APPENDIX W

Future Floodplain Evaluation

City of Toronto

Floodplain Analysis for Southwest Agincourt Transportation Connection Study

March 29, 2023

FINAL



wsp



Floodplain Analysis for Southwest Agincourt Transportation Connection Study

City of Toronto

FINAL

Project No.: 19M-01888-00 Date: March 29, 2023

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WSP Canada Inc.



March 29, 2023

City of Toronto 100 Queen St. W. Toronto, ON M5H 2N2

Dear Madam/Sir:

Subject: Floodplain Analysis for Southwest Agincourt Transportation Connection Study

We are pleased to submit an electronic copy of the Floodplain Study report to support the study of Southwest Agincourt Transportation Connection, City of Toronto.

The report examines the hydraulic conditions of the West Highland Creek and provides an analysis of flood impacts under both current and proposed conditions, and provides the findings of the study.

We trust the submission of this documents meets your requirements. Should you have any comments we look forward to your response.

Yours sincerely,

1

Steven van Haren, P.Eng., Manager, Land Development / Water Resources

WSP ref.: 19M-01888-00

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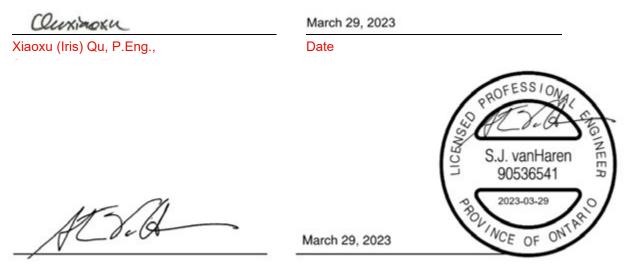
Revision History

FINAL

March 29, 2023	Floodplain Study				
Prepared by	Reviewed by Approved by				
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Signatures

Prepared by



Steven van Haren, P.Eng. Date Manager, Land Development/Water Resources

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Contributors

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TABLE OF CONTENTS

1		1
1.1	General	1
1.2	Scope of Floodplain Analysis	4
2	OVERVIEW 2020 TECHNICAL MEMO	5
3	CURRENT CONDITIONS	6
3.1	Site Location	6
3.2	Land Cover Map	6
3.3	Model Boundaries	6
3.4	Simulation Results	7
4	PROPOSED CONDITIONS	.11
4.1	Proposed Site Plan	11
4.2	Land Cover Map	11
4.3	Model Boundaries	11
4.4	Simulation Results	11
4.5	Potential Hydraulic Impacts	14
5	CONCLUSION	.18

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Figures

Figure 1 Site Location
Figure 2 Land Cover Map for Current Conditions9
Figure 3 Regional Floodlines – WSP vs TRCA 10
Figure 4 Land Cover Map for Proposed Conditions 12
Figure 5 Regional Floodlines - Proposed Conditions 13
Figure 6 Comparison of Regional Water Level - Proposed vs Current
Figure 7 Comparison of Regional Velocity - Proposed vs Current
Figure 8 Comparison of Regional Product of Depth and Velocity - Proposed vs Current

Appendices

- A Technical Memo "Agincourt HEC-RAS Model Update" (September 29, 2020)
- **B** Proposed Site Plan
- C Model Outputs from HEC-RAS 1D Portion

1 INTRODUCTION

1.1 General

The City of Toronto has retained WSP to undertake the Southwest Agincourt Transportation Connections Study (herein referred to as the SW Agincourt EA) following the Municipal Class Environmental Assessment (MCEA) process for Schedule 'C'. The purpose of this study is to consider the findings from the 2014 Feasibility Study, as well as the changes in the Focus Area and the latest City policies to identify improvements to enhance connectivity for all modes of transportation between Village Green Square (south of the CP Railway corridor), Cowdray Court, Collingwood Street and Sheppard Avenue East (in the vicinity of Reidmount Avenue and the Agincourt GO Station). A map of the study's Focus Area is shown in **Exhibit 1**.

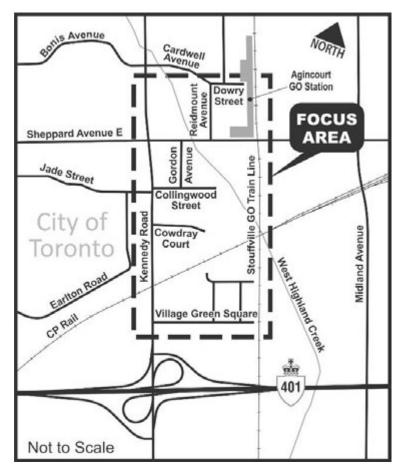


Exhibit 1: Southwest Agincourt Transportation Connections Study Study Area

In the SW Agincourt EA study, four complete street alternatives that will serve all modes of transportation (e.g. pedestrians, cyclists, transit and motorists) have been developed through the Focus Area, as shown in **Exhibit 2**. Option C-1 was recommended as the preferred in the SW Agincourt EA study.

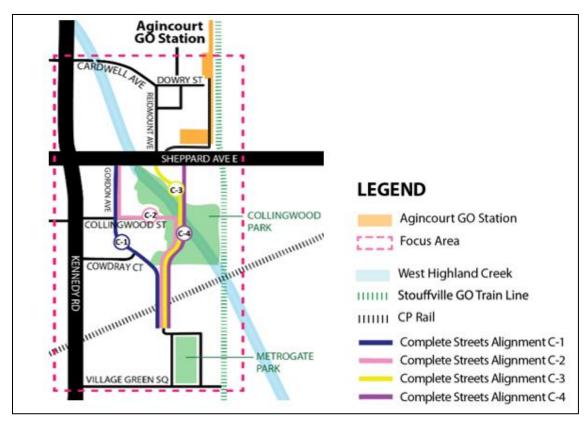


Exhibit 2: Map of Potential New Complete Streets

Two new muti-use trail alternatives have been considered in this study to serve key destinations and origins in the Focus Area: Agincourt GO Station, Collingwood Park, Kennedy/Sheppard, school and local transit, as shown in **Exhibit 3.** Option D-1 was recommended as the preferred in the SW Agincourt EA study.

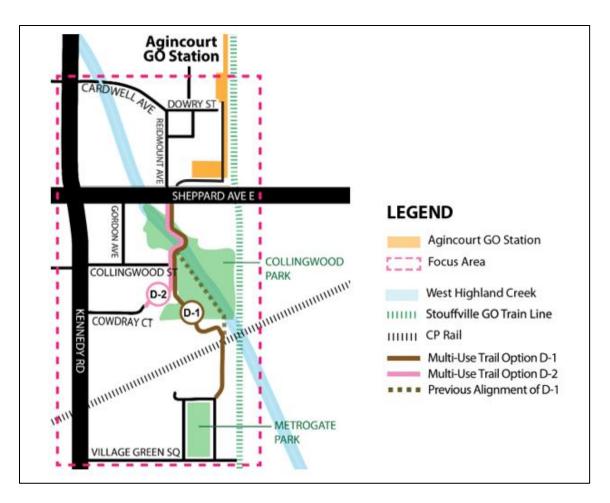


Exhibit 3: Map of Potential New Trail Connections

The preferred alternatives Complete Street Alignment C-1 and Multi-Use Trail Option D-1 were used for the proposed conditions in this floodplain analysis.

As shown in **Exhibit 1**, the West Highland Creek flows through the Focus Area from the north to the south. The West Highland Creek is a tributary of the Highland Creek, which is regulated by the Toronto and Region Conservation Authority (TRCA). Since the Focus Area is located within the watershed of the Highland Creek, a floodplain analysis was performed as part of the SW Agincourt EA Study to evaluate the potential hydraulic impacts of the proposed developments.

This report examines the current and proposed conditions, discusses the methodology of the hydraulic analysis, summarizes the results of computational simulations, and presents the findings for the Focus Area.

1.2 Scope of Floodplain Analysis

The scope of the floodplain analysis is described as follows:

- Overview the Technical Memo "Agincourt HEC-RAS Model Update" dated September 29, 2020 (herein referred to as 2020 Technical Memo).
- Simulate the current and proposed conditions under the Regional event; examine the potential hydraulic impacts.
- Prepare a report to document the methodology of the analysis and summarize the results.

2 OVERVIEW: 2020 TECHNICAL MEMO

On September 29, 2020, WSP prepared a technical memo entitled "Agincourt HEC-RAS Model Update" to document the HEC-RAS model updates. Below is the summary of the memo:

- WSP reviewed the latest Highland Creek HEC-RAS 1D model provided by the TRCA in April 2020. In the model, a creek named "Bendale Branch Reach 3" runs through the Focus Area. Four watercourse crossings were coded in this creek within the Focus Area. Among these crossings, the complex "Railway double crossing" was coded using two separate structures: the Metrolinx GO Stouffville Railway crossing and CP Railway crossing.
- WSP described the conversion of the TRCA HEC-RAS 1D model to a 1D/2D coupled model in the Focus Area by WSP to evaluate the spill paths and flooding conditions, especially at the Railway double crossing. In the WSP 1D/2D coupled model, the Railway double crossing was combined to be one structure configuration including two extended Metrolinx GO Stouffville Railway culverts, the railway top edge as an non-parallel weir and the existing CP bridge piers above.
- WSP presented the comparison of the modelled Regional water levels and floodlines between the TRCA 1D and WSP 1D/2D coupled model.

The 2020 Technical Memo is provided in Appendix A.

3 CURRENT CONDITIONS

3.1 Site Location

As stated above, WSP converted the TRCA 1D HEC-RAS model to a 1D/2D coupled model in the Focus Area. **Figure 1** shows the site location, 1D/2D coupled model and the alignments of the proposed road and trail. The details of the coupled model are documented in the *2020 Technical Memo*.

3.2 Land Cover Map

The land cover map was generated to define the Manning's roughness in the 2D flow areas. Manning's n values of 0.025 and 0.05 were used for the impervious and pervious areas, respectively. **Figure 2** illustrates the land cover map under the current conditions.

3.3 Model Boundaries

Exhibit 4 shows the TRCA peak flows presented in the 2020 Technical Memo Table 2.

