"		Surface Area	5.460	0.000	5.460
hectare"					
"		Time of concentration	38.726	3.874	38.726
minutes"					
"		Time to Centroid	142.896	90.583	142.896
minutes"					
"		Rainfall depth	68.266	68.266	68.266
mm"					
"		Rainfall volume	3727.33	0.00	3727.34
c.m"					
"		Rainfall losses	43.519	7.065	43.519
mm"					
"		Runoff depth	24.747	61.202	24.747
mm"					
"		Runoff volume	1351.18	0.00	1351.18
c.m"					
"		Runoff coefficient	0.363	0.000	0.363
"					
"		Maximum flow	0.305	0.000	0.305
c.m/sec"					
"	40	HYDROGRAPH Add Runoff "			
"		4 Add Runoff "			
"		0.305	0.305	0.311	0.311"
"	40	HYDROGRAPH Copy to Outflow"			
"		8 Copy to Outflow"			
"		0.305	0.305	0.305	0.311"
"	40	HYDROGRAPH Combine 2"			
"		6 Combine "			
"		2 Node #"			

"	Towards Southwesterly Wetland/Woodland"			
"	Maximum flow		0.305	c.m/sec"
"	Hydrograph volume		1351.180	c.m"
"		0.305	0.305	0.305 0.305"

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"                          MIDUSS
Output ----->"
"                          MIDUSS version                          Version 2.25
rev. 473"
"                          MIDUSS created
February 7, 2010"
"          10      Units used:
ie METRIC"
"          Job folder:                \\Triton-srv-ferg
\OfficeData\"
"          Private Development\A2680-AUDREY SUB\Phase 2\SWM
Design\20210607 Rev 1\Modelling\Pre-Development\v1\hazel2"
"          Output filename:          Hazel pre-
development.out"
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jkoolhaas"
"          Company                    Triton Engineering
Services Limited"
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5:58:15 PM"
" 31      TIME PARAMETERS"
"          5.000     Time Step"
"          2880.000  Max. Storm length"
"          5000.000  Max. Hydrograph"
" 32      STORM Historic"
"          5      Historic"
"          2880.000  Duration"
"          576.000  Rainfall intensity values"
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"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
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"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"
"          2.028    2.028    2.028    2.028    2.028"

```


"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	6.000	6.000	6.000"
"	6.000	6.000	6.000	6.000	6.000"
"	6.000	6.000	6.000	6.000	4.000"
"	4.000	4.000	4.000	4.000	4.000"
"	4.000	4.000	4.000	4.000	4.000"
"	4.000	6.000	6.000	6.000	6.000"
"	6.000	6.000	6.000	6.000	6.000"
"	6.000	6.000	6.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	17.000	17.000	17.000	17.000	17.000"
"	17.000	17.000	17.000	17.000	17.000"
"	17.000	17.000	13.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	23.000"
"	23.000	23.000	23.000	23.000	23.000"
"	23.000	23.000	23.000	23.000	23.000"
"	23.000	13.000	13.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	53.000	53.000	53.000	53.000	53.000"
"	53.000	53.000	53.000	53.000	53.000"
"	53.000	53.000	38.000	38.000	38.000"
"	38.000	38.000	38.000	38.000	38.000"
"	38.000	38.000	38.000	38.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	13.000"				
"	Maximum intensity		53.000	mm/hr"	
"	Total depth		285.008	mm"	
"	6	200hyd	Hydrograph extension used in this file"		
" 33	CATCHMENT 101"				
"	1	Triangular SCS"			
"	1	Equal length"			
"	1	SCS method"			
"	101	Towards Victoria Road"			
"	0.000	% Impervious"			
"	7.510	Total Area"			
"	269.000	Flow length"			
"	3.000	Overland Slope"			

"	7.510	Pervious Area"			
"	269.000	Pervious length"			
"	3.000	Pervious slope"			
"	0.000	Impervious Area"			
"	269.000	Impervious length"			
"	3.000	Impervious slope"			
"	0.350	Pervious Manning 'n'"			
"	88.000	Pervious SCS Curve No."			
"	0.879	Pervious Runoff coefficient"			
"	0.100	Pervious Ia/S coefficient"			
"	3.464	Pervious Initial abstraction"			
"	0.015	Impervious Manning 'n'"			
"	98.000	Impervious SCS Curve No."			
"	0.000	Impervious Runoff coefficient"			
"	0.250	Impervious Ia/S coefficient"			
"	1.296	Impervious Initial abstraction"			
"	1.062	0.000	0.000	0.000	c.m/sec"
"	Catchment 101	Pervious	Impervious	Total Area	
"					
"	Surface Area	7.510	0.000	7.510	hectare"
"	Time of concentration	62.936	9.444	62.936	minutes"
"	Time to Centroid	2475.896	2284.384	2475.896	minutes"
"	Rainfall depth	285.008	285.008	285.008	mm"
"	Rainfall volume	2.1404	0.0000	2.1404	ha-m"
"	Rainfall losses	34.371	7.797	34.371	mm"
"	Runoff depth	250.637	277.211	250.637	mm"
"	Runoff volume	1.8823	0.0000	1.8823	ha-m"
"	Runoff coefficient	0.879	0.000	0.879	
"					
"	Maximum flow	1.062	0.000	1.062	c.m/sec"
"	40	HYDROGRAPH Add Runoff "			
"	4	Add Runoff "			
"		1.062	1.062	0.000	0.000"
"	40	HYDROGRAPH Copy to Outflow"			
"	8	Copy to Outflow"			
"		1.062	1.062	1.062	0.000"
"	40	HYDROGRAPH Combine 1"			
"	6	Combine "			
"	1	Node #"			
"		Towards Victoria Road"			
"		Maximum flow	1.062		c.m/sec"
"		Hydrograph volume	18822.836		c.m"
"		1.062	1.062	1.062	1.062"

```

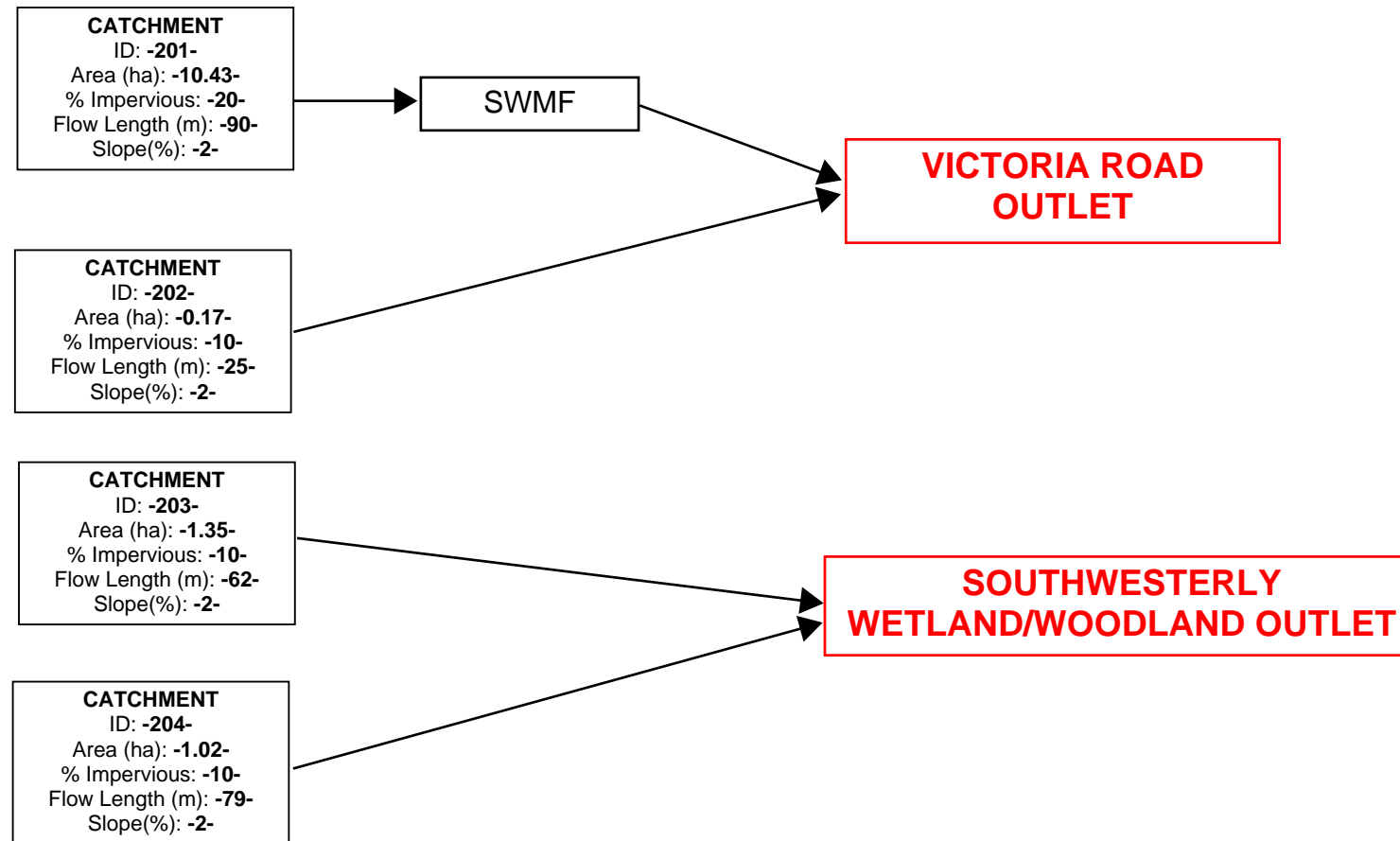
" 40          HYDROGRAPH Start - New Tributary"
"            2    Start - New Tributary"
"              1.062    0.000    1.062    1.062"
" 33          CATCHMENT 102"
"            1    Triangular SCS"
"            1    Equal length"
"            1    SCS method"
"           102    Towards Southwesterly Wetland/Woodland"
"           0.000    % Impervious"
"           5.460    Total Area"
"          182.000    Flow length"
"           5.000    Overland Slope"
"           5.460    Pervious Area"
"          182.000    Pervious length"
"           5.000    Pervious slope"
"           0.000    Impervious Area"
"          182.000    Impervious length"
"           5.000    Impervious slope"
"           0.350    Pervious Manning 'n'"
"          88.000    Pervious SCS Curve No."
"           0.879    Pervious Runoff coefficient"
"           0.100    Pervious Ia/S coefficient"
"           3.464    Pervious Initial abstraction"
"           0.015    Impervious Manning 'n'"
"          98.000    Impervious SCS Curve No."
"           0.000    Impervious Runoff coefficient"
"           0.250    Impervious Ia/S coefficient"
"           1.296    Impervious Initial abstraction"
"              0.834    0.000    1.062    1.062 c.m/sec"
"            Catchment 102          Pervious    Impervious Total Area
"
"            Surface Area          5.460    0.000    5.460
hectare"
"            Time of concentration  42.711    6.409    42.711
minutes"
"            Time to Centroid      2446.655  2278.533  2446.654
minutes"
"            Rainfall depth        285.008    285.008    285.008
mm"
"            Rainfall volume       1.5561    0.0000    1.5561
ha-m"
"            Rainfall losses       34.346    8.347    34.346
mm"
"            Runoff depth          250.663    276.661    250.663
mm"
"            Runoff volume         1.3686    0.0000    1.3686
ha-m"
"            Runoff coefficient     0.879    0.000    0.879
"
"            Maximum flow          0.834    0.000    0.834
c.m/sec"
" 40          HYDROGRAPH Add Runoff "

```

"	4	Add Runoff "				
"			0.834	0.834	1.062	1.062"
"	40	HYDROGRAPH Copy to Outflow"				
"	8	Copy to Outflow"				
"			0.834	0.834	0.834	1.062"
"	40	HYDROGRAPH Combine 2"				
"	6	Combine "				
"	2	Node #"				
"		Towards Southwesterly Wetland/Woodland"				
"		Maximum flow		0.834		c.m/sec"
"		Hydrograph volume		13686.194		c.m"
"			0.834	0.834	0.834	0.834"

Modelling Output (Post Development)

**TOWNSHIP OF PUSLINCH
AUDREY MEADOWS LTD.
PROPOSED DEVELOPMENT**



**POST DEVELOPMENT
MODELLING SCHEMATIC**

JUNE 2021

A2680