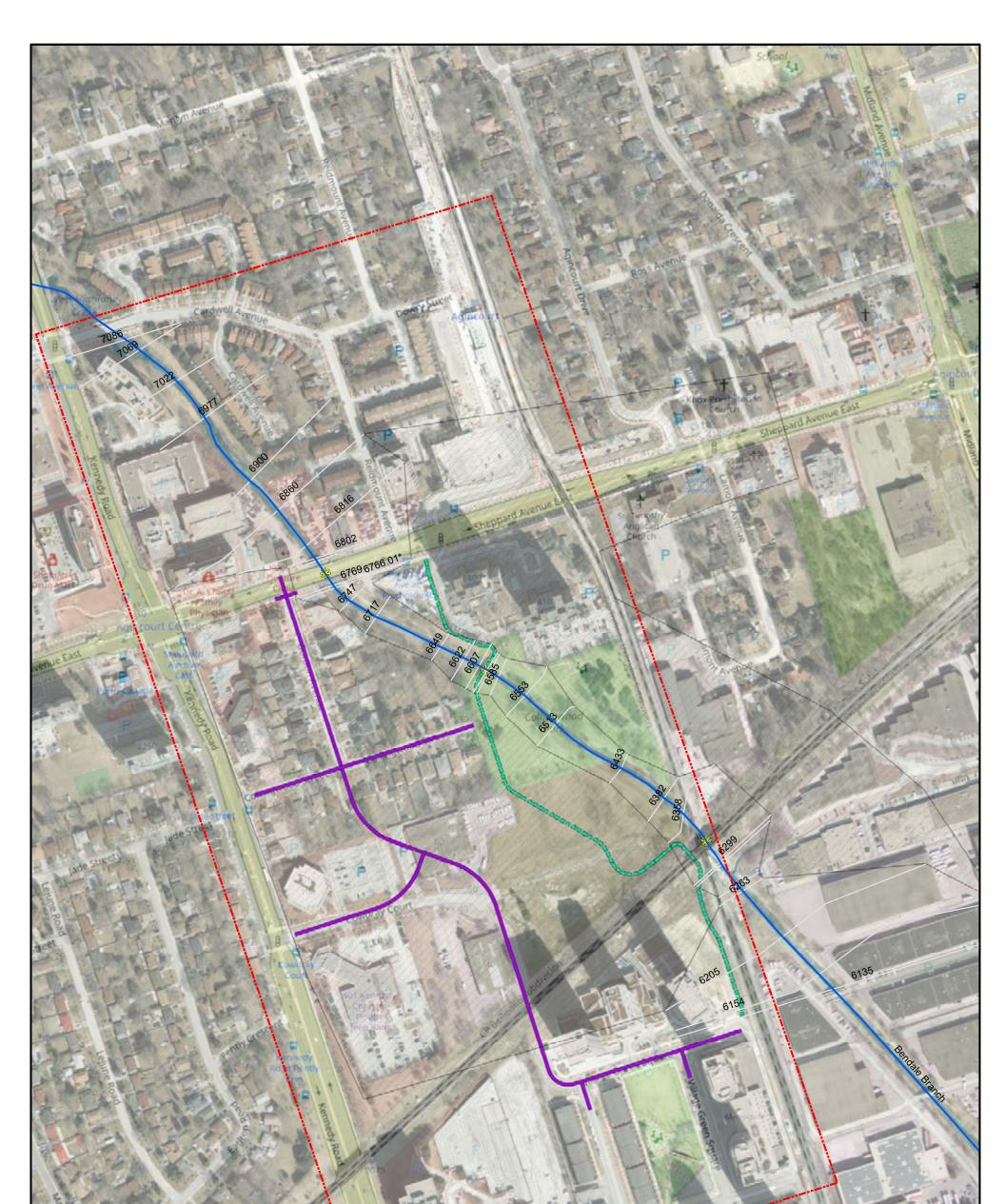
River	Reach	RS		Flow (m3/s)					Note		
		N3	2 yr	5 yr	10 yr	25 yr	50 yr	100 yr	350 yr	Regional	Note
		7086	27.32	44.41	55.62	68.68	77.94	87.43	186.83	158.668	
		6769	31.27	51.34	64.12	78.48	87.53	97.27	203.53	185.907	
Bendale Branch	Reach 3	6598	31.17	51.16	64.06	77.97	86.65	95.77	203.8	187.719	U/S of Railway Double Crossings
		6299	31.25	51.28	64.09	77.33	85.04	93.53	203.88	189.629	D/S of Railway Doule Crossings

Exhibit 4: TRCA Peak Flows

A quasi-steady hydrograph with a peak flow rate of 158.668 m³/s (Regional event) was entered at RS 7086. Lateral inflows were entered in other three locations to match the TRCA peak flows. The Rating curve generated from the TRCA 1D model was used as the downstream boundary at RS 6135.

3.4 Simulation Results

The Regional flood event was simulated and the Regional floodlines were produced from the model results, as shown in **Figure 3**. The TRCA existing Regional floodlines are also shown in **Figure 3** for the comparison.



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Legend		CITY OF TORONTO	114	
C:Focus Area	Proposed Complete Road Alignment C-1	TITLE FLOODPLAIN ANALYSIS FOR SOUTHWEST		
-Bendale Branch	Proposed Multi-Use Trail Alignment D-1	AGINCOURT TRANSPORTATION CONNECTION	Checked I.Q	Drawn J.C
-Cross Sections			Date March 2023	Proj. No. 19M-01888-00
* Watercourse Crossir	ng	Site Location	Scale	Figure No.
2D Areas			1:3,500	1



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Legend

2D Areas

Focus Area -Bendale Branch Cross Sections

Watercourse Crossing

Manning's n_Current Conditions Urban Uses Impervious 0.025 Urban Uses Pervious 0.05

TITLE

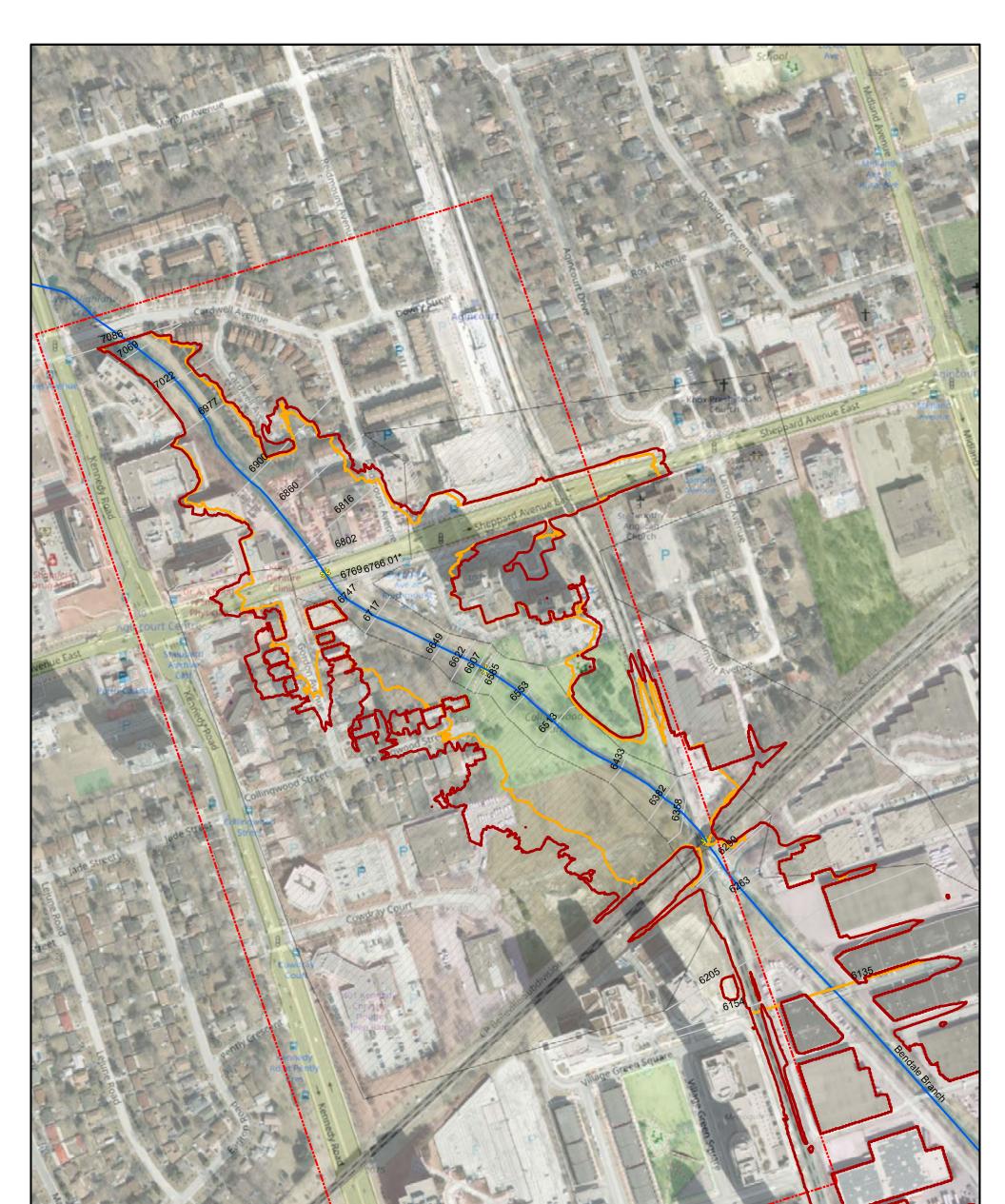
CLIENT

FLOODPLAIN ANALYSIS FOR SOUTHWEST AGINCOURT TRANSPORTATION CONNECTION

CITY OF TORONTO

Land Cover Map for 2D Areas -Current Conditions

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Checked	Drawn			
I.Q	J.C			
Date	Proj. No.			
March 2023	19M-01888-00			
Scale 1:3,500	Figure No. 2			



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Legend

- Focus Area
- Bendale Branch
- -Cross Sections
- Watercourse Crossing

-TRCA Regional Floodlines (1D, April 2020)

(1D/2D Model)

WSP Regional Floodlines_Current Conditions

🖂 2D Areas

TITLE FLOODPLAIN ANALYSIS FOR SOUTHWEST AGINCOURT TRANSPORTATION CONNECTION

CITY OF TORONTO

CLIENT

TRCA and WSP Regional Floodlines -Current Conditions

NSP					
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I.Q	J.C				
Date	Proj. No.				
March 2023	19M-01888-00				
Scale	Figure No.				
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4 PROPOSED CONDITIONS

4.1 Proposed Site Plan

As stated above, the preferred alternatives Complete Street Alignment C-1 and Multi-Use Trail Option D-1 were used for the proposed conditions in this floodplain analysis. The proposed site plan is provided in **Appendix B**.

The proposed surface was created and applied in the model simulation.

4.2 Land Cover Map

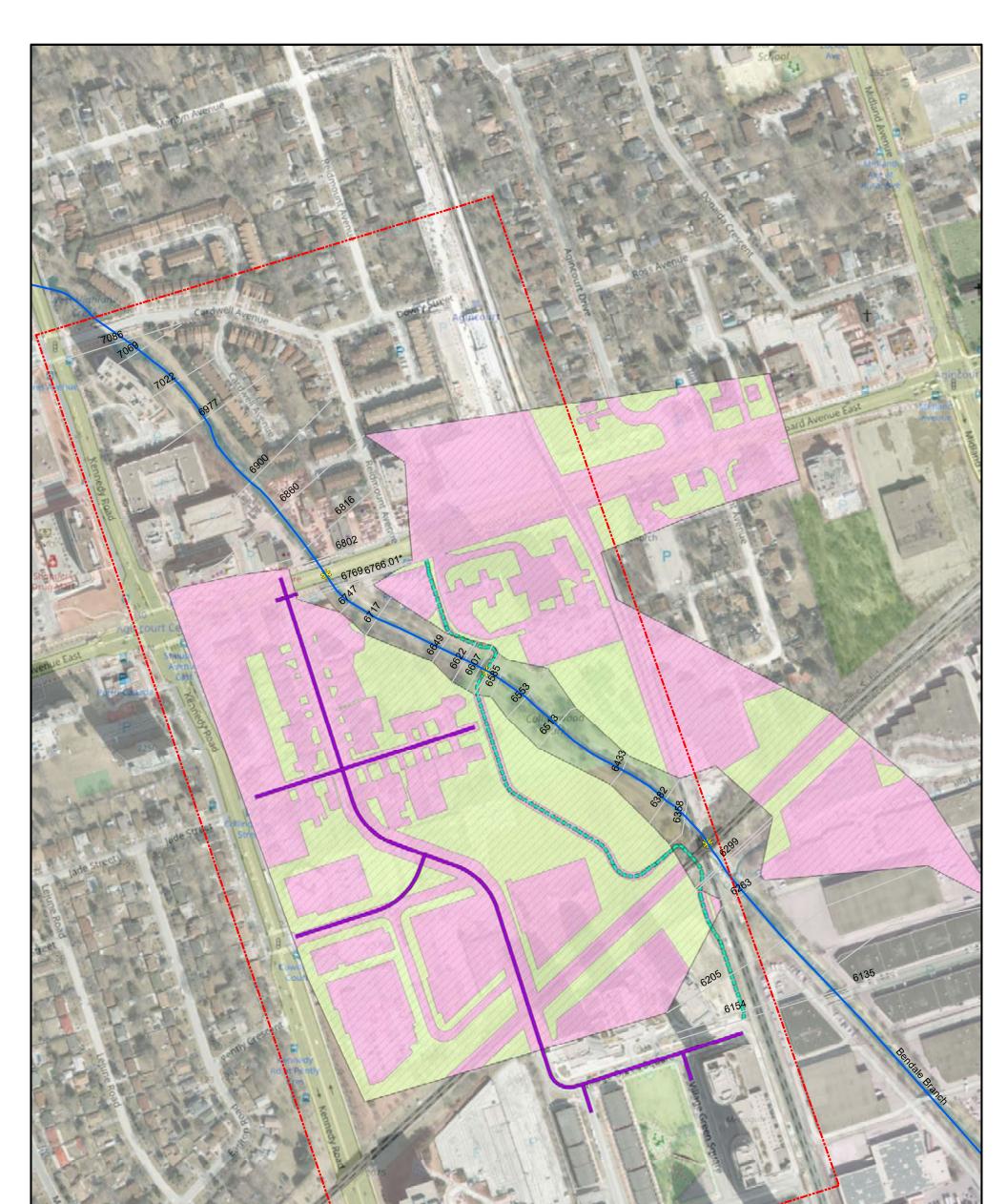
The land cover map for the 2D flow areas was revised for the proposed conditions. Manning's n values of 0.025 and 0.05 were used for the impervious and pervious areas, respectively. **Figure 4** illustrates the land cover map under the proposed conditions.

4.3 Model Boundaries

The flows and downstream boundaries remain unchanged for the proposed simulation.

4.4 Simulation Results

The Regional flood event was simulated and the Regional floodlines were produced, as shown in **Figure 5**. The outputs from the 1D portion for both current and proposed conditions are provided in **Appendix C**.



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Legend

Focus Area Bendale Branch Cross Sections Watercourse Crossing 2D Areas Proposed Complete Road Alignment C-1 Proposed Multi-Use Trail Alignment D-1

Proposed CompleteManning's n_ProposedRoad Alignment C-1Conditions

Urban Uses Impervious 0.025

> Urban Uses Pervious 0.05

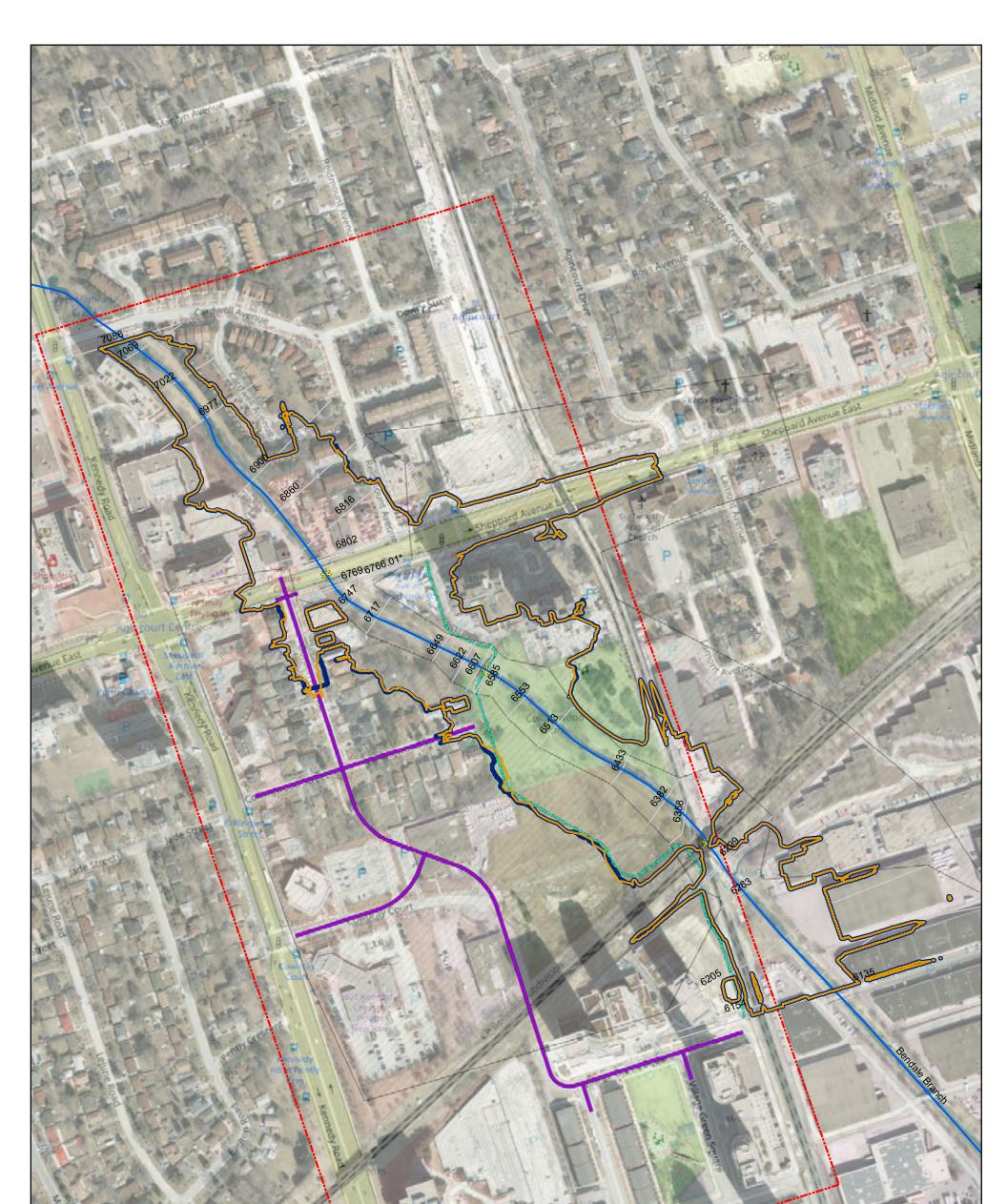
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FLOODPLAIN ANALYSIS FOR SOUTHWEST AGINCOURT TRANSPORTATION CONNECTION