```

"                                MIDUSS
Output ----->"
"                                MIDUSS version                                Version 2.25
rev. 473"
"                                MIDUSS created
February 7, 2010"
"                                10 Units used:
ie METRIC"
"                                Job folder:                                \\Triton-srv-ferg
\OfficeData\"
"                                Private Development\A2680-AUDREY SUB\Phase 2\SWM
Design\20210607 Rev 1\Modelling\Post Development\v2\5-year post devt"
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"                                Licensee name:
jkoolhaas"
"                                Company                                Triton Engineering
Services Limited"
"                                Date & Time last used:                                2021-06-14 at
2:36:13 PM"
" 31                                TIME PARAMETERS"
"                                5.000 Time Step"
"                                1440.000 Max. Storm length"
"                                3000.000 Max. Hydrograph"
" 32                                STORM Chicago storm"
"                                1 Chicago storm"
"                                1593.000 Coefficient A"
"                                11.000 Constant B"
"                                0.879 Exponent C"
"                                0.400 Fraction R"
"                                180.000 Duration"
"                                1.000 Time step multiplier"
"                                Maximum intensity                                139.288 mm/hr"
"                                Total depth                                47.265 mm"
"                                6 005hyd Hydrograph extension used in this file"
" 33                                CATCHMENT 203"
"                                1 Triangular SCS"
"                                1 Equal length"
"                                1 SCS method"
"                                203 No description"
"                                10.000 % Impervious"
"                                1.350 Total Area"
"                                62.000 Flow length"
"                                2.000 Overland Slope"
"                                1.215 Pervious Area"
"                                62.000 Pervious length"
"                                2.000 Pervious slope"
"                                0.135 Impervious Area"
"                                62.000 Impervious length"
"                                2.000 Impervious slope"
"                                0.250 Pervious Manning 'n'"
"                                61.000 Pervious SCS Curve No."

```

"	0.105	Pervious Runoff coefficient"			
"	0.100	Pervious Ia/S coefficient"			
"	16.239	Pervious Initial abstraction"			
"	0.015	Impervious Manning 'n'"			
"	98.000	Impervious SCS Curve No."			
"	0.858	Impervious Runoff coefficient"			
"	0.250	Impervious Ia/S coefficient"			
"	1.296	Impervious Initial abstraction"			
"		0.037	0.000	0.000	0.000 c.m/sec"
"		Catchment 203	Pervious	Impervious	Total Area
"		Surface Area	1.215	0.135	1.350
hectare"					
"		Time of concentration	47.038	3.065	26.139
minutes"					
"		Time to Centroid	158.147	91.132	126.296
minutes"					
"		Rainfall depth	47.265	47.265	47.265
mm"					
"		Rainfall volume	574.27	63.81	638.07
c.m"					
"		Rainfall losses	42.290	6.714	38.733
mm"					
"		Runoff depth	4.975	40.550	8.532
mm"					
"		Runoff volume	60.44	54.74	115.18
c.m"					
"		Runoff coefficient	0.105	0.858	0.181
"					
"		Maximum flow	0.011	0.037	0.037
c.m/sec"					
" 40		HYDROGRAPH Add Runoff "			
"	4	Add Runoff "			
"		0.037	0.037	0.000	0.000"
" 40		HYDROGRAPH Copy to Outflow"			
"	8	Copy to Outflow"			
"		0.037	0.037	0.037	0.000"
" 40		HYDROGRAPH Combine 1"			
"	6	Combine "			
"	1	Node #"			
"		Towards Southwesterly Wetland/Woodland"			
"		Maximum flow	0.037		c.m/sec"
"		Hydrograph volume	115.183		c.m"
"		0.037	0.037	0.037	0.037"
" 40		HYDROGRAPH Start - New Tributary"			
"	2	Start - New Tributary"			
"		0.037	0.000	0.037	0.037"
" 33		CATCHMENT 204"			
"	1	Triangular SCS"			
"	1	Equal length"			
"	1	SCS method"			
"	204	No description"			

"	10.000	% Impervious"			
"	1.020	Total Area"			
"	79.000	Flow length"			
"	2.000	Overland Slope"			
"	0.918	Pervious Area"			
"	79.000	Pervious length"			
"	2.000	Pervious slope"			
"	0.102	Impervious Area"			
"	79.000	Impervious length"			
"	2.000	Impervious slope"			
"	0.250	Pervious Manning 'n'"			
"	61.000	Pervious SCS Curve No."			
"	0.105	Pervious Runoff coefficient"			
"	0.100	Pervious Ia/S coefficient"			
"	16.239	Pervious Initial abstraction"			
"	0.015	Impervious Manning 'n'"			
"	98.000	Impervious SCS Curve No."			
"	0.856	Impervious Runoff coefficient"			
"	0.250	Impervious Ia/S coefficient"			
"	1.296	Impervious Initial abstraction"			
"		0.029	0.000	0.037	0.037 c.m/sec"
"		Catchment 204	Pervious	Impervious	Total Area
"					
"		Surface Area	0.918	0.102	1.020
hectare"					
"		Time of concentration	54.399	3.545	30.263
minutes"					
"		Time to Centroid	166.506	91.866	131.081
minutes"					
"		Rainfall depth	47.265	47.265	47.265
mm"					
"		Rainfall volume	433.89	48.21	482.10
c.m"					
"		Rainfall losses	42.289	6.811	38.741
mm"					
"		Runoff depth	4.976	40.453	8.523
mm"					
"		Runoff volume	45.68	41.26	86.94
c.m"					
"		Runoff coefficient	0.105	0.856	0.180
"					
"		Maximum flow	0.007	0.028	0.029
c.m/sec"					
"	40	HYDROGRAPH Add Runoff "			
"		4 Add Runoff "			
"		0.029	0.029	0.037	0.037"
"	40	HYDROGRAPH Copy to Outflow"			
"		8 Copy to Outflow"			
"		0.029	0.029	0.029	0.037"
"	40	HYDROGRAPH Combine 1"			
"		6 Combine "			
"		1 Node #"			

```

"          Towards Southwesterly Wetland/Woodland"
"          Maximum flow          0.066    c.m/sec"
"          Hydrograph volume     202.123  c.m"
"          0.029    0.029    0.029    0.066"
" 40      HYDROGRAPH Start - New Tributary"
"          2    Start - New Tributary"
"          0.029    0.000    0.029    0.066"
" 33      CATCHMENT 202"
"          1    Triangular SCS"
"          1    Equal length"
"          1    SCS method"
"          202  No description"
"          10.000 % Impervious"
"          0.170  Total Area"
"          25.000  Flow length"
"          2.000  Overland Slope"
"          0.153  Pervious Area"
"          25.000  Pervious length"
"          2.000  Pervious slope"
"          0.017  Impervious Area"
"          25.000  Impervious length"
"          2.000  Impervious slope"
"          0.250  Pervious Manning 'n'"
"          61.000  Pervious SCS Curve No."
"          0.105  Pervious Runoff coefficient"
"          0.100  Pervious Ia/S coefficient"
"          16.239  Pervious Initial abstraction"
"          0.015  Impervious Manning 'n'"
"          98.000  Impervious SCS Curve No."
"          0.862  Impervious Runoff coefficient"
"          0.250  Impervious Ia/S coefficient"
"          1.296  Impervious Initial abstraction"
"          0.005    0.000    0.029    0.066 c.m/sec"
"          Catchment 202          Pervious    Impervious Total Area
"
"          Surface Area          0.153    0.017    0.170
hectare"
"          Time of concentration  27.276    1.778    15.123
minutes"
"          Time to Centroid      135.702    89.172    113.525
minutes"
"          Rainfall depth        47.265    47.265    47.265
mm"
"          Rainfall volume       72.31     8.03     80.35
c.m"
"          Rainfall losses       42.292    6.511    38.714
mm"
"          Runoff depth          4.972    40.754    8.551
mm"
"          Runoff volume         7.61     6.93     14.54
c.m"
"          Runoff coefficient     0.105    0.862    0.181

```

"				
"		Maximum flow	0.002	0.005
c.m/sec"				0.005
" 40		HYDROGRAPH Add Runoff "		
"	4	Add Runoff "		
"		0.005	0.005	0.029
" 40		HYDROGRAPH Copy to Outflow"		0.066"
"	8	Copy to Outflow"		
"		0.005	0.005	0.005
" 40		HYDROGRAPH Combine 2"		0.066"
"	6	Combine "		
"	2	Node #"		
"		Towards Victoria Road"		
"		Maximum flow	0.005	c.m/sec"
"		Hydrograph volume	14.536	c.m"
"		0.005	0.005	0.005"
" 40		HYDROGRAPH Start - New Tributary"		
"	2	Start - New Tributary"		
"		0.005	0.000	0.005
" 33		CATCHMENT 201"		0.005"
"	1	Triangular SCS"		
"	1	Equal length"		
"	1	SCS method"		
"	201	No description"		
"	20.000	% Impervious"		
"	10.430	Total Area"		
"	90.000	Flow length"		
"	2.000	Overland Slope"		
"	8.344	Pervious Area"		
"	90.000	Pervious length"		
"	2.000	Pervious slope"		
"	2.086	Impervious Area"		
"	90.000	Impervious length"		
"	2.000	Impervious slope"		
"	0.250	Pervious Manning 'n'"		
"	61.000	Pervious SCS Curve No."		
"	0.105	Pervious Runoff coefficient"		
"	0.100	Pervious Ia/S coefficient"		
"	16.239	Pervious Initial abstraction"		
"	0.015	Impervious Manning 'n'"		
"	98.000	Impervious SCS Curve No."		
"	0.860	Impervious Runoff coefficient"		
"	0.250	Impervious Ia/S coefficient"		
"	1.296	Impervious Initial abstraction"		
"		0.594	0.000	0.005
"		Catchment 201	Pervious	0.005 c.m/sec"
"			Impervious	Total Area
"		Surface Area	8.344	2.086
hectare"				10.430
"		Time of concentration	58.825	3.834
minutes"				21.915
"		Time to Centroid	171.536	92.278
				118.338

minutes"				
"	Rainfall depth	47.265	47.265	47.265
mm"				
"	Rainfall volume	3943.77	985.94	4929.71
c.m"				
"	Rainfall losses	42.289	6.636	35.158
mm"				
"	Runoff depth	4.976	40.628	12.106
mm"				
"	Runoff volume	415.18	847.51	1262.69
c.m"				
"	Runoff coefficient	0.105	0.860	0.256
"				
"	Maximum flow	0.063	0.590	0.594
c.m/sec"				
" 40	HYDROGRAPH Add Runoff "			
"	4 Add Runoff "			
"	0.594 0.594 0.005 0.005"			
" 54	POND DESIGN"			
"	0.594 Current peak flow c.m/sec"			
"	0.563 Target outflow c.m/sec"			
"	1262.7 Hydrograph volume c.m"			
"	22. Number of stages"			
"	0.000 Minimum water level metre"			
"	335.000 Maximum water level metre"			
"	0.000 Starting water level metre"			
"	0 Keep Design Data: 1 = True; 0 = False"			
"	Level Discharge Volume"			
"	331.550 0.000 0.000"			
"	331.650 0.00660 106.780"			
"	331.750 0.00930 219.680"			
"	331.850 0.01140 338.820"			
"	331.950 0.01320 464.320"			
"	332.050 0.01480 596.320"			
"	332.150 0.01620 734.940"			
"	332.250 0.01750 880.320"			
"	332.350 0.01870 1032.580"			
"	332.450 0.01980 1191.840"			
"	332.550 0.09320 1358.240"			
"	332.650 0.09890 1531.900"			
"	332.750 0.1042 1712.960"			
"	332.850 0.1094 1901.540"			
"	332.950 0.1142 2097.760"			
"	333.050 0.1189 2301.760"			
"	333.150 0.1234 2513.660"			
"	333.250 0.1278 2733.600"			
"	333.350 0.1320 2961.700"			
"	333.450 0.4706 3198.080"			
"	333.550 1.120 3442.880"			
"	333.650 2.007 3696.220"			
"	Peak outflow 0.019 c.m/sec"			
"	Maximum level 332.349 metre"			

"	Maximum storage		1031.515	c.m"
"	Centroidal lag		12.720	hours"
"	0.594	0.594	0.019	0.005 c.m/sec"
" 40	HYDROGRAPH	Combine	2"	
"	6	Combine	"	
"	2	Node #"		
"		Towards Victoria Road"		
"	Maximum flow		0.019	c.m/sec"
"	Hydrograph volume		1276.797	c.m"
"	0.594	0.594	0.019	0.019"