CITY OF TORONTO

Land Cover Map for 2D Areas -Proposed Conditions

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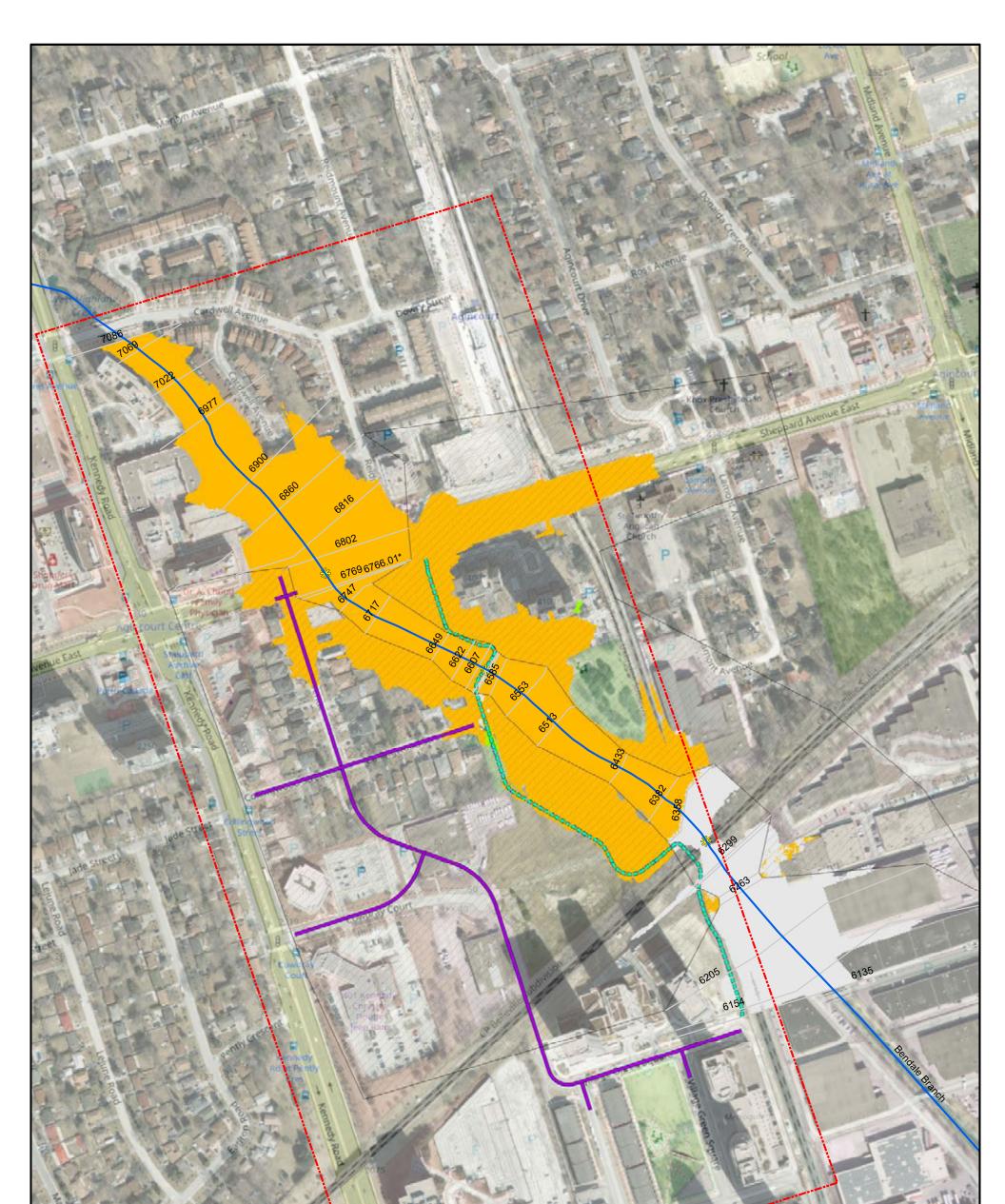
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Legend			CLIENT		
Focus Area	Proposed Complete Road	WSP Regional	CITY OF TORONTO		
-Bendale Branch	Alignment C-1	—Floodlines_Current Conditions (1D/2D Model)			
—Cross Sections	Proposed Multi-Use Trail Alignment D-1	WSP Regional	FLOODPLAIN ANALYSIS FOR SOUTHWEST AGINCOURT TRANSPORTATION CONNECTION	Checked I.Q	Drawn J.C
₩ Watercourse Crossing 2D Areas		Floodlines_Proposed Conditions (1D/2D Model)	WSP Regional Floodlines -	Date March 2023	Proj. No. 19M-01888-00
		``````````````````````````````````````	Current and Proposed Conditions	Scale 1:3,500	Figure No. 5

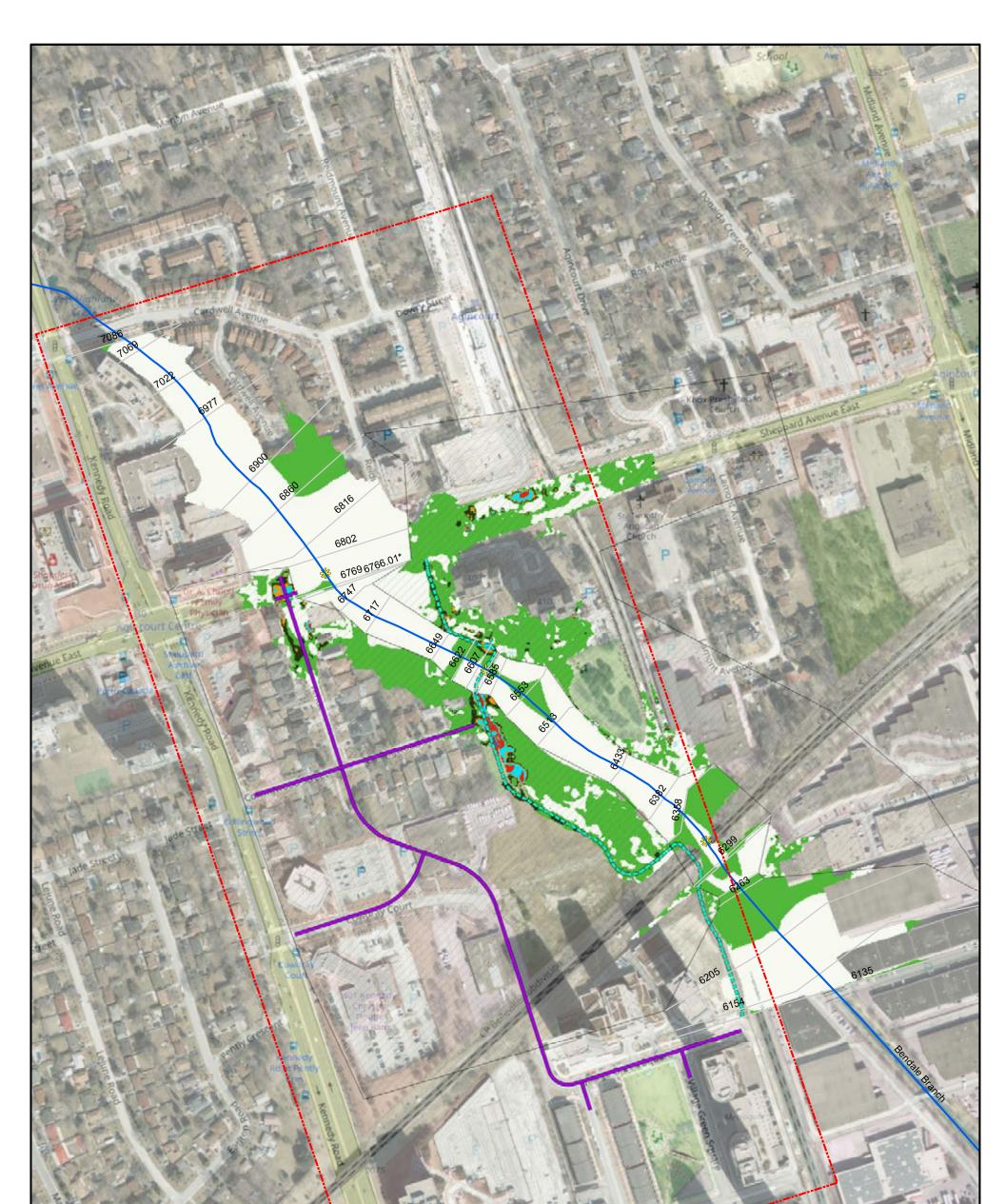
## 4.5 Potential Hydraulic Impacts

The comparisons of the Regional water level, velocity and product of depth and velocity were made between the proposed and current conditions to examine the potential hydraulic impacts due to the site development, as illustrated in **Figure 6**, **Figure 7** and **Figure 8**. The results show the site development would have negligible hydraulic impacts to adjacent properties (normally 0- 0.05 m, 0-0.05 m/s and 0-0.05 m²/s for water level, velocity and DxV in the majority of the Focus Area).



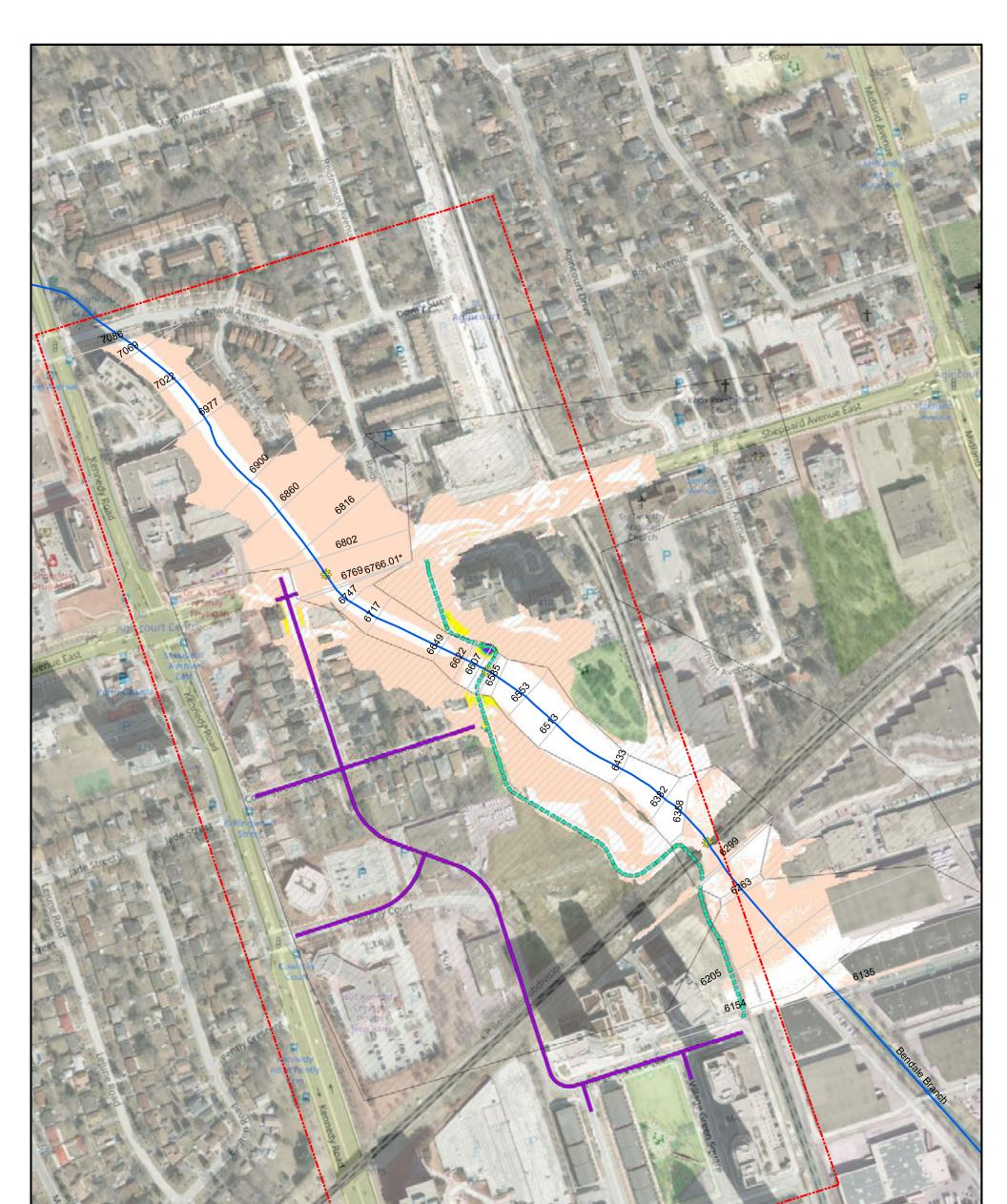
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Legend	CLIENT CITY OF TORONTO	110	2
Bendale Branch     C-1     Comparison     Comparison     Proposed Multi-Use Trail Alignment     D-1     D-1     D-1     D-1     Comparison     Proposed minus Existing (m)     Comparison     Proposed minus Existing (m)     Comparison	FLOODPLAIN ANALYSIS FOR SOUTHWEST AGINCOURT TRANSPORTATION CONNECTION	Checked I.Q	Drawn J.C
□ 2D Areas □ 0 - 0.05 □ 0.05 - 0.1 □ 0.1 - 0.15 □ >0.15	Regional Water Level Comparison Proposed minus Existing	Date March 2023 Scale 1:3,500	Proj. No. 19M-01888-00 Figure No. <b>6</b>



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Source: Esri, DigitalGlobe, GeoEye, Earthstas, AeroGRID, IGN, a	and the GIS User Community

Legend Focus Area Bendale Branch Proposed Complete Road Alignment C-1	Regional Velocity Comparison	<b>[10</b> 0.05 - 0.1 ). <b>[10</b> 0.1 - 0.15]	CITY OF TORONTO	110	SD -
Cross Sections	Proposed minus Existing (m/s)	<b>0</b> .15 - 0.3 <b>1</b> 0.3 - 0.5	AGINCOURT TRANSPORTATION CONNECTION	Checked I.Q	Drawn J.C
2D Areas	<b>—</b> -10.5 <b>—</b> -0.5 - 0	0.5 - 1 1 - 2	<b>Regional Velocity Comparison</b>	Date March 2023	Proj. No. 19M-01888-00
	0 - 0.05	>2	Proposed minus Existing	Scale 1:3,500	Figure No. <b>7</b>



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Source: Esri, DigitalGlobe, GeoEyel Earthstan, AeroGRID, IGN, and the GIS L	<b>User</b> Community

	Proposed Complete Road	Regional DepthxVelocity	0.05 - 0.1	CLIENT CITY OF TORONTO	11.	
Cross Sections	Alignment C-1 Proposed Multi-Use Trail Alignment D-1	Comparison Proposed minus Existing (m2/s) CO 0 - 0.05	0.1 - 0.15 0.15 - 0.2 0.2 - 0.3 0.3 - 0.4	AGINCOURT TRANSPORTATION CONNECTION Regional Depth x Velocity Comparison	Date March 2023	Drawn J.C Proj. No. 19M-01888-00
				Proposed minus Existing	Scale 1:3,500	Figure No. <b>8</b>

# 5 CONCLUSION

A floodplain analysis was performed in support of the SW Agincourt EA study for the City of Toronto.

WSP converted the TRCA Highland Creek 1D HEC-RAS model to a 1D/2D coupled model in the Focus Area and simulated the revised model for the current conditions under the Regional flood event. The Regional floodlines for the current conditions were generated based on the model results.

Subsequently, the preferred Complete Road Alignment C-1 and Multi-Use Trail D-1 were used for the proposed conditions. The model was then revised to reflect the proposed conditions and simulated under the Regional Storm event. The Regional floodlines for the proposed conditions were produced based on the model results.

A comparison of Regional water levels, velocities and the product of depth and velocity was made between the proposed and current conditions. The results show the proposed conditions would generally have negligible impacts on the adjacent properties.

# **APPENDIX**



Technical Memo « Agincourt HEC-RAS Model Update » (September 29, 2020)



### **Technical Memorandum**

То:	Steven van Haren, P.Eng.	Date:	September 29, 2020
From:	Xiaoxu (Iris) Qu, P.Eng.	Project No:	19M-16008-001
Subject:	Agincourt HEC-RAS Model Upda	ite	

#### 1 Introduction

This technical memorandum documents the comparison of the Regional water levels modelled by the latest Highland Creek HEC-RAS 1D model obtained from the Toronto and Region Conservation Authority (TRCA) in April 2020 and WSP's HEC-RAS 1D/2D coupled model for the proposed conditions between upstream of Sheppard Avenue and downstream of the Railway double crossings.

#### 2 Latest Highland Creek HEC-RAS 1D Model (TRCA)

The updated Highland Creek HEC-RAS 1D model was provided by the TRCA in April 2020.

Four structures were coded in Bendale Branch Reach 3 between Sheppard Avenue to Railway double crossings. The chainages and opening dimensions are presented in **Table 1**. As shown in **Table 1**, the Railway double crossings were coded using two separate structures: Metrolinx GO Stouffville Railway crossing and CP Railway crossing. **Figure 1** shows the geometries of the Railway double crossing structures.

Location	HEC-RAS Chainage	Structure Type	Opening Dimensions
Sheppard Ave.	Bendale Branch, Reach 3, 6785.84	Bridge	10.2 m (W) x 3.1 m (H)
Collingwood Park Pedestrian Bridge	Bendale Branch, Reach 3, 6602.81	Bridge	21.7 m (W) x 3.4 m (H)
Metrolinx GO Stouffville Railway crossing	Bendale Branch, Reach 3, 6345	Culvert	2 – 6.12 m (W) x 3.44 m (H), 21.75 m long
Canadian Pacific (CP) Railway crossing	Bendale Branch, Reach 3, 6313	Bridge	45.6 m (W) x 10.3 m (H)

#### Table 1 Structures Coded in Existing 1D Model



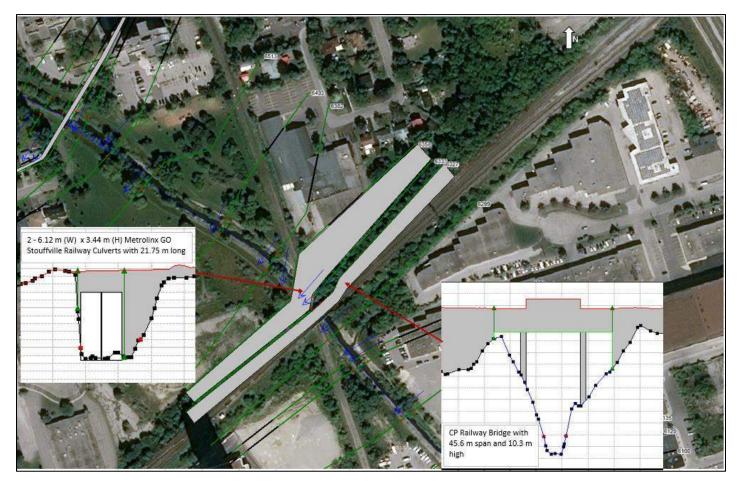


Figure 1 TRCA HEC-RAS 1D Model - Double Railway Crossings

2- to 350-yr and Regional peak flow rates extracted from the TRCA HEC-RAS model at both upstream and downstream of the Railway double crossings are presented in **Table 2**.

River	Reach	RS		Flow (m3/s)							Note	
RIVEI REACII RS		25	2 yr	5 yr	10 yr	25 yr	50 yr	100 yr	350 yr	Regional	NOLE	
		7086	27.32	44.41	55.62	68.68	77.94	87.43	186.83	158.668		
		6769	31.27	51.34	64.12	78.48	87.53	97.27	203.53	185.907		
Bendale Branch	Reach 3	6598	31.17	51.16	64.06	77.97	86.65	95.77	203.8	187.719	U/S of Railway Double Crossings	
		6299	31.25	51.28	64.09	77.33	85.04	93.53	203.88	189.629	D/S of Railway Doule Crossings	

#### Table 2 TRCA Peak Flows at Railway Double Crossings



Except the CP Railway bridge, other three structures would be overtopped during the Regional flood event. The modelled Regional water levels (this simulation was named "RUN 1") are provided in **Table 3**.

#### 3 HEC-RAS 1D/2D Coupled Model for Proposed Conditions (WSP)

Given the complex hydraulics at the Railway double crossings, WSP converted the TRCA's HEC-RAS 1D model to a 1D/2D coupled model from upstream of Shepperd Avenue to downstream of Railway double crossings to allow for an appropriate level of detail in evaluating spill paths and flooding conditions.

To focus on the study area, the existing TRCA 1D model was extracted from Bendale Branch Reach 3 RS 7086 to RS 6135 to construct the 1D/2D model.

The construction drawings of Stouffville Rail Corridor Expansion 2nd Track (Contract No. IT-2015-CI-047) were obtained from AECOM. Since the Metrolinx GO Stouffville Rail is proposed to be expanded, the existing Metrolinx GO Stouffville Railway culverts are proposed to be extended to south approximately 15.9 m and 24.5 m. The extended portion will be under the existing CP Railway bridge. As such, the Railway double crossings were combined to be one structure configuration including two extended Metrolinx GO Stouffville Railway culverts and the existing CP bridge piers for the proposed conditions, as shown in **Figure 2**. Shepperd Avenue bridge and Collingwood Park Pedestrian bridge remain unchanged in the WSP's model. These three structures were coded in 1D river channel, while the floodplains were modelled using two separate 2D domains from immediately upstream of Shepperd Avenue to downstream of Railway double crossings. The 2D areas were connected to the 1D channel using two lateral structures, as shown in **Figure 2**.

Qusi-steady hydrograph with a peak rate of 158.668 m³/s (Regional event) was entered at RS 7086. Lateral inflows were entered in other three flow change locations. Rating curve generated from the existing TRCA 1D model was used as the downstream boundary at RS 6135.

The modelled Regional water levels (this simulation was named "RUN 2") are provided in Table 3.



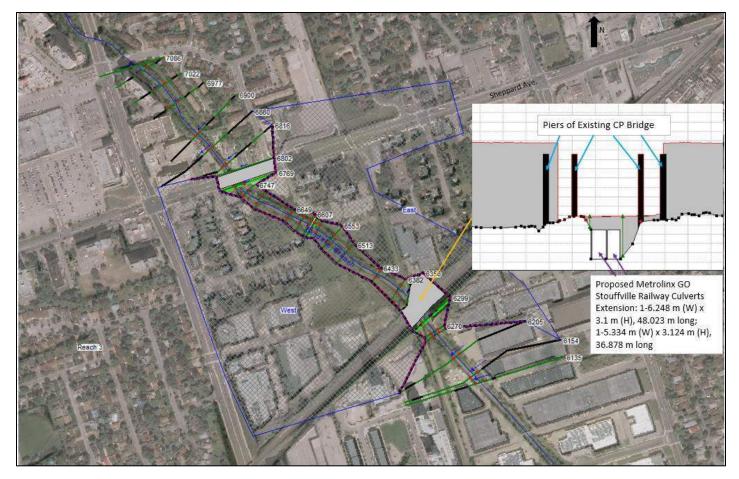


Figure 2 Revised Railway Double Crossings for Proposed Conditions (HEC-RAS 1D/2D Coupled Model)



#### Table 3 Comparison of Modelled Regional Water Levels

	RUN 1						
	TRCA April Model (1D)						
Reach	Regional W.S. Elevation						
Reach 3	7086	(m³/s) 158.67	(m) 167.77				
Reach 3	7069	158.67	167.8				
Reach 3	7003	158.67	167.78				