```

"                MIDUSS
Output ----->"
"                MIDUSS version                        Version 2.25
rev. 473"
"                MIDUSS created
February 7, 2010"
"                10 Units used:
ie METRIC"
"                Job folder:                            \\Triton-srv-ferg
\OfficeData\"
"                Private Development\A2680-AUDREY SUB\Phase 2\SWM
Design\20210607 Rev 1\Modelling\Post Development\v2\25-year post devt"
"                Output filename:                       25-year post
deveopment.out"
"                Licensee name:
jkoolhaas"
"                Company                                Triton Engineering
Services Limited"
"                Date & Time last used:                2021-06-14 at
3:22:53 PM"
" 31            TIME PARAMETERS"
"                5.000 Time Step"
"                1440.000 Max. Storm length"
"                3000.000 Max. Hydrograph"
" 32            STORM Chicago storm"
"                1 Chicago storm"
"                3158.000 Coefficient A"
"                15.000 Constant B"
"                0.936 Exponent C"
"                0.400 Fraction R"
"                180.000 Duration"
"                1.000 Time step multiplier"
"                Maximum intensity                    191.557 mm/hr"
"                Total depth                          68.266 mm"
"                6 025hyd Hydrograph extension used in this file"
" 33            CATCHMENT 203"
"                1 Triangular SCS"
"                1 Equal length"
"                1 SCS method"
"                203 No description"
"                10.000 % Impervious"
"                1.350 Total Area"
"                62.000 Flow length"
"                2.000 Overland Slope"
"                1.215 Pervious Area"
"                62.000 Pervious length"
"                2.000 Pervious slope"
"                0.135 Impervious Area"
"                62.000 Impervious length"
"                2.000 Impervious slope"
"                0.250 Pervious Manning 'n'"
"                61.000 Pervious SCS Curve No."

```

"	0.185	Pervious Runoff coefficient"			
"	0.100	Pervious Ia/S coefficient"			
"	16.239	Pervious Initial abstraction"			
"	0.015	Impervious Manning 'n'"			
"	98.000	Impervious SCS Curve No."			
"	0.891	Impervious Runoff coefficient"			
"	0.250	Impervious Ia/S coefficient"			
"	1.296	Impervious Initial abstraction"			
"		0.058	0.000	0.000	0.000 c.m/sec"
"		Catchment 203	Pervious	Impervious	Total Area
"		Surface Area	1.215	0.135	1.350
hectare"					
"		Time of concentration	31.552	2.673	21.476
minutes"					
"		Time to Centroid	134.906	88.854	118.839
minutes"					
"		Rainfall depth	68.266	68.266	68.266
mm"					
"		Rainfall volume	829.43	92.16	921.59
c.m"					
"		Rainfall losses	55.656	7.449	50.835
mm"					
"		Runoff depth	12.611	60.817	17.431
mm"					
"		Runoff volume	153.22	82.10	235.32
c.m"					
"		Runoff coefficient	0.185	0.891	0.255
"					
"		Maximum flow	0.039	0.056	0.058
c.m/sec"					
" 40		HYDROGRAPH Add Runoff "			
"	4	Add Runoff "			
"		0.058	0.058	0.000	0.000"
" 40		HYDROGRAPH Copy to Outflow"			
"	8	Copy to Outflow"			
"		0.058	0.058	0.058	0.000"
" 40		HYDROGRAPH Combine 1"			
"	6	Combine "			
"	1	Node #"			
"		Towards Southwesterly Wetland/Woodland"			
"		Maximum flow	0.058		c.m/sec"
"		Hydrograph volume	235.322		c.m"
"		0.058	0.058	0.058	0.058"
" 40		HYDROGRAPH Start - New Tributary"			
"	2	Start - New Tributary"			
"		0.058	0.000	0.058	0.058"
" 33		CATCHMENT 204"			
"	1	Triangular SCS"			
"	1	Equal length"			
"	1	SCS method"			
"	204	No description"			

"	10.000	% Impervious"			
"	1.020	Total Area"			
"	79.000	Flow length"			
"	2.000	Overland Slope"			
"	0.918	Pervious Area"			
"	79.000	Pervious length"			
"	2.000	Pervious slope"			
"	0.102	Impervious Area"			
"	79.000	Impervious length"			
"	2.000	Impervious slope"			
"	0.250	Pervious Manning 'n'"			
"	61.000	Pervious SCS Curve No."			
"	0.185	Pervious Runoff coefficient"			
"	0.100	Pervious Ia/S coefficient"			
"	16.239	Pervious Initial abstraction"			
"	0.015	Impervious Manning 'n'"			
"	98.000	Impervious SCS Curve No."			
"	0.892	Impervious Runoff coefficient"			
"	0.250	Impervious Ia/S coefficient"			
"	1.296	Impervious Initial abstraction"			
"		0.044	0.000	0.058	0.058 c.m/sec"
"		Catchment 204	Pervious	Impervious	Total Area
"					
"		Surface Area	0.918	0.102	1.020
hectare"					
"		Time of concentration	36.489	3.091	24.831
minutes"					
"		Time to Centroid	140.501	89.456	122.682
minutes"					
"		Rainfall depth	68.266	68.266	68.266
mm"					
"		Rainfall volume	626.68	69.63	696.32
c.m"					
"		Rainfall losses	55.645	7.350	50.816
mm"					
"		Runoff depth	12.621	60.917	17.451
mm"					
"		Runoff volume	115.86	62.13	178.00
c.m"					
"		Runoff coefficient	0.185	0.892	0.256
"					
"		Maximum flow	0.027	0.041	0.044
c.m/sec"					
" 40		HYDROGRAPH Add Runoff "			
"	4	Add Runoff "			
"		0.044	0.044	0.058	0.058"
" 40		HYDROGRAPH Copy to Outflow"			
"	8	Copy to Outflow"			
"		0.044	0.044	0.044	0.058"
" 40		HYDROGRAPH Combine 1"			
"	6	Combine "			
"	1	Node #"			


```

"          Towards Southwesterly Wetland/Woodland"
"          Maximum flow          0.101    c.m/sec"
"          Hydrograph volume     413.318  c.m"
"          0.044    0.044    0.044    0.101"
" 40      HYDROGRAPH Start - New Tributary"
"          2    Start - New Tributary"
"          0.044    0.000    0.044    0.101"
" 33      CATCHMENT 202"
"          1    Triangular SCS"
"          1    Equal length"
"          1    SCS method"
"          202  No description"
"          10.000 % Impervious"
"          0.170  Total Area"
"          25.000  Flow length"
"          2.000  Overland Slope"
"          0.153  Pervious Area"
"          25.000  Pervious length"
"          2.000  Pervious slope"
"          0.017  Impervious Area"
"          25.000  Impervious length"
"          2.000  Impervious slope"
"          0.250  Pervious Manning 'n'"
"          61.000  Pervious SCS Curve No."
"          0.185  Pervious Runoff coefficient"
"          0.100  Pervious Ia/S coefficient"
"          16.239  Pervious Initial abstraction"
"          0.015  Impervious Manning 'n'"
"          98.000  Impervious SCS Curve No."
"          0.898  Impervious Runoff coefficient"
"          0.250  Impervious Ia/S coefficient"
"          1.296  Impervious Initial abstraction"
"          0.009    0.000    0.044    0.101 c.m/sec"
"          Catchment 202          Pervious    Impervious Total Area
"
"          Surface Area          0.153    0.017    0.170
hectare"
"          Time of concentration 18.296    1.550    12.425
minutes"
"          Time to Centroid     119.840    87.174    108.388
minutes"
"          Rainfall depth       68.266    68.266    68.266
mm"
"          Rainfall volume      104.45    11.61    116.05
c.m"
"          Rainfall losses      55.652    6.981    50.785
mm"
"          Runoff depth         12.614    61.285    17.481
mm"
"          Runoff volume        19.30    10.42    29.72
c.m"
"          Runoff coefficient    0.185    0.898    0.256

```

"				
"		Maximum flow	0.007	0.008
"				0.009
c.m/sec"				
"	40	HYDROGRAPH Add Runoff "		
"		4 Add Runoff "		
"		0.009	0.009	0.044
"				0.101"
"	40	HYDROGRAPH Copy to Outflow"		
"		8 Copy to Outflow"		
"		0.009	0.009	0.009
"				0.101"
"	40	HYDROGRAPH Combine 2"		
"		6 Combine "		
"		2 Node #"		
"		Towards Victoria Road"		
"		Maximum flow	0.009	c.m/sec"
"		Hydrograph volume	29.719	c.m"
"		0.009	0.009	0.009
"				0.009"
"	40	HYDROGRAPH Start - New Tributary"		
"		2 Start - New Tributary"		
"		0.009	0.000	0.009
"				0.009"
"	33	CATCHMENT 201"		
"		1 Triangular SCS"		
"		1 Equal length"		
"		1 SCS method"		
"		201 No description"		
"		20.000 % Impervious"		
"		10.430 Total Area"		
"		90.000 Flow length"		
"		2.000 Overland Slope"		
"		8.344 Pervious Area"		
"		90.000 Pervious length"		
"		2.000 Pervious slope"		
"		2.086 Impervious Area"		
"		90.000 Impervious length"		
"		2.000 Impervious slope"		
"		0.250 Pervious Manning 'n'"		
"		61.000 Pervious SCS Curve No."		
"		0.185 Pervious Runoff coefficient"		
"		0.100 Pervious Ia/S coefficient"		
"		16.239 Pervious Initial abstraction"		
"		0.015 Impervious Manning 'n'"		
"		98.000 Impervious SCS Curve No."		
"		0.893 Impervious Runoff coefficient"		
"		0.250 Impervious Ia/S coefficient"		
"		1.296 Impervious Initial abstraction"		
"		0.859	0.000	0.009
"				0.009 c.m/sec"
"		Catchment 201	Pervious	Impervious Total Area
"				
"		Surface Area	8.344	2.086
hectare"				10.430
"		Time of concentration	39.458	3.342
minutes"				19.704
"		Time to Centroid	143.880	89.830
				114.316

minutes"				
"	Rainfall depth	68.266	68.266	68.266
mm"				
"	Rainfall volume	5696.14	1424.03	7120.17
c.m"				
"	Rainfall losses	55.644	7.307	45.976
mm"				
"	Runoff depth	12.623	60.959	22.290
mm"				
"	Runoff volume	1053.23	1271.60	2324.83
c.m"				
"	Runoff coefficient	0.185	0.893	0.327
"				
"	Maximum flow	0.233	0.825	0.859
c.m/sec"				
" 40	HYDROGRAPH Add Runoff "			
"	4 Add Runoff "			
"	0.859 0.859 0.009 0.009"			
" 54	POND DESIGN"			
"	0.859 Current peak flow c.m/sec"			
"	0.563 Target outflow c.m/sec"			
"	2324.8 Hydrograph volume c.m"			
"	22. Number of stages"			
"	0.000 Minimum water level metre"			
"	335.000 Maximum water level metre"			
"	0.000 Starting water level metre"			
"	0 Keep Design Data: 1 = True; 0 = False"			
"	Level Discharge Volume"			
"	331.550 0.000 0.000"			
"	331.650 0.00660 106.780"			
"	331.750 0.00930 219.680"			
"	331.850 0.01140 338.820"			
"	331.950 0.01320 464.320"			
"	332.050 0.01480 596.320"			
"	332.150 0.01620 734.940"			
"	332.250 0.01750 880.320"			
"	332.350 0.01870 1032.580"			
"	332.450 0.01980 1191.840"			
"	332.550 0.09320 1358.240"			
"	332.650 0.09890 1531.900"			
"	332.750 0.1042 1712.960"			
"	332.850 0.1094 1901.540"			
"	332.950 0.1142 2097.760"			
"	333.050 0.1189 2301.760"			
"	333.150 0.1234 2513.660"			
"	333.250 0.1278 2733.600"			
"	333.350 0.1320 2961.700"			
"	333.450 0.4706 3198.080"			
"	333.550 1.120 3442.880"			
"	333.650 2.007 3696.220"			
"	Peak outflow 0.102 c.m/sec"			
"	Maximum level 332.709 metre"			

"	Maximum storage		1639.343	c.m"
"	Centroidal lag		9.981	hours"
"	0.859	0.859	0.102	0.009 c.m/sec"
" 40	HYDROGRAPH	Combine	2"	
"	6	Combine	"	
"	2	Node #"		
"		Towards Victoria Road"		
"	Maximum flow		0.103	c.m/sec"
"	Hydrograph volume		2353.675	c.m"
"	0.859	0.859	0.102	0.103"

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"                MIDUSS
Output ----->"
"                MIDUSS version                        Version 2.25
rev. 473"
"                MIDUSS created
February 7, 2010"
"                10  Units used:
ie METRIC"
"                Job folder:                            \\Triton-srv-ferg
\OfficeData\"
"                Private Development\A2680-AUDREY SUB\Phase 2\SWM
Design\20210607 Rev 1\Modelling\Post Development\v2\100-year post
devt"
"                Output filename:                       100-year post
deveopment.out"
"                Licensee name:
jkoolhaas"
"                Company                                Triton Engineering
Services Limited"
"                Date & Time last used:                 2021-06-14 at
2:22:33 PM"
" 31            TIME PARAMETERS"
"                5.000  Time Step"
"                1440.000  Max. Storm length"
"                3000.000  Max. Hydrograph"
" 32            STORM Chicago storm"
"                1  Chicago storm"
"                4688.000  Coefficient A"
"                17.000  Constant B"
"                0.962  Exponent C"
"                0.400  Fraction R"
"                180.000  Duration"
"                1.000  Time step multiplier"
"                Maximum intensity                239.354  mm/hr"
"                Total depth                    87.079  mm"
"                6  100hyd  Hydrograph extension used in this file"
" 33            CATCHMENT 203"
"                1  Triangular SCS"
"                1  Equal length"
"                1  SCS method"
"                203  No description"
"                10.000  % Impervious"
"                1.350  Total Area"
"                62.000  Flow length"
"                2.000  Overland Slope"
"                1.215  Pervious Area"
"                62.000  Pervious length"
"                2.000  Pervious slope"
"                0.135  Impervious Area"
"                62.000  Impervious length"
"                2.000  Impervious slope"
"                0.250  Pervious Manning 'n'"

```

```

"      61.000   Pervious SCS Curve No."
"      0.247   Pervious Runoff coefficient"
"      0.100   Pervious Ia/S coefficient"
"     16.239   Pervious Initial abstraction"
"      0.015   Impervious Manning 'n'"
"     98.000   Impervious SCS Curve No."
"      0.912   Impervious Runoff coefficient"
"      0.250   Impervious Ia/S coefficient"
"      1.296   Impervious Initial abstraction"
"              0.096      0.000      0.000      0.000 c.m/sec"
"      Catchment 203      Pervious      Impervious Total Area
"
"      Surface Area      1.215      0.135      1.350
hectare"
"      Time of concentration 24.423      2.436      18.022
minutes"
"      Time to Centroid      125.203      87.659      114.275
minutes"
"      Rainfall depth      87.079      87.079      87.079
mm"
"      Rainfall volume      1058.01      117.56      1175.57
c.m"
"      Rainfall losses      65.586      7.654      59.793
mm"
"      Runoff depth      21.493      79.425      27.286
mm"
"      Runoff volume      261.14      107.22      368.36
c.m"
"      Runoff coefficient      0.247      0.912      0.313
"
"      Maximum flow      0.081      0.073      0.096
c.m/sec"
" 40      HYDROGRAPH Add Runoff "
" 4      Add Runoff "
"              0.096      0.096      0.000      0.000"
" 40      HYDROGRAPH Copy to Outflow"
" 8      Copy to Outflow"
"              0.096      0.096      0.096      0.000"
" 40      HYDROGRAPH Combine 1"
" 6      Combine "
" 1      Node #"
"              Towards Southwesterly Wetland/Woodland"
"      Maximum flow      0.096      c.m/sec"
"      Hydrograph volume      368.361      c.m"
"              0.096      0.096      0.096      0.096"
" 40      HYDROGRAPH Start - New Tributary"
" 2      Start - New Tributary"
"              0.096      0.000      0.096      0.096"
" 33      CATCHMENT 204"
" 1      Triangular SCS"
" 1      Equal length"
" 1      SCS method"

```

"	204	No description"			
"	10.000	% Impervious"			
"	1.020	Total Area"			
"	79.000	Flow length"			
"	2.000	Overland Slope"			
"	0.918	Pervious Area"			
"	79.000	Pervious length"			
"	2.000	Pervious slope"			
"	0.102	Impervious Area"			
"	79.000	Impervious length"			
"	2.000	Impervious slope"			
"	0.250	Pervious Manning 'n'"			
"	61.000	Pervious SCS Curve No."			
"	0.247	Pervious Runoff coefficient"			
"	0.100	Pervious Ia/S coefficient"			
"	16.239	Pervious Initial abstraction"			
"	0.015	Impervious Manning 'n'"			
"	98.000	Impervious SCS Curve No."			
"	0.908	Impervious Runoff coefficient"			
"	0.250	Impervious Ia/S coefficient"			
"	1.296	Impervious Initial abstraction"			
"		0.066	0.000	0.096	0.096 c.m/sec"
"		Catchment 204	Pervious	Impervious	Total Area
"		Surface Area	0.918	0.102	1.020
hectare"		Time of concentration	28.244	2.817	20.869
minutes"		Time to Centroid	129.681	88.248	117.664
minutes"		Rainfall depth	87.079	87.079	87.079
mm"		Rainfall volume	799.39	88.82	888.21
c.m"		Rainfall losses	65.581	8.037	59.826
mm"		Runoff depth	21.499	79.042	27.253
mm"		Runoff volume	197.36	80.62	277.98
c.m"		Runoff coefficient	0.247	0.908	0.313
"		Maximum flow	0.056	0.054	0.066
c.m/sec"		HYDROGRAPH Add Runoff "			
" 40		4 Add Runoff "			
"		0.066	0.066	0.096	0.096"
" 40		HYDROGRAPH Copy to Outflow"			
"		8 Copy to Outflow"			
"		0.066	0.066	0.066	0.096"
" 40		HYDROGRAPH Combine 1"			
"		6 Combine "			

```

"          1   Node #"
"          Towards Southwesterly Wetland/Woodland"
"          Maximum flow          0.161   c.m/sec"
"          Hydrograph volume      646.341 c.m"
"          0.066   0.066   0.066   0.161"
" 40        HYDROGRAPH Start - New Tributary"
"          2   Start - New Tributary"
"          0.066   0.000   0.066   0.161"
" 33        CATCHMENT 202"
"          1   Triangular SCS"
"          1   Equal length"
"          1   SCS method"
"          202 No description"
"          10.000 % Impervious"
"          0.170 Total Area"
"          25.000 Flow length"
"          2.000 Overland Slope"
"          0.153 Pervious Area"
"          25.000 Pervious length"
"          2.000 Pervious slope"
"          0.017 Impervious Area"
"          25.000 Impervious length"
"          2.000 Impervious slope"
"          0.250 Pervious Manning 'n'"
"          61.000 Pervious SCS Curve No."
"          0.247 Pervious Runoff coefficient"
"          0.100 Pervious Ia/S coefficient"
"          16.239 Pervious Initial abstraction"
"          0.015 Impervious Manning 'n'"
"          98.000 Impervious SCS Curve No."
"          0.915 Impervious Runoff coefficient"
"          0.250 Impervious Ia/S coefficient"
"          1.296 Impervious Initial abstraction"
"          0.017   0.000   0.066   0.161 c.m/sec"
"          Catchment 202          Pervious   Impervious Total Area
"
"          Surface Area          0.153   0.017   0.170
hectare"
"          Time of concentration 14.162   1.412   10.443
minutes"
"          Time to Centroid      113.179   86.195   105.307
minutes"
"          Rainfall depth        87.079   87.079   87.079
mm"
"          Rainfall volume       133.23   14.80   148.03
c.m"
"          Rainfall losses       65.589   7.419   59.772
mm"
"          Runoff depth          21.491   79.660   27.308
mm"
"          Runoff volume         32.88   13.54   46.42
c.m"