Reach 3	6977	158.67	167.77				
Reach 3	6900	158.67	167.6				
Reach 3	6860	158.67	167.67				
Reach 3	6816	158.67	167.64				
Reach 3	6802	158.67	167.71				
Reach 3	6785.84	Bridge	Sheppard Ave. Bridge				
Reach 3	6769	185.91	167.71				
Reach 3	6747	185.91	167.67				
Reach 3	6717	185.91	167.59				
Reach 3	6649	185.91	167.53				
Reach 3	6622	185.91	167.56				
Reach 3	6607	185.91	167.59				
Reach 3	6602.81	Bridge	Collingwood Park Pedestrian Bridge				
Reach 3	6598	187.72	167.55				
Reach 3	6585	187.72	167.48				
Reach 3	6553	187.72	167.48				
Reach 3	6513	187.72	167.44				
Reach 3	6433	187.72	167.42				
Reach 3	6382	187.72	167.47				
Reach 3	6358	187.72	167.47				
Reach 3	6345	Culvert	Metrolinx Culvert				
Reach 3	6333	187.72	167.2				
Reach 3	6327	187.72	166.72				
Reach 3	6313	Bridge	CNRailway Bridge				
Reach 3	6299	189.63	165.86				
Reach 3	6270	189.63	165.87				
Reach 3	6263	189.63	165.89				
Reach 3	6205	189.63	165.9				
Reach 3	6154	189.63	165.83				
Reach 3	6135	189.63	165.81				

	RU	N 2				
WSP Revis (wi	WL Difference (m) (RUN 2- RUN 1)					
	Lateral Weir C	Coefficient 0.2	2	RUN 1)		
Reach	River Station	Q Total (1D and 2D)	Regional W.S. Elevation			
Reach 3	7086	(m ³ /s)	(m)	0.42		
Reach 3	7069	158.67 158.71	167.34	-0.43		
	7069	158.8	167.43	-0.37		
Reach 3 Reach 3	6977	158.75	167.41 167.39	-0.37 -0.38		
		158.42				
Reach 3 Reach 3	6900 6860	158.69	167.24 167.31	-0.36 -0.36		
Reach 3	6816	158.5	167.31	-0.35		
Reach 3	6802	156.5	167.29			
Reach 3	6785.84	Bridge	Sheppard Ave. Bridge	-0.35 -		
Reach 3	6769 ¹	157.64 ¹	167.36	-0.35		
Reach 3	6747	185.46	167.28	-0.39		
Reach 3	6717	185.92	167.24	-0.35		
Reach 3	6649	186.04	167.16	-0.37		
Reach 3			167.23	-0.33		
Reach 3	6607	185.24	167.27	-0.32		
Reach 3	6602.81	Bridge	Collingwood Park Pedestrian Bridge	-		
Reach 3	6598	185.47	166.90	-0.65		
Reach 3	6585	188.42	166.84	-0.64		
Reach 3	6553	188.04	166.84	-0.64		
Reach 3	6513	187.75	166.83	-0.61		
Reach 3	6433	187.81	166.75	-0.67		
Reach 3	6382	188.00	166.77	-0.70		
Reach 3	6358	188.00	166.88	-0.59		
Reach 3	6345	Proposed Metrolinx Double Crossing	-	-		
Reach 3	<del>6333</del>	-	-	-		
Reach 3	<del>6327</del>	-	-	-		
Reach 3	<del>6313</del>	-	-	-		
Reach 3	6299	188.00	165.90	0.04		
Reach 3	6270	189.99	165.79	-0.08		
Reach 3	6263	189.85	165.83	-0.06		
Reach 3	6205	189.9	165.87	-0.03		
Reach 3	6154	189.88	165.83	0		
Reach 3	6135	189.88	165.81	0		

Note 1: Flow change location. But because this is the bridge D/S cross section, 1D/2D coupled model doesn't allow to add a flow node at this cross section, so an additional cross section (RS 6766.01) was added 3 m downstream of RS 6769 for flow change.

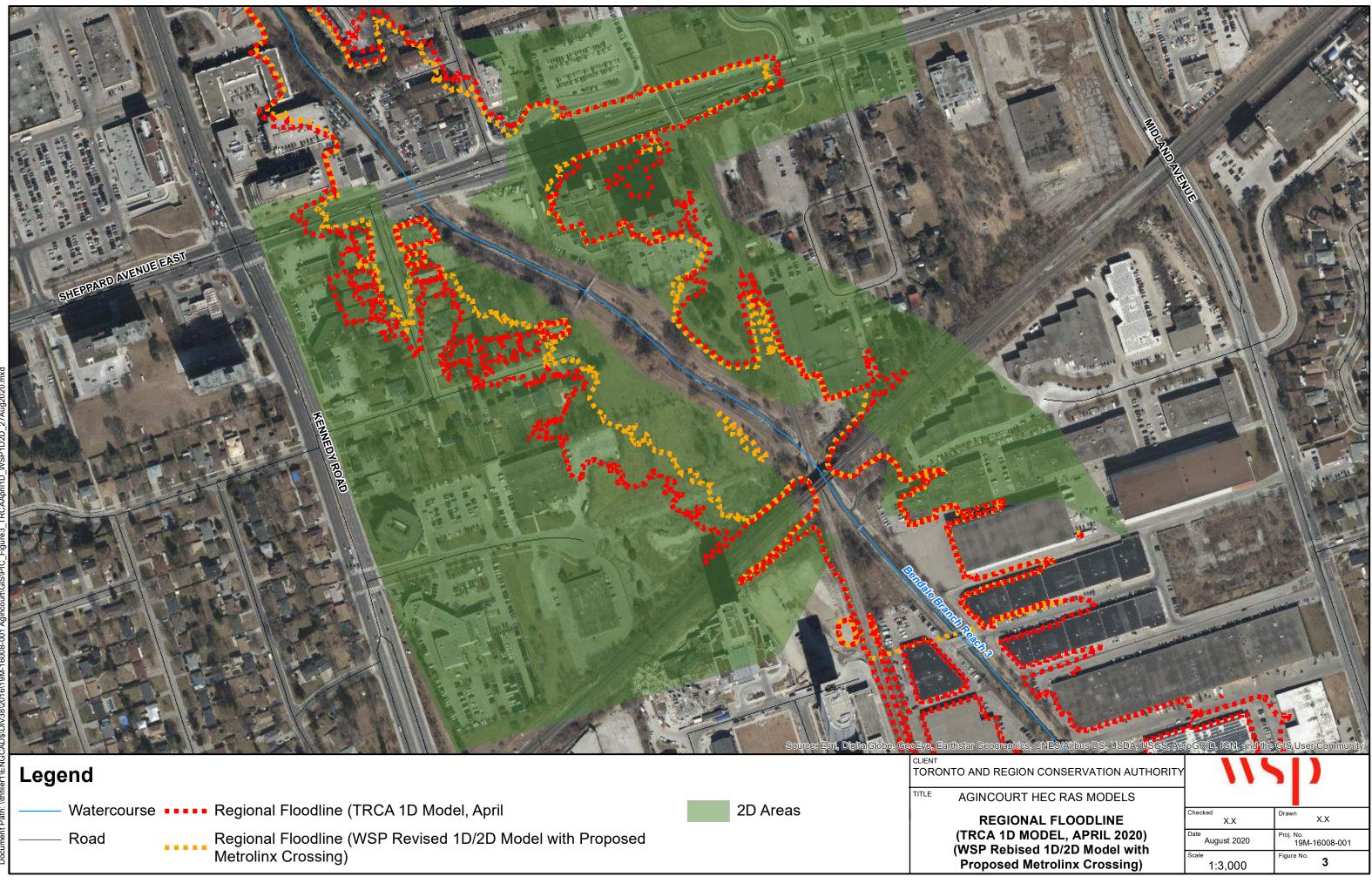


#### 4 Comparison of Modelled Regional Water Levels

As presented in **Table 3**, 0.32 m to 0.70 m water level reduction would occur between Sheppard Avenue and Railway double crossings comparing WSP 1D/2D coupled model for the proposed conditions (RUN 2) to the TRCA's 1D model provided in April (RUN 1).

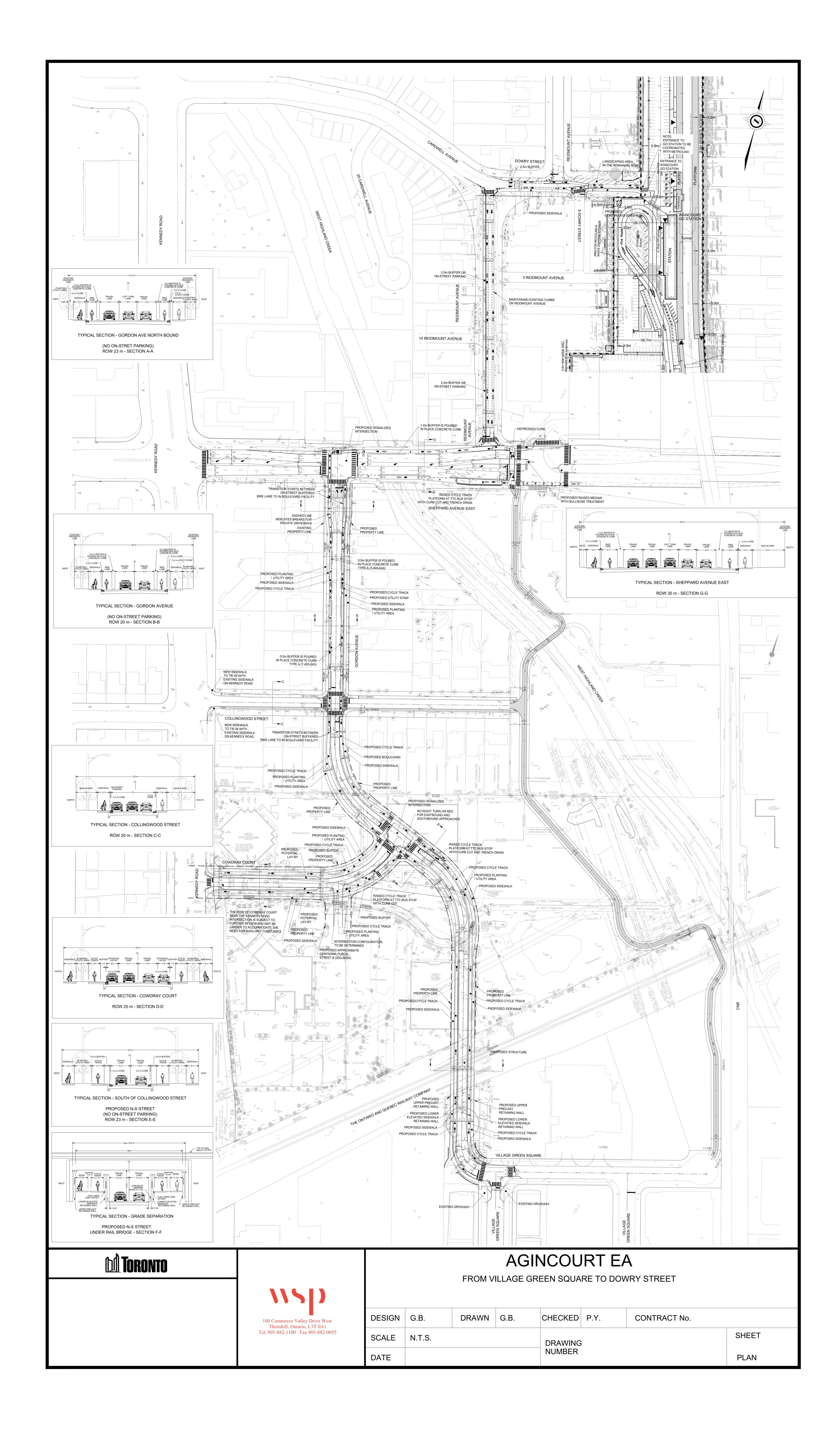
The Regional floodlines for RUN 1 and RUN 2 are provided in Figure 3.

Cluxinoku Xiaoxu (Iris) Qu, P.Eng. Senior Project Engineer, Water Resources



# **APPENDIX**





# **APPENDIX**



Model Outputs from HEC-RAS 1D Portion

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NameNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteNoteN														0.32
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BandsBodyMarketPargenoration Reg. holefort, with an analysis of the second of the se	Reach 3	6814			Lat Struct									
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Ren 3         Oli M         Mar W         Applied (Polymourid) Bay, Corret, MSW         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000 <td>Reach 3</td> <td>6802</td> <td>Max WS</td> <td></td> <td>157.40</td> <td>162.10</td> <td>167.43</td> <td>164.84</td> <td>167.50</td> <td>0.000056</td> <td>1.47</td> <td>219.94</td> <td>123.07</td> <td>0.21</td>	Reach 3	6802	Max WS		157.40	162.10	167.43	164.84	167.50	0.000056	1.47	219.94	123.07	0.21
Ren 3         Oli M         Mar W         Applied (Polymourid) Bay, Corret, MSW         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000         1000 <td>Reach 3</td> <td>6785.84</td> <td></td> <td></td> <td>Bridge</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Reach 3	6785.84			Bridge									
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Bench         Bent         Bench														
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Bach B         917         Nu W         ProgenourD. Bog. Point 1, of the second D region 200 (2000)         1710         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912         1912														
Ren.h         Gen         Nu.WW         Regind Programmer, NW         100.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7         101.7 <td></td> <td>0.30</td>														0.30
Beach B         642         Max WS         Prodymound DB, Beg, Dreff, vic         10.0         10.10         10.72         10.75         0.0014         12.9         11.19         0.05           Beach B         6622         Max WS         Hightend, Prodymound DB, Bg, Dreff, vic         100.7         101.73         102.2         104.74         0.00014         11.9         104.29         104.55         0.02           Beach B         6627         Max WS         Hightend, Prodymound D, Bg, Dreff, vic         101.70         101.72         104.74         0.00044         1.18         14.49         44.80         0.02           Beach B         602.61         Max WS         Hightend, Prodymound D, Bg, Dreff, vic         107.70         101.72         104.74         0.00044         1.18         14.49         44.80         0.02           Beach B         602.61         Max WS         Hightend, Prodymound D, Rg, Dreff, vic         107.70         101.72         106.8         107.00         0.00080         2.18         100.80         44.38         0.02           Beach B         650.27         Max WS         Hightend, Prodymound D, Rg, Dreff, Vic         177.64         101.72         106.65         0.0077         2.18         10.43         0.02           Beach B<														
Renth         Renth <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>														
Bach Max W3         PhologenourD, Beg, Penkerr, v6         191.04         919.15         197.24         0.0004         1.09         140.05         140.05           Reach M         6007         Max W5         Highand, PendgenourD, Beg, Denkerr, v6         110.13         112.2         116.73         112.3         112.3         116.73         116.73         116.73         116.74         0.00056         1.13         142.40         44.83         0.0.0005           Reach M         6502         Max W5         Highand, PendgenourD, Beg, Denkerr, v6         116.73         116.73         116.73         116.73         116.73         116.73         116.73         116.74         0.00056         2.13         109.19         44.80         0.0.0005           Reach M         6502         Max W5         Highand, PendgenourdD, Beg, Current NEW         177.10         116.12         116.65         117.01         116.12         116.65         117.01         110.12         116.65         117.01         110.12         116.65         117.01         110.12         116.65         117.01         110.12         116.65         117.01         110.12         116.65         117.01         110.12         116.65         117.01         110.13         110.12         110.65         110.10														
Rench 3         Max WS         Heftend, Pholgmount2D, Reg., Current, NEW4         177.03         161.73         161.73         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.74         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75         161.75														0.29
Bench         BENCH         Max WS         Prodepicount2D, Reg., proRift, vi         176 64         191.73         197.32         194.74         197.44         0.000497         1.76         142.39         442.39         0.22           Rench 3         6602.81         Max WS         Hiphand Produincourt2D, Reg., Current, NEW4         1177.03         161.72         166.65         167.06         0.00068         2.13         100.65         45.68         0.3           Rench 3         6556.02**         Max WS         Hiphand Produincourt2D, Reg., Current, NEW4         1177.05         161.72         166.65         167.06         0.000074         2.11         10.46         44.33         0.0.3           Rench 3         6556.02**         Max WS         Hiphand Produincourt2D, Reg., Current, NEW4         110.86         110.73         116.61         110.76         100.0074         2.11         10.46         44.33         0.0.3           Rench 3         6556.02**         Max WS         Hiphand Produincourt2D, Reg., Drent HW4         110.81         116.81         116.62         1167.02         0.00016         2.06         12.66         12.67         0.3.0         0.3.3           Rench 3         6513         Max WS         Hiphand Produprocurt2D, Reg., Drent HW4         116.42														