```


"	Runoff coefficient	0.247	0.915	0.314
"				
"	Maximum flow	0.014	0.010	0.017
c.m/sec"				
" 40	HYDROGRAPH Add Runoff "			
"	4 Add Runoff "			
"	0.017 0.017 0.066 0.161"			
" 40	HYDROGRAPH Copy to Outflow"			
"	8 Copy to Outflow"			
"	0.017 0.017 0.017 0.161"			
" 40	HYDROGRAPH Combine 2"			
"	6 Combine "			
"	2 Node #"			
"	Towards Victoria Road"			
"	Maximum flow	0.017	c.m/sec"	
"	Hydrograph volume	46.423	c.m"	
"	0.017 0.017 0.017 0.017"			
" 40	HYDROGRAPH Start - New Tributary"			
"	2 Start - New Tributary"			
"	0.017 0.000 0.017 0.017"			
" 33	CATCHMENT 201"			
"	1 Triangular SCS"			
"	1 Equal length"			
"	1 SCS method"			
"	201 No description"			
"	20.000 % Impervious"			
"	10.430 Total Area"			
"	90.000 Flow length"			
"	2.000 Overland Slope"			
"	8.344 Pervious Area"			
"	90.000 Pervious length"			
"	2.000 Pervious slope"			
"	2.086 Impervious Area"			
"	90.000 Impervious length"			
"	2.000 Impervious slope"			
"	0.250 Pervious Manning 'n'"			
"	61.000 Pervious SCS Curve No."			
"	0.247 Pervious Runoff coefficient"			
"	0.100 Pervious Ia/S coefficient"			
"	16.239 Pervious Initial abstraction"			
"	0.015 Impervious Manning 'n'"			
"	98.000 Impervious SCS Curve No."			
"	0.909 Impervious Runoff coefficient"			
"	0.250 Impervious Ia/S coefficient"			
"	1.296 Impervious Initial abstraction"			
"	1.127 0.000 0.017 0.017 c.m/sec"			
"	Catchment 201 Pervious Impervious Total Area			
"				
"	Surface Area	8.344	2.086	10.430
hectare"				
"	Time of concentration	30.542	3.046	17.366
minutes"				

"	Time to Centroid	132.374	88.578	111.387
minutes"				
"	Rainfall depth	87.079	87.079	87.079
mm"				
"	Rainfall volume	7265.89	1816.47	9082.36
c.m"				
"	Rainfall losses	65.579	7.952	54.054
mm"				
"	Runoff depth	21.500	79.127	33.025
mm"				
"	Runoff volume	1793.94	1650.60	3444.53
c.m"				
"	Runoff coefficient	0.247	0.909	0.379
"				
"	Maximum flow	0.485	1.078	1.127
c.m/sec"				
" 40	HYDROGRAPH Add Runoff "			
"	4 Add Runoff "			
"	1.127 1.127 0.017 0.017"			
" 54	POND DESIGN"			
"	1.127 Current peak flow c.m/sec"			
"	0.563 Target outflow c.m/sec"			
"	3444.5 Hydrograph volume c.m"			
"	22. Number of stages"			
"	0.000 Minimum water level metre"			
"	335.000 Maximum water level metre"			
"	0.000 Starting water level metre"			
"	0 Keep Design Data: 1 = True; 0 = False"			
"	Level Discharge Volume"			
"	331.550 0.000 0.000"			
"	331.650 0.00660 106.780"			
"	331.750 0.00930 219.680"			
"	331.850 0.01140 338.820"			
"	331.950 0.01320 464.320"			
"	332.050 0.01480 596.320"			
"	332.150 0.01620 734.940"			
"	332.250 0.01750 880.320"			
"	332.350 0.01870 1032.580"			
"	332.450 0.01980 1191.840"			
"	332.550 0.09320 1358.240"			
"	332.650 0.09890 1531.900"			
"	332.750 0.1042 1712.960"			
"	332.850 0.1094 1901.540"			
"	332.950 0.1142 2097.760"			
"	333.050 0.1189 2301.760"			
"	333.150 0.1234 2513.660"			
"	333.250 0.1278 2733.600"			
"	333.350 0.1320 2961.700"			
"	333.450 0.4706 3198.080"			
"	333.550 1.120 3442.880"			
"	333.650 2.007 3696.220"			
"	Peak outflow 0.124 c.m/sec"			

"	Maximum level		333.156	metre"
"	Maximum storage		2526.598	c.m"
"	Centroidal lag		9.068	hours"
"	1.127	1.127	0.124	0.017 c.m/sec"
" 40	HYDROGRAPH	Combine	2"	
"	6	Combine	"	
"	2	Node #"		
"		Towards Victoria Road"		
"	Maximum flow		0.125	c.m/sec"
"	Hydrograph volume		3489.934	c.m"
"	1.127	1.127	0.124	0.125"

" MIDUSS
Output ----->"
" MIDUSS version Version 2.25
rev. 473"
" MIDUSS created
February 7, 2010"
" 10 Units used:
ie METRIC"
" Job folder: \\Triton-srv-ferg
\OfficeData\
" Private Development\A2680-AUDREY SUB\Phase 2\SWM
Design\20210607 Rev 1\Modelling\Post Development\v2\Hazel 48hr post"
" Output filename: Hazel 48-hour
post.out"
" Licensee name:
jkoolhaas"
" Company Triton Engineering
Services Limited"
" Date & Time last used: 2021-06-14 at
2:53:15 PM"
" 31 TIME PARAMETERS"
" 5.000 Time Step"
" 3000.000 Max. Storm length"
" 6000.000 Max. Hydrograph"
" 32 STORM Historic"
" 5 Historic"
" 2880.000 Duration"
" 576.000 Rainfall intensity values"
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" 2.028 2.028 2.028 2.028 2.028"
" 2.028 2.028 2.028 2.028 2.028"
" 2.028 2.028 2.028 2.028 2.028"
" 2.028 2.028 2.028 2.028 2.028"
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" 2.028 2.028 2.028 2.028 2.028"
" 2.028 2.028 2.028 2.028 2.028"

"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	2.028	2.028	2.028"
"	2.028	2.028	6.000	6.000	6.000"
"	6.000	6.000	6.000	6.000	6.000"
"	6.000	6.000	6.000	6.000	4.000"
"	4.000	4.000	4.000	4.000	4.000"
"	4.000	4.000	4.000	4.000	4.000"
"	4.000	6.000	6.000	6.000	6.000"
"	6.000	6.000	6.000	6.000	6.000"
"	6.000	6.000	6.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	17.000	17.000	17.000	17.000	17.000"
"	17.000	17.000	17.000	17.000	17.000"
"	17.000	17.000	13.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	23.000"
"	23.000	23.000	23.000	23.000	23.000"
"	23.000	23.000	23.000	23.000	23.000"
"	23.000	13.000	13.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	53.000	53.000	53.000	53.000	53.000"
"	53.000	53.000	53.000	53.000	53.000"
"	53.000	53.000	38.000	38.000	38.000"
"	38.000	38.000	38.000	38.000	38.000"
"	38.000	38.000	38.000	38.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	13.000	13.000	13.000	13.000	13.000"
"	13.000"				
"	Maximum intensity		53.000	mm/hr"	
"	Total depth		285.008	mm"	
"	6	200hyd	Hydrograph extension used in this file"		
" 33	CATCHMENT 203"				
"	1	Triangular SCS"			
"	1	Equal length"			
"	1	SCS method"			
"	203	No description"			
"	10.000	% Impervious"			
"	1.350	Total Area"			
"	62.000	Flow length"			
"	2.000	Overland Slope"			

"	1.215	Pervious Area"			
"	62.000	Pervious length"			
"	2.000	Pervious slope"			
"	0.135	Impervious Area"			
"	62.000	Impervious length"			
"	2.000	Impervious slope"			
"	0.250	Pervious Manning 'n'"			
"	81.000	Pervious SCS Curve No."			
"	0.806	Pervious Runoff coefficient"			
"	0.100	Pervious Ia/S coefficient"			
"	5.958	Pervious Initial abstraction"			
"	0.015	Impervious Manning 'n'"			
"	98.000	Impervious SCS Curve No."			
"	0.970	Impervious Runoff coefficient"			
"	0.250	Impervious Ia/S coefficient"			
"	1.296	Impervious Initial abstraction"			
"		0.200	0.000	0.000	0.000 c.m/sec"
"		Catchment 203	Pervious	Impervious	Total Area
"					
"		Surface Area	1.215	0.135	1.350
hectare"					
"		Time of concentration	24.341	4.422	21.992
minutes"					
"		Time to Centroid	2475.358	2277.646	2452.047
minutes"					
"		Rainfall depth	285.008	285.008	285.008
mm"					
"		Rainfall volume	3462.85	384.76	3847.61
c.m"					
"		Rainfall losses	55.177	8.544	50.514
mm"					
"		Runoff depth	229.831	276.465	234.495
mm"					
"		Runoff volume	2792.45	373.23	3165.68
c.m"					
"		Runoff coefficient	0.806	0.970	0.823
"					
"		Maximum flow	0.180	0.020	0.200
c.m/sec"					
" 40		HYDROGRAPH Add Runoff "			
"	4	Add Runoff "			
"		0.200	0.200	0.000	0.000"
" 40		HYDROGRAPH Copy to Outflow"			
"	8	Copy to Outflow"			
"		0.200	0.200	0.200	0.000"
" 40		HYDROGRAPH Combine 1"			
"	6	Combine "			
"	1	Node #"			
"		Towards Southwesterly Wetland/Woodland"			
"		Maximum flow	0.200	c.m/sec"	
"		Hydrograph volume	3165.679	c.m"	
"		0.200	0.200	0.200	0.200"

```

" 40          HYDROGRAPH Start - New Tributary"
"            2    Start - New Tributary"
"              0.200    0.000    0.200    0.200"
" 33          CATCHMENT 204"
"            1    Triangular SCS"
"            1    Equal length"
"            1    SCS method"
"           204    No description"
"          10.000    % Impervious"
"           1.020    Total Area"
"          79.000    Flow length"
"           2.000    Overland Slope"
"           0.918    Pervious Area"
"          79.000    Pervious length"
"           2.000    Pervious slope"
"           0.102    Impervious Area"
"          79.000    Impervious length"
"           2.000    Impervious slope"
"           0.250    Pervious Manning 'n'"
"          81.000    Pervious SCS Curve No."
"           0.806    Pervious Runoff coefficient"
"           0.100    Pervious Ia/S coefficient"
"           5.958    Pervious Initial abstraction"
"           0.015    Impervious Manning 'n'"
"          98.000    Impervious SCS Curve No."
"           0.973    Impervious Runoff coefficient"
"           0.250    Impervious Ia/S coefficient"
"           1.296    Impervious Initial abstraction"
"              0.152    0.000    0.200    0.200 c.m/sec"
"            Catchment 204          Pervious    Impervious Total Area
"
"            Surface Area          0.918    0.102    1.020
hectare"
"            Time of concentration  28.150    5.113    25.425
minutes"
"            Time to Centroid      2480.617  2279.444  2456.823
minutes"
"            Rainfall depth        285.008    285.008    285.008
mm"
"            Rainfall volume        2616.38    290.71    2907.09
c.m"
"            Rainfall losses        55.269    7.653    50.508
mm"
"            Runoff depth           229.739    277.355    234.501
mm"
"            Runoff volume           2109.01    282.90    2391.91
c.m"
"            Runoff coefficient      0.806    0.973    0.823
"
"            Maximum flow           0.137    0.015    0.152
c.m/sec"
" 40          HYDROGRAPH Add Runoff "

```


"	4	Add Runoff "				
"			0.152	0.152	0.200	0.200"
" 40		HYDROGRAPH Copy to Outflow"				
"	8	Copy to Outflow"				
"			0.152	0.152	0.152	0.200"
" 40		HYDROGRAPH Combine 1"				
"	6	Combine "				
"	1	Node #"				
"		Towards Southwesterly Wetland/Woodland"				
"		Maximum flow			0.351	c.m/sec"
"		Hydrograph volume			5557.586	c.m"
"			0.152	0.152	0.152	0.351"
" 40		HYDROGRAPH Start - New Tributary"				
"	2	Start - New Tributary"				
"			0.152	0.000	0.152	0.351"
" 33		CATCHMENT 202"				
"	1	Triangular SCS"				
"	1	Equal length"				
"	1	SCS method"				
"	202	No description"				
"	10.000	% Impervious"				
"	0.170	Total Area"				
"	25.000	Flow length"				
"	2.000	Overland Slope"				
"	0.153	Pervious Area"				
"	25.000	Pervious length"				
"	2.000	Pervious slope"				
"	0.017	Impervious Area"				
"	25.000	Impervious length"				
"	2.000	Impervious slope"				
"	0.250	Pervious Manning 'n'"				
"	81.000	Pervious SCS Curve No."				
"	0.805	Pervious Runoff coefficient"				
"	0.100	Pervious Ia/S coefficient"				
"	5.958	Pervious Initial abstraction"				
"	0.015	Impervious Manning 'n'"				
"	98.000	Impervious SCS Curve No."				
"	0.960	Impervious Runoff coefficient"				
"	0.250	Impervious Ia/S coefficient"				
"	1.296	Impervious Initial abstraction"				
"			0.025	0.000	0.152	0.351 c.m/sec"
"		Catchment 202		Pervious		Impervious Total Area
"		Surface Area		0.153	0.017	0.170
hectare"		Time of concentration		14.114	2.564	12.762
minutes"		Time to Centroid		2460.238	2273.963	2438.435
minutes"		Rainfall depth		285.008	285.008	285.008
mm"		Rainfall volume		436.06	48.45	484.51

c.m"				
"	Rainfall losses	55.619	11.327	51.190
mm"				
"	Runoff depth	229.390	273.681	233.819
mm"				
"	Runoff volume	350.97	46.53	397.49
c.m"				
"	Runoff coefficient	0.805	0.960	0.820
"				
"	Maximum flow	0.022	0.003	0.025
c.m/sec"				
" 40	HYDROGRAPH Add Runoff "			
"	4 Add Runoff "			
"	0.025 0.025 0.152 0.351"			
" 40	HYDROGRAPH Copy to Outflow"			
"	8 Copy to Outflow"			
"	0.025 0.025 0.025 0.351"			
" 40	HYDROGRAPH Combine 2"			
"	6 Combine "			
"	2 Node #"			
"	Towards Victoria Road"			
"	Maximum flow 0.025 c.m/sec"			
"	Hydrograph volume 397.492 c.m"			
"	0.025 0.025 0.025 0.025"			
" 40	HYDROGRAPH Start - New Tributary"			
"	2 Start - New Tributary"			
"	0.025 0.000 0.025 0.025"			
" 33	CATCHMENT 201"			
"	1 Triangular SCS"			
"	1 Equal length"			
"	1 SCS method"			
"	201 No description"			
"	20.000 % Impervious"			
"	10.430 Total Area"			
"	90.000 Flow length"			
"	2.000 Overland Slope"			
"	8.344 Pervious Area"			
"	90.000 Pervious length"			
"	2.000 Pervious slope"			
"	2.086 Impervious Area"			
"	90.000 Impervious length"			
"	2.000 Impervious slope"			
"	0.250 Pervious Manning 'n'"			
"	81.000 Pervious SCS Curve No."			
"	0.806 Pervious Runoff coefficient"			
"	0.100 Pervious Ia/S coefficient"			
"	5.958 Pervious Initial abstraction"			
"	0.015 Impervious Manning 'n'"			
"	98.000 Impervious SCS Curve No."			
"	0.970 Impervious Runoff coefficient"			
"	0.250 Impervious Ia/S coefficient"			
"	1.296 Impervious Initial abstraction"			

"	1.549	0.000	0.025	0.025 c.m/sec"
"	Catchment 201		Pervious	Impervious Total Area
"				
"	Surface Area	8.344	2.086	10.430
hectare"				
"	Time of concentration	30.440	5.529	24.679
minutes"				
"	Time to Centroid	2483.995	2277.432	2436.224
minutes"				
"	Rainfall depth	285.008	285.008	285.008
mm"				
"	Rainfall volume	2.3781	0.5945	2.9726
ha-m"				
"	Rainfall losses	55.183	8.456	45.838
mm"				
"	Runoff depth	229.825	276.553	239.171
mm"				
"	Runoff volume	1.9177	0.5769	2.4946
ha-m"				
"	Runoff coefficient	0.806	0.970	0.839
"				
"	Maximum flow	1.243	0.318	1.549
c.m/sec"				
" 40	HYDROGRAPH Add Runoff "			
"	4 Add Runoff "			
"	1.549	1.549	0.025	0.025"
" 54	POND DESIGN"			
"	1.549	Current peak flow	c.m/sec"	
"	0.563	Target outflow	c.m/sec"	
"	24945.5	Hydrograph volume	c.m"	
"	22.	Number of stages"		
"	0.000	Minimum water level	metre"	
"	335.000	Maximum water level	metre"	
"	0.000	Starting water level	metre"	
"	0	Keep Design Data: 1 = True; 0 = False"		
"		Level Discharge	Volume"	
"	331.550	0.000	0.000"	
"	331.650	0.00660	105.120"	
"	331.750	0.00930	215.500"	
"	331.850	0.01140	331.250"	
"	331.950	0.01320	452.520"	
"	332.050	0.01480	579.410"	
"	332.150	0.01620	712.080"	
"	332.250	0.01750	850.630"	
"	332.350	0.01870	995.200"	
"	332.450	0.01980	1145.920"	
"	332.550	0.03950	1302.920"	
"	332.650	0.05420	1466.320"	
"	332.750	0.06460	1636.250"	
"	332.850	0.07320	1812.840"	
"	332.950	0.08070	1996.220"	
"	333.050	0.08750	2186.520"	

"	333.150	0.09370	2383.860"		
"	333.250	0.09950	2588.370"		
"	333.350	0.1050	2800.180"		
"	333.450	0.6598	3019.410"		
"	333.550	1.704	3246.210"		
"	333.650	3.101	3480.680"		
"	Peak outflow		1.543	c.m/sec"	
"	Maximum level		333.535	metre"	
"	Maximum storage		3211.412	c.m"	
"	Centroidal lag		44.012	hours"	
"	1.549	1.549	1.543	0.025 c.m/sec"	
" 40	HYDROGRAPH	Combine	2"		
"	6	Combine	"		
"	2	Node #"			
"		Towards Victoria Road"			
"	Maximum flow		1.566	c.m/sec"	
"	Hydrograph volume		25346.680	c.m"	
"	1.549	1.549	1.543	1.566"	

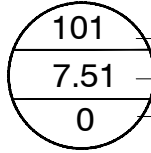
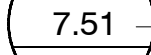






FIGURES

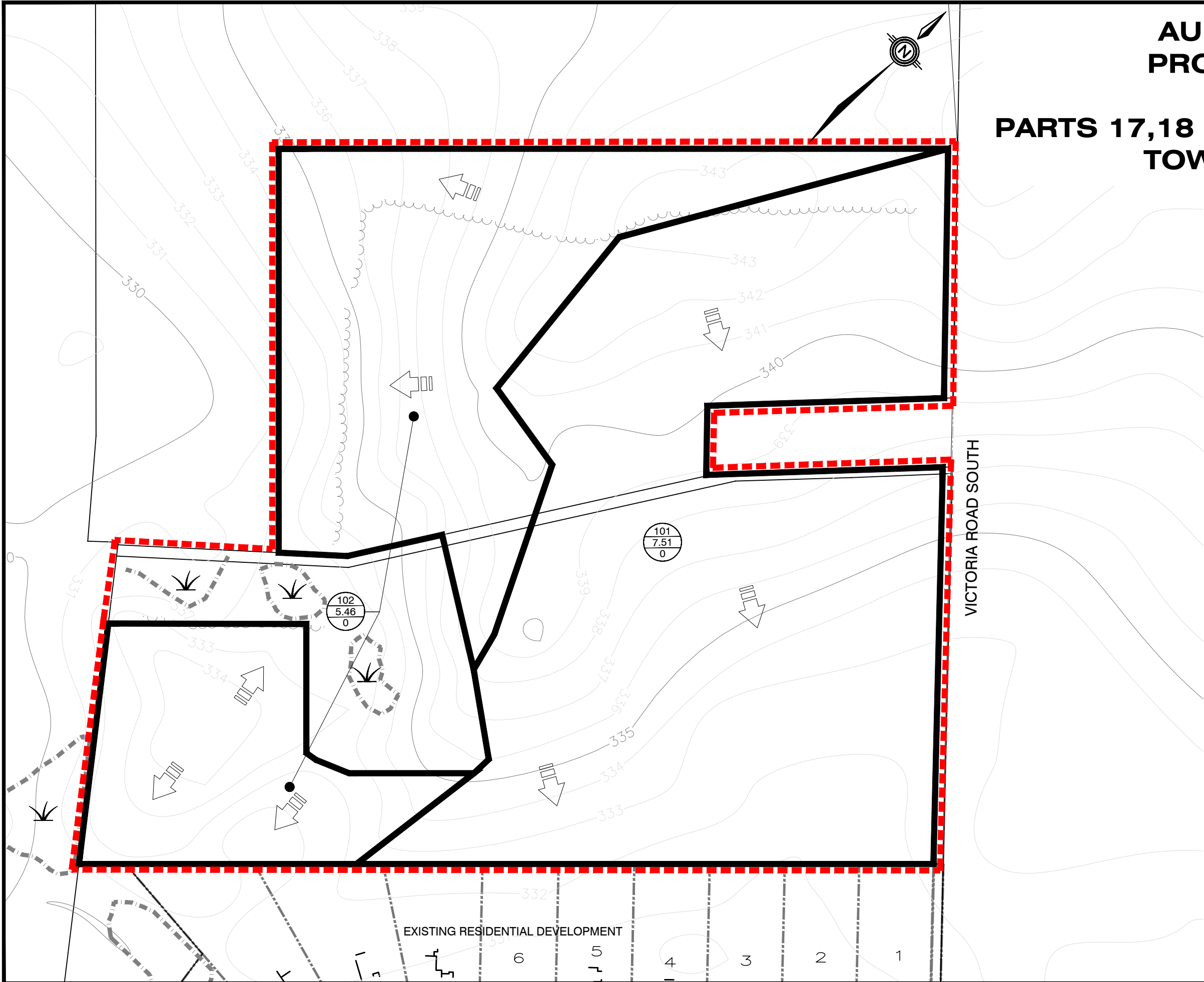
Figure 1 – Pre Development Storm Drainage Area Map

Figure 2 – Post Development Storm Drainage Area Map

AUDREY MEADOWS LTD. PROPOSED RESIDENTIAL DEVELOPMENT PARTS 17,18 & 19, CONCESSION 8 TOWNSHIP OF PUSLINCH

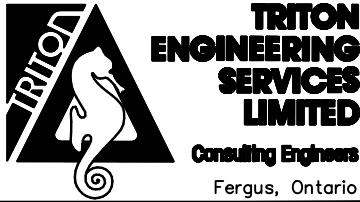
LEGEND:

-  CATCHMENT ID
-  CATCHMENT AREA (ha)
-  PERCENT IMPERVIOUS
-  DRAINAGE LIMIT
-  SURVEYED DRIPLINE LIMIT
-  SURVEYED WETLAND LIMIT
-  PROPERTY LIMITS
-  LIMIT OF DEVELOPMENT



PRE DEVELOPMENT STORM DRAINAGE AREA MAP

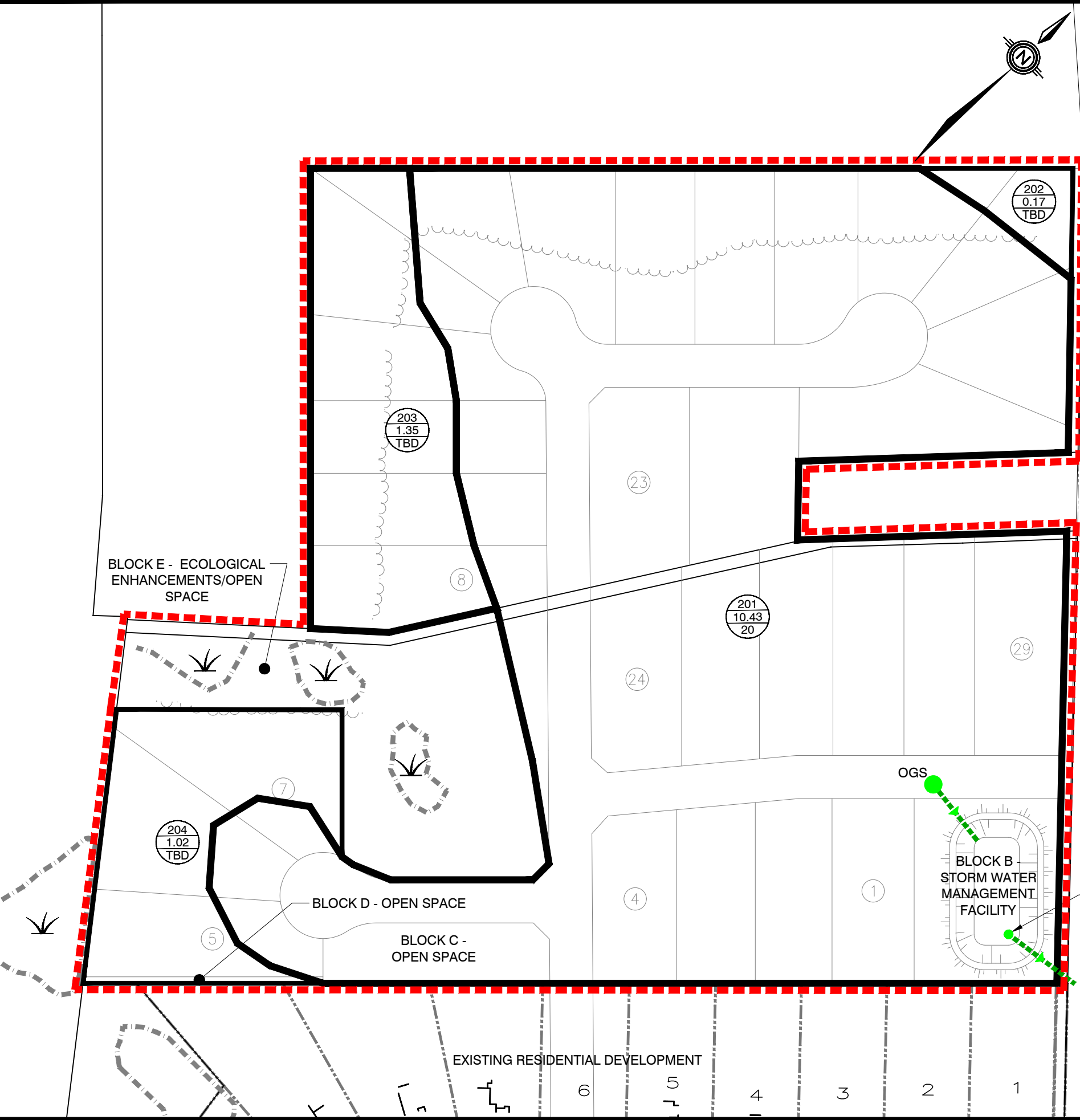
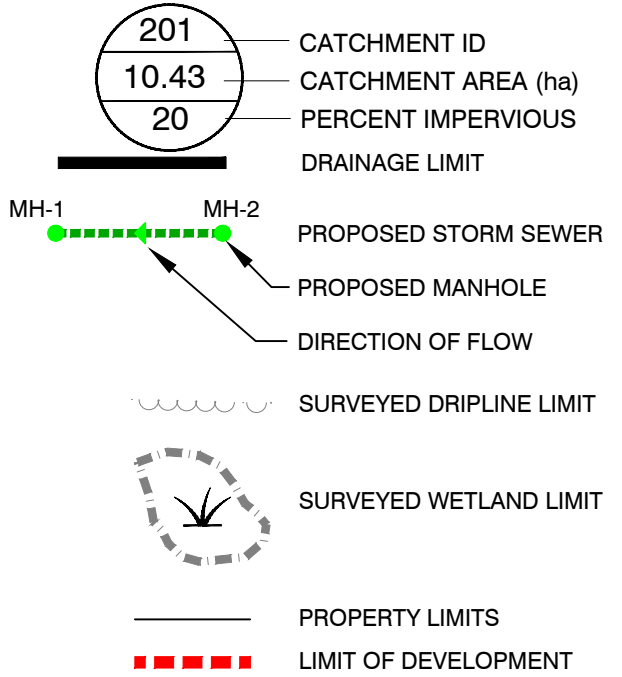
SCALE: 1:2000
JUNE 2021
A2680
Figure 1



k:\a2680\phase 2\design\sheets\q2680-dam-pre.dwg - 2021-06-16 - cwalshe

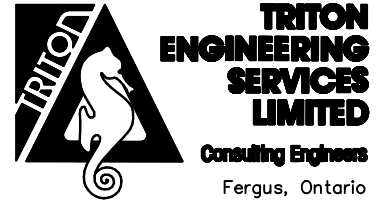
AUDREY MEADOWS LTD. PROPOSED RESIDENTIAL DEVELOPMENT PARTS 17,18 & 19, CONCESSION 8 TOWNSHIP OF PUSLINCH

LEGEND:



POST DEVELOPMENT STORM DRAINAGE AREA MAP

SCALE: 1:2000
JUNE 2021
A2680
Figure 2

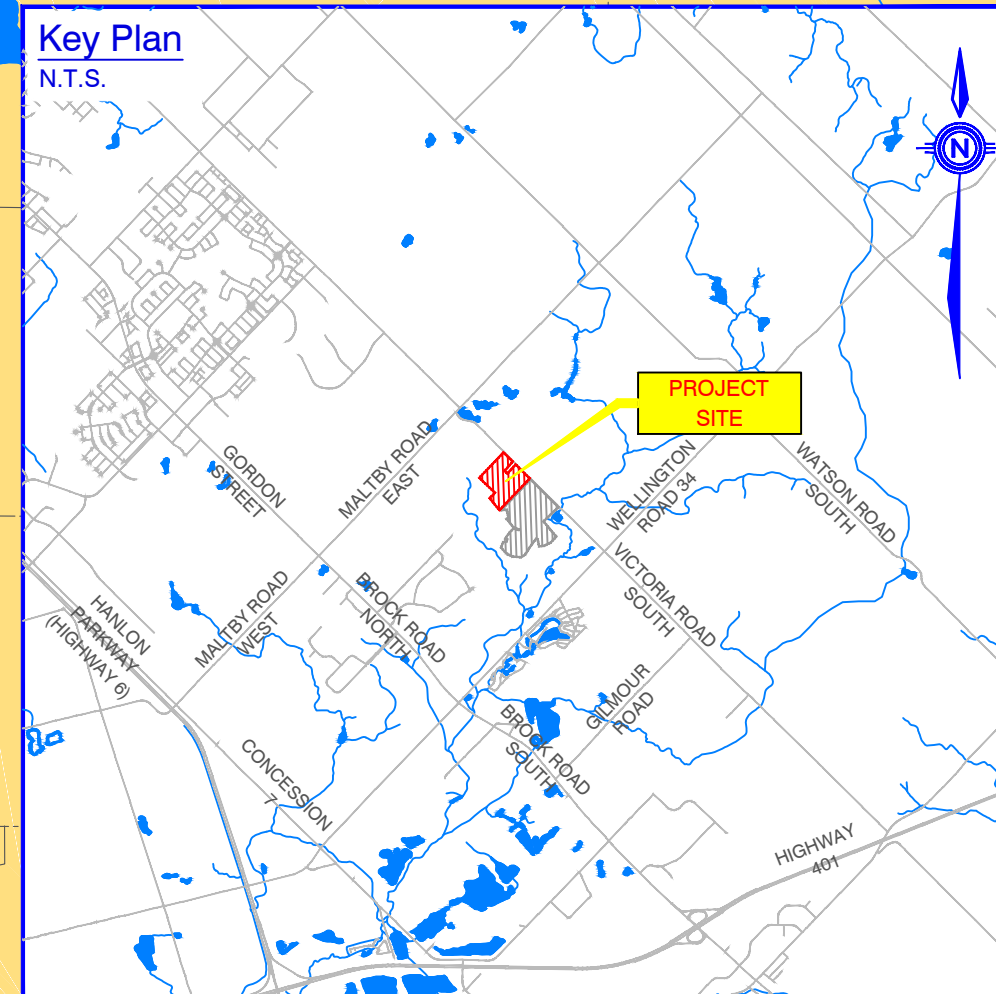
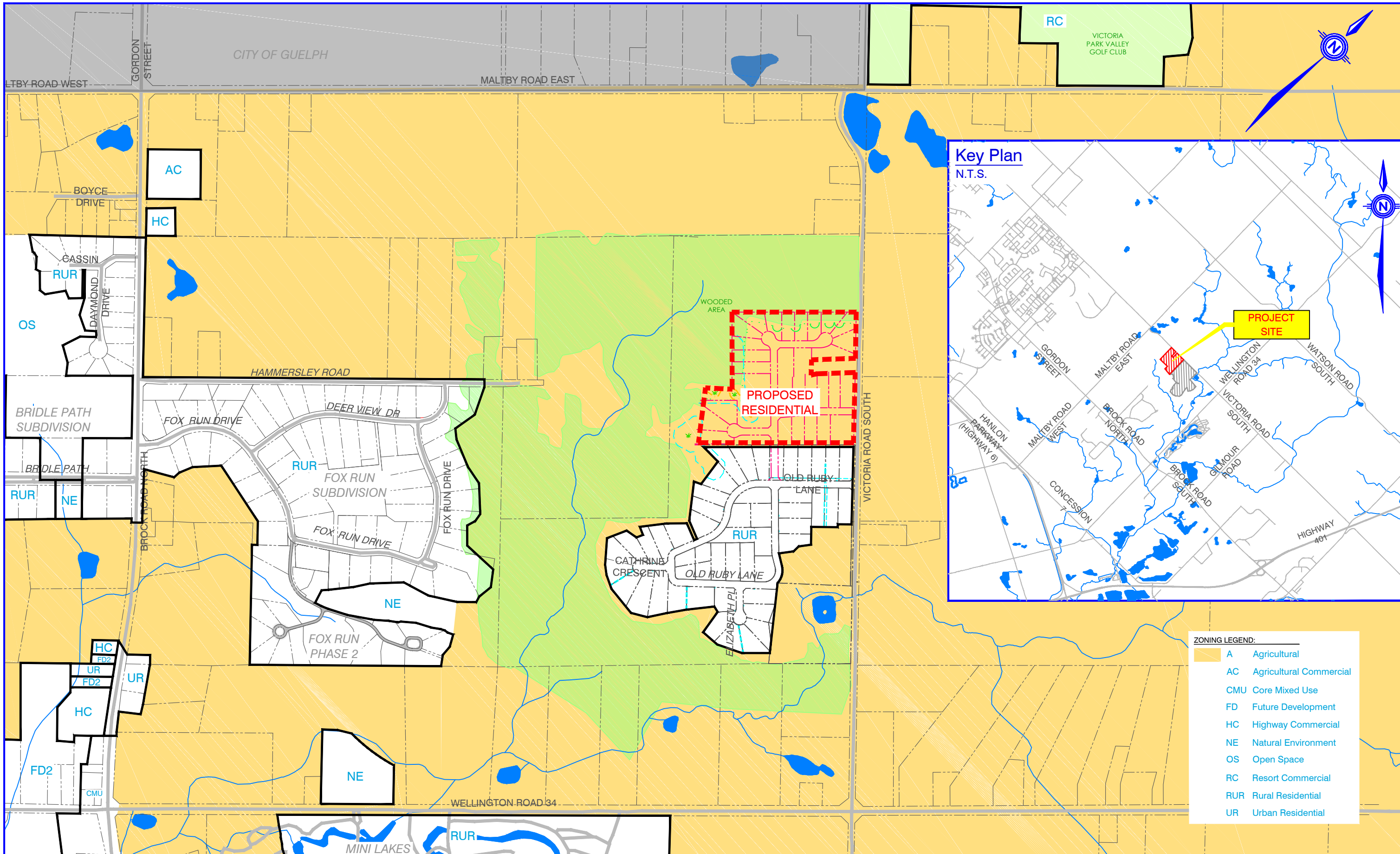