Reach 3         602.8         Max WS         Hightand ProdynourDD, Reg, Current, NEM4         177.03         161.7.2         168.65         167.06         0.00080         2.13         100.19         4.5.88         0.3.3           Reach 3         6566.07         Max WS         ProdynourDD, Reg, Current, NEM4         177.03         161.72         166.65         167.06         0.00080         2.15         107.65         45.88         0.3.3           Reach 3         6565.07         Max WS         ProdynourDD, Reg, Current, NEM4         177.83         161.72         166.65         167.06         0.00072         2.16         110.40         44.33         0.3.3           Reach 3         6555.07         Max WS         ProdynourDD, Reg, Current, NEM4         107.83         166.21         1167.06         0.000710         2.25         110.40         38.10         0.3.3           Reach 3         6553         Max WS         ProdynourDD, Reg, Current, NEM4         183.36         111.80         166.62         1167.02         0.000100         2.26         112.67         6.3.30         0.3.3           Reach 3         6513         Max WS         ProdynourDD, Reg, Current, NEM4         183.40         116.63         1167.02         0.000168         2.01         132.07	-													0.26
Reach 3         Bits         Max WS         Highland, Phodgmoour2D, Reg. Current, NEW4         177.31         161.12         166.85         167.06         0.00028         2.11         010.16         44.88         0.33           Reach 3         5555         Max WS         Highland, Phodgmoour2D, Reg. Current, NEW4         177.43         117.12         1166.85         1167.05         0.000247         2.11         110.69         44.33         0.33           Reach 3         555.02         Max WS         Highland, Phodgmoour2D, Reg. Current, NEW4         117.43         1161.23         1166.80         1167.05         0.000752         2.21         110.69         44.33         0.33           Reach 3         555.0         Max WS         Highland, Phodgmoour2D, Reg. Current, NEW4         110.31         1167.31         106.80         1167.03         0.000169         2.26         11.04         33.10         0.33           Reach 3         6553         Max WS         Highland, Phodgmoour2D, Reg. PreR4T, v6         118.33         1166.82         1167.03         0.000169         2.26         112.05         44.33         0.33           Reach 3         6513         Max WS         Highland, Phodgmoour2D, Reg. PreR4T, v6         118.43         1166.82         1167.03         0.000169         <			Max 110	risignooditeb_riog_risitari_ro		101.10	107.02		101.11	0.000101		112.00	10.00	0.20
Reach 3         6589         Max WS         Prodemoun2D, Reg. ProkAffr. v6         177.64         191.72         196.85         197.06         0.00080         2.15         107.06         44.83         0.00077           Reach 3         655.02*         Max WS         Highand, Prodepnoout2D, Reg. Current, NEW4         117.74         116.85         1197.05         0.000747         2.11         111.04         44.33         0.03           Reach 3         655.0*         Max WS         Highand, Prodepnoout2D, Reg. Current, NEW4         119.08         116.13         1166.0         117.06         0.000150         2.25         111.04         44.33         0.03           Reach 3         655.0         Max WS         Highand, Prodepnoout2D, Reg. Current, NEW4         118.05         116.10         1166.21         117.05         0.000150         2.25         110.40         44.33         0.03           Reach 3         6513         Max WS         Highand, Prodepnoout2D, Reg. Current, NEW4         118.13         1166.33         1167.02         0.000150         2.26         126.27         54.12         0.03           Reach 3         6513         Max WS         Highand, Prodepinoout2D, Reg. Current, NEW4         184.43         1161.83         1166.53         167.02         0.00016         2	Reach 3	6602.81			Bridge									
Reach         State         Parkagenour2D, Reg. Current, NEW4         177.4         101.72         168.65         167.05         0.000722         2.10         111.05         44.33         0.3.           Reach 3         5555         Max WS         Prodynour2D, Reg. DrehdTr, v6         117.05         1167.05         0.000722         2.10         111.04         44.33         0.3.           Reach 3         5555         Max WS         Highand, Prodynour2D, Reg. Current, NEW4         110.08         111.73         1166.01         1167.05         0.000190         2.25         111.04         39.10         0.3.           Reach 3         5535         Max WS         Highand, Prodynour2D, Reg. Current, NEW4         118.35         1168.01         166.82         167.05         0.000168         2.26         126.86         6.00         0.3.           Reach 3         6535         Max WS         Highand, Prodynour2D, Reg. Current, NEW4         118.43         166.83         167.02         0.000168         2.26         126.86         6.00         0.3.           Reach 3         6513         Max WS         Highand, Prodynour2D, Reg. Current, NEW4         118.43         166.83         167.02         0.000168         2.21         13.3.0         0.3.3.0         0.3.3.0         0.3.3.0 </td <td></td> <td>0.33</td>														0.33
Beach 3         6585.02*         Max WS         Prodyncourt2D, Reg, ProRRT, v6         117.64         117.24         116.88         117.25         117.05         0.000747         2.10         110.85         0.433         0.0.3           Reach 3         6585         Max WS         Highland, Prodyncourt2D, Reg, Current, NEW4         180.85         101.73         116.68         1167.05         0.000192         2.26         110.40         33.10         0.3.3           Reach 3         6585         Max WS         Highland, Prodyncourt2D, Reg, Current, NEW4         183.49         101.73         116.68         1167.05         0.000169         2.06         126.67         6.300         0.0.0           Reach 3         6513         Max WS         Highland, Prodyncourt2D, Reg, Current, NEW4         183.49         101.63         166.82         117.02         0.000169         2.01         132.27         6.41.2         0.3.3           Reach 3         6513         Max WS         Highland, Prodyncourt2D, Reg, Current, NEW4         189.42         101.63         166.67         167.01         0.000169         2.01         132.27         6.41.2         0.3.3         0.3.3         0.3.3         0.3.3         0.3.3         0.3.3         0.3.3         0.3.3         0.3.3         0.3.3	Reach 3	6598	Max WS	ProAgincourt2D_Reg_ProRdTr_v6	176.64	161.72	166.85		167.06	0.000840	2.15	107.65	45.88	0.33
Reach 3         655         Max WS         Prolymount2D, Reg, Current, NEW4         180.8         101.73         166.80         117.05         0.000192         2.26         110.04         33.10         0.3           Reach 3         6555         Max WS         Prolymount2D, Reg, Current, NEW4         183.86         111.73         166.80         117.05         0.000192         2.26         110.04         33.10         0.3           Reach 3         6553         Max WS         Highand, Prokymount2D, Reg, Current, NEW4         183.36         111.80         166.82         1167.03         0.000189         2.06         126.87         63.00         0.3           Reach 3         6533         Max WS         Prolymount2D, Reg, Current, NEW4         118.40         1161.83         166.82         1167.03         0.000189         2.06         126.87         63.00         0.3           Reach 3         6533         Max WS         Prolymount2D, Reg, Current, NEW4         118.42         161.63         166.63         1167.02         0.000189         2.25         101.16         33.30         0.3           Reach 3         6433         Max WS         Prolymount2D, Reg, Current, NEW4         188.47         161.56         166.71         10.0000135         2.35         101.16 <td></td> <td>0.32</td>														0.32
Reach 3         6565         Max WS         ProAginoour2D, Reg. ProRfTr, v6         180.3         161.73         166.8         167.55         000100         2.26         110.46         30.10         0.3.3           Reach 3         6553         Max WS         ProAginoour2D, Reg. DroRfTr, v6         183.49         161.80         166.82         167.03         0.000160         2.05         126.57         63.00         0.3.3           Reach 3         6513         Max WS         ProAginoour2D, Reg. DroRfTr, v6         188.49         161.80         166.82         167.03         0.000180         2.01         132.07         54.12         0.3.3           Reach 3         6513         Max WS         ProAginoour2D, Reg. DroRfTr, v6         188.40         161.85         166.75         167.01         0.000185         2.25         101.16         33.30         0.3.3           Reach 3         632         Max WS         ProAginoour2D, Reg. DroRfTr, v6         188.47         161.56         166.75         167.01         0.000185         2.25         101.16         33.30         0.3.3           Reach 3         6382         Max WS         Highland, ProAginoour2D, Reg. Current, NEW4         188.42         161.56         166.75         167.00         0.000106         2.19	Reach 3	6595.02*	Max WS	ProAgincourt2D_Reg_ProRdTr_v6	176.94	161.72	166.86		167.05	0.000747	2.10	110.56	44.33	0.32
Reach 3         653         Max WS         Highland Prokginoourt2D Reg. Current NEW4         183.95         111.80         166.82         167.03         0.000168         22.05         122.56         63.00         0.00           Reach 3         653         Max WS         Prokgincourt2D Reg. ProRTr. v6         183.49         118.40         166.82         167.03         0.000168         22.05         122.56         63.00         0.03           Reach 3         6513         Max WS         Prokgincourt2D Reg. Current NEW4         184.43         1161.80         166.82         167.02         0.000188         2.01         132.12         64.12         0.03           Reach 3         6513         Max WS         Prokgincourt2D Reg. Current NEW4         188.52         161.65         166.75         167.01         0.000155         2.35         101.16         33.30         0.33           Reach 3         632         Max WS         Prokgincourt2D Reg. ProRtTr. v6         166.42         166.75         167.01         0.000156         2.15         49.07         0.33           Reach 3         6382         Max WS         Prokgincourt2D Reg. ProRtTr. v6         166.75         167.00         0.000169         2.19         122.51         49.07         0.33														0.35
Rank 3         Instant 3         I	Reach 3	6585	Max WS	ProAgincourt2D_Reg_ProRdTr_v6	180.31	161.73	166.81		167.05	0.000190	2.25	110.48	39.10	0.34
Reach 3         First         Max WS         Highland, ProAgincourt2D, Reg. Current, NEW4         194-04         161.83         167.02         0.000189         2.01         132.12         54.12         0.33           Reach 3         6513         Max WS         ProAgincourt2D, Reg. DroRdTr.v6         184.20         161.83         166.83         167.02         0.000189         2.01         132.12         54.12         0.33           Reach 3         6433         Max WS         Highland, ProAgincourt2D, Reg. Current, NEW4         188.52         161.56         186.75         187.01         0.000185         2.35         101.16         33.30         0.33           Reach 3         6433         Max WS         Highland, ProAgincourt2D, Reg. Current, NEW4         189.42         161.42         166.76         167.00         0.00019         2.19         122.51         49.07         0.33           Reach 3         638         Max WS         ProAgincourt2D, Reg. Current, NEW4         189.42         161.42         166.76         167.00         0.000076         1.30         216.67         83.82         0.11           Reach 3         638         Max WS         ProAgincourt2D, Reg. Current, NEW4         187.81         161.85         166.86         0.000076         1.30         216.														0.32
Rand 3         653         Max WS         ProAgincourt2D, Reg. ProRdTr, v6         184.20         184.80         186.83         167.02         0.00188         2.10         132.12         54.12         0.00188           Reach 3         6433         Max WS         Highland, ProAgincourt2D, Reg. Current, NEW4         188.62         161.56         166.75         167.01         0.000135         2.35         101.16         33.30         0.33           Reach 3         633         Max WS         Highland, ProAgincourt2D, Reg. Current, NEW4         188.42         161.42         166.75         167.01         0.000109         2.19         122.51         49.07         0.33           Reach 3         6332         Max WS         ProAgincourt2D, Reg. ProRdTr, v6         189.38         161.42         166.78         167.00         0.000109         2.19         122.51         49.07         0.33           Reach 3         6358         Max WS         ProAgincourt2D, Reg. ProRdTr, v6         189.38         161.42         166.78         167.00         0.000178         2.19         122.67         83.82         0.11           Reach 3         6358         Max WS         ProAgincourt2D, Reg. Current, NEW4         187.81         161.35         166.88         0.000078         1.30	Reach 3	6553	Max WS	ProAgincourt2D_Reg_ProRdTr_v6	183.49	161.80	166.82		167.03	0.000168	2.05	126.67	63.00	0.32
Inst         Inst         Instant Productor Dag Current, NEW4         188.52         161.56         166.75         167.01         0.000135         2.25         101.16         33.30         0.33           Reach 3         6433         Max WS         Prodgincount/D Reg. Durent, NEW4         188.47         161.56         166.75         167.01         0.000135         2.25         101.16         33.30         0.33           Reach 3         6382         Max WS         Highland, Prodgincount/D Reg. Current, NEW4         189.42         161.42         166.76         0.000109         2.19         122.51         49.07         0.33           Reach 3         6382         Max WS         Highland, Prodgincount/D, Reg. Current, NEW4         189.42         161.42         166.78         0.000078         1.30         216.67         63.82         0.11           Reach 3         6358         Max WS         Highland, Prodgincount/D, Reg. Current, NEW4         187.81         161.35         166.88         166.95         0.000078         1.30         216.67         63.82         0.11           Reach 3         6354         Max WS         Highland, Prodgincount/D, Reg. Current, NEW4         187.81         161.35         166.50         0.000102         1.52         166.71         81.14	r touon o						100.00		101.02	0.000100	2.01	102.01	01.12	0.30
Beach 3         6433         Max WS         ProAgincourt2D_Reg_ProRdTr_v6         188.47         161.56         167.70         0.000135         2.35         101.16         33.30         0.33           Reach 3         6382         Max WS         Highland ProAgincourt2D Reg_Current NEW4         189.42         161.42         166.76         167.00         0.000109         2.19         122.51         49.07         0.33           Reach 3         6382         Max WS         ProAgincourt2D Reg_Current NEW4         189.42         161.42         166.76         167.00         0.000109         2.19         122.51         49.07         0.33           Reach 3         6382         Max WS         Highland ProAgincourt2D Reg_Current NEW4         189.78         161.42         166.76         167.00         0.000078         1.30         216.67         83.82         0.11           Reach 3         6358         Max WS         ProAgincourt2D Reg_Current NEW4         187.81         161.35         166.88         166.85         0.000078         1.30         216.67         83.82         0.11           Reach 3         6299         Max WS         Highland ProAgincourt2D Reg_Current NEW4         187.81         161.35         165.90         166.00         0.000102         1.52 <t< td=""><td>Reach 3</td><td>6513</td><td>Max WS</td><td>ProAgincourt2D_Reg_ProRdTr_v6</td><td>184.20</td><td>161.63</td><td>166.83</td><td></td><td>167.02</td><td>0.000188</td><td>2.01</td><td>132.12</td><td>54.12</td><td>0.30</td></t<>	Reach 3	6513	Max WS	ProAgincourt2D_Reg_ProRdTr_v6	184.20	161.63	166.83		167.02	0.000188	2.01	132.12	54.12	0.30
Reach 3         6382         Max WS         Prodgincourt2D Reg_ProRdTr v6         161.42         161.42         166.76         167.00         0.000109         2.19         122.51         49.07         0.33           Reach 3         6382         Max WS         Prodgincourt2D Reg_ProRdTr v6         161.42         166.76         167.00         0.000109         2.19         122.51         49.07         0.33           Reach 3         6358         Max WS         Prodgincourt2D Reg_ProRdTr v6         161.42         166.78         166.98         0.000078         1.30         216.67         83.82         0.11           Reach 3         6358         Max WS         Prodgincourt2D Reg_ProRdTr v6         187.81         161.35         166.88         166.98         0.000078         1.30         216.67         83.82         0.11           Reach 3         6345         Culvert         Culvert <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.35</td></td<>														0.35
Reach 3         6382         Max WS         ProAgincount2D_Reg_ProRdTr_v6         189.38         161.42         166.78         167.00         0.000109         2.19         12.51         49.07         0.33           Reach 3         6358         Max WS         Highland_ProAgincount2D_Reg_Current_NEW4         187.81         161.35         166.88         166.95         0.000078         1.30         22.16.7         83.82         0.011           Reach 3         6358         Max WS         ProAgincount2D_Reg_ProRdTr_v6         187.81         161.35         166.88         166.95         0.000078         1.30         22.16.7         83.82         0.011           Reach 3         6358         Max WS         ProAgincount2D_Reg_ProRdTr_v6         187.81         161.35         166.80         0.000102         1.50         1.60         0.000102         1.52         166.71         81.14         0.20           Reach 3         6299         Max WS         ProAgincount2D_Reg_ProRdTr_v6         187.81         161.35         165.50         166.00         0.000102         1.52         166.71         81.14         0.22           Reach 3         6299         Max WS         ProAgincount2D_Reg_ProRdTr_v6         187.81         161.55         165.50         166.01 <th< td=""><td>Reach 3</td><td>6433</td><td>Max WS</td><td>ProAgincourt2D_Reg_ProRdTr_v6</td><td>188.47</td><td>161.56</td><td>166.75</td><td></td><td>167.01</td><td>0.000135</td><td>2.35</td><td>101.16</td><td>33.30</td><td>0.35</td></th<>	Reach 3	6433	Max WS	ProAgincourt2D_Reg_ProRdTr_v6	188.47	161.56	166.75		167.01	0.000135	2.35	101.16	33.30	0.35