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DRAWINGS

Drawing 01 – Location Plan

Drawing 02 – Proposed Residential Development Concept Plan



ZONING LEGEND:

A	Agricultural
AC	Agricultural Commercial
CMU	Core Mixed Use
FD	Future Development
HC	Highway Commercial
NE	Natural Environment
OS	Open Space
RC	Resort Commercial
RUR	Rural Residential
UR	Urban Residential

DISCLAIMERS:
 1. ALL EXISTING ELEVATIONS & DIMENSIONS TO BE CONFIRMED ON SITE. THE LOCATION OF UTILITIES IS APPROXIMATE ONLY AND SHOULD BE, DETERMINED BY CONSULTING THE MUNICIPAL AUTHORITIES AND UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE THE LOCATION OF UTILITIES AND SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION AGAINST DAMAGE.

No	DATE	REVISION	INITIAL

PROPOSED RESIDENTIAL DEVELOPMENT
 PARTS 17, 18 & 19, CONCESSION 8
 TOWNSHIP OF PUSLINCH

AUDREY MEADOWS LTD.
 P.O. BOX 1805
 GUELPH, ONTARIO N1H 7A1

LOCATION PLAN

PROJECT No:
A2680

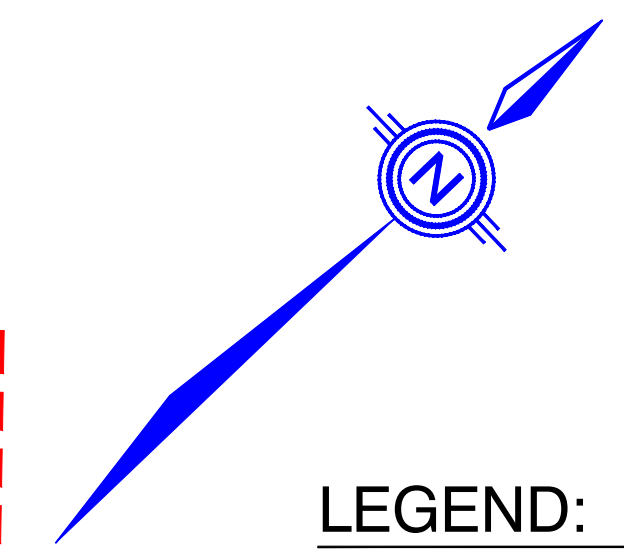
DESIGNED BY: **C.J.D.W.**
 CHECKED BY: **P.F.Z.**
 APPROVED BY: **P.F.Z.**
 DATE: **APRIL 2019**




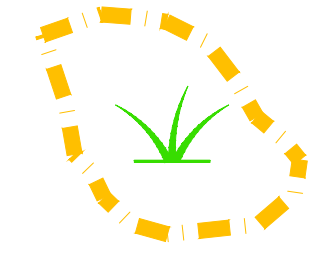


SCALE:
 N.T.S.
 UNLESS OTHERWISE SHOWN

DRAWING NUMBER
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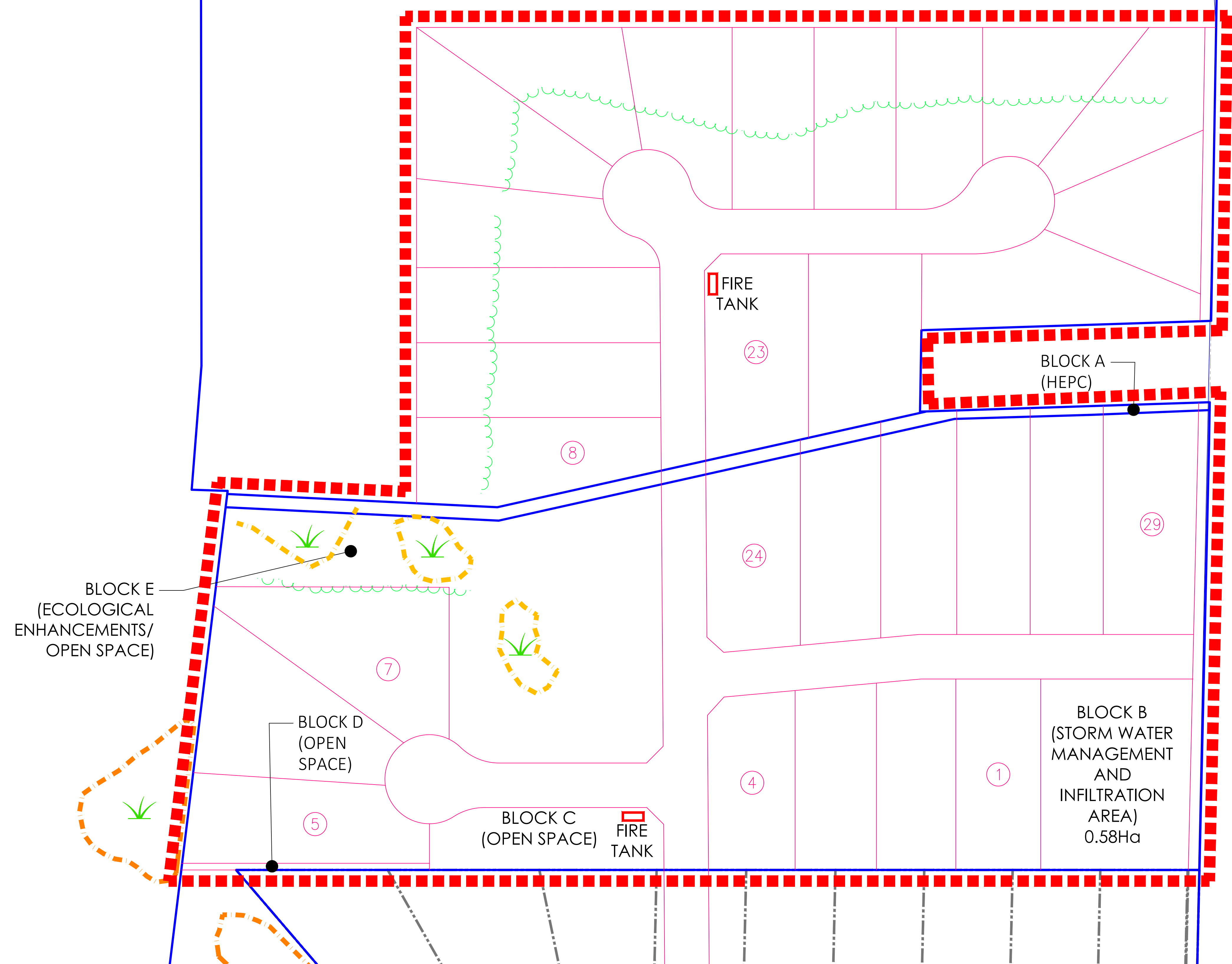
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LEGEND:

-  SURVEYED DRIPLINE LIMIT
-  SURVEYED WETLAND LIMIT
-  LIMITS OF PROPOSAL
-  PROPERTY LIMITS

LOT #	FRONTAGE (m)	AREA (Ha)
1	38.1	0.33
2	35.6	0.3
3	36.5	0.3
4	39.1	0.31
5	41.8	0.38
6	28.2	0.43
7	33.3	0.47
8	26.1	0.38
9	33.6	0.37
10	33.8	0.37
11	38.7	0.33
12	21.1	0.36
13	24.7	0.33
14	41.3	0.3
15	36.8	0.3
16	36.8	0.3
17	38.9	0.3
18	34.2	0.3
19	20.3	0.3
20	25.9	0.3
21	80.9	0.39
22	50.9	0.38
23	46.7	0.4
24	42.1	0.35
25	36.3	0.32
26	34.1	0.32
27	32.9	0.32
28	32.8	0.32
29	40.6	0.42
BLOCKS		
A		N/A
B		0.58
C		0.28
D		0.03
E		1.55



VICTORIA ROAD SOUTH

SOURCES:
 1. VEGETATION COMMUNITIES – LINCOLN ENVIRONMENTAL, 2021
 2. SURVEYED WETLAND LIMITS & DRIPLINE LIMITS – SAI/TESL, MAY 2021

No	DATE	REVISION	INITIAL

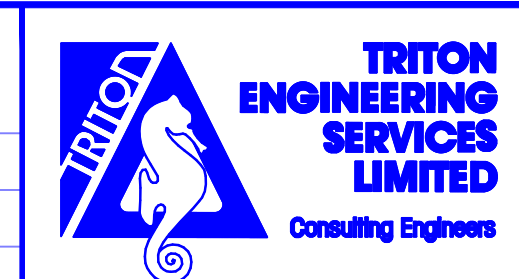
PROPOSED RESIDENTIAL DEVELOPMENT
 PARTS 17,18 & 19, CONCESSION 8
 TOWNSHIP OF PUSLINCH

AUDREY MEADOWS LTD.
 P.O. BOX 1805
 GUEPLH, ONTARIO N1H 7A1

PROPOSED LOT FABRIC PLAN

PROJECT No
A2680

DESIGNED BY: C.J.D.W.
 CHECKED BY: P.F.Z.
 APPROVED BY: P.F.Z.
 DATE: June 2021



SCALE:
 N.T.S.
 UNLESS OTHERWISE SHOWN

DRAWING NUMBER
02

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