Image: Note of the state of the st														0.32
Reach 3         6358         Max WS         ProAgincount2D_Reg_ProRdTr_v6         1187.81         1161.35         1166.88         1166.95         0.00078         1.30         216.67         83.82         0.11           Reach 3         6358         Max WS         ProAgincount2D_Reg_ProRdTr_v6         117.81         1161.35         1166.88         1166.95         0.00078         1.30         216.67         83.82         0.11           Reach 3         6359         Max WS         ProAgincount2D_Reg_Current_NEW4         1187.81         1161.35         1166.00         0.000102         1.52         1166.71         81.14         0.22           Reach 3         6299         Max WS         ProAgincount2D_Reg_ProRdTr_v6         187.81         161.35         1165.90         166.00         0.000102         1.52         166.71         81.14         0.22           Reach 3         6299.97*         Max WS         ProAgincount2D_Reg_ProRdTr_v6         187.75         161.35         1165.50         166.01         0.000233         1.58         173.38         86.43         0.22           Reach 3         6295.97*         Max WS         ProAgincount2D_Reg_ProRdTr_v6         187.75         161.35         1165.50         166.01         0.000233         1.58         173.38	Reach 3	6382	Max WS	ProAgincourt2D_Reg_ProRdTr_v6	189.38	161.42	166.78		167.00	0.000109	2.19	122.51	49.07	0.32
Image: Note of the second se														0.19
Image: Note of the state of the st	Reach 3	6358	Max WS	ProAgincourt2D_Reg_ProRdTr_v6	187.81	161.35	166.88		166.95	0.000078	1.30	216.67	83.82	0.19
Reach 3         6299         Max WS         ProAgincourt2D_Reg_ProRdT_v6         187.81         161.35         165.90         166.00         0.000102         1.52         166.71         81.14         0.2           Reach 3         6295.97*         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         187.74         161.35         165.90         166.01         0.000102         1.52         166.71         81.14         0.2           Reach 3         6295.97*         Max WS         ProAgincourt2D_Reg_Urrent_NEW4         187.75         161.35         165.90         166.01         0.00023         1.56         173.38         86.43         0.22           Reach 3         6270         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.54         161.30         165.78         166.05         0.000164         2.44         109.49         46.00         0.33           Reach 3         6270         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.54         161.30         165.78         166.05         0.000164         2.44         109.49         46.00         0.33           Reach 3         6263         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.80         160.85         165.62         166.03         0.000119 </td <td>Reach 3</td> <td>6345</td> <td></td> <td></td> <td>Culvert</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Reach 3	6345			Culvert									
Reach 3         6299         Max WS         ProAgincourt2D_Reg_ProRdT_v6         187.81         161.35         165.90         166.00         0.000102         1.52         166.71         81.14         0.2           Reach 3         6295.97*         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         187.74         161.35         165.90         166.01         0.000102         1.52         166.71         81.14         0.2           Reach 3         6295.97*         Max WS         ProAgincourt2D_Reg_Urrent_NEW4         187.75         161.35         165.90         166.01         0.00023         1.56         173.38         86.43         0.22           Reach 3         6270         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.54         161.30         165.78         166.05         0.000164         2.44         109.49         46.00         0.33           Reach 3         6270         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.54         161.30         165.78         166.05         0.000164         2.44         109.49         46.00         0.33           Reach 3         6263         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.80         160.85         165.62         166.03         0.000119 </td <td>Reach 3</td> <td>6299</td> <td>Max WS</td> <td>Highland ProAgincourt2D Reg Current NEW4</td> <td>187.81</td> <td>161.35</td> <td>165.90</td> <td></td> <td>166.00</td> <td>0,000102</td> <td>1.52</td> <td>166.71</td> <td>81.14</td> <td>0.24</td>	Reach 3	6299	Max WS	Highland ProAgincourt2D Reg Current NEW4	187.81	161.35	165.90		166.00	0,000102	1.52	166.71	81.14	0.24
Reach 3         5295.97*         Max WS         ProAgincourt2D_Reg_ProRdT_v6         187.75         161.35         165.90         166.01         0.000233         1.56         173.38         86.43         0.22           Reach 3         6270         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.54         161.30         165.78         166.05         0.000164         2.44         109.49         46.00         0.33           Reach 3         6270         Max WS         ProAgincourt2D_Reg_Orrent_NEW4         189.54         161.30         165.78         166.05         0.000164         2.44         109.49         46.00         0.33           Reach 3         6263         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.80         166.85         165.62         166.03         0.000119         2.23         124.35         49.70         0.33           Reach 3         6263         Max WS         ProAgincourt2D_Reg_Orrent_NEW4         189.80         160.85         165.82         166.03         0.000119         2.23         124.35         49.70         0.33           Reach 3         6205         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.72         160.89         165.87         166.01         0.00096														0.24
Reach 3         5295.97*         Max WS         ProAgincourt2D_Reg_ProRdT_v6         187.75         161.35         165.90         166.01         0.000233         1.56         173.38         86.43         0.22           Reach 3         6270         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.54         161.30         165.78         166.05         0.000164         2.44         109.49         46.00         0.33           Reach 3         6270         Max WS         ProAgincourt2D_Reg_Orrent_NEW4         189.54         161.30         165.78         166.05         0.000164         2.44         109.49         46.00         0.33           Reach 3         6263         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.80         166.85         165.62         166.03         0.000119         2.23         124.35         49.70         0.33           Reach 3         6263         Max WS         ProAgincourt2D_Reg_Orrent_NEW4         189.80         160.85         165.82         166.03         0.000119         2.23         124.35         49.70         0.33           Reach 3         6205         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.72         160.89         165.87         166.01         0.00096	Reach 3	6295.97*	Max WS	Highland ProAgincourt2D Reg Current NEW/	187 74	161.35	165 00		166.01	0.000233	1.56	173.38	86.43	0.25
Reach 3         6270         Max WS         ProAgincourt2D_Reg_ProAdT_v6         189.54         161.30         165.78         166.05         0.000164         2.44         109.49         46.00         0.33           Reach 3         6263         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.80         166.85         165.82         166.03         0.000164         2.44         109.49         46.00         0.33           Reach 3         6263         Max WS         ProAgincourt2D_Reg_Current_NEW4         189.80         166.85         165.82         166.03         0.000164         2.44         109.49         46.00         0.33           Reach 3         6263         Max WS         ProAgincourt2D_Reg_ProAdT_v6         189.80         160.85         165.82         166.03         0.000119         2.23         124.35         49.70         0.33           Reach 3         6205         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.72         160.89         165.87         166.01         0.00096         2.02         182.89         111.61         0.33           Reach 3         6205         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.72         160.89         165.87         166.01         0.00096         2														0.25
Reach 3         6270         Max WS         ProAgincourt2D_Reg_ProAdT_v6         189.54         161.30         165.78         166.05         0.000164         2.44         109.49         46.00         0.33           Reach 3         6263         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.80         166.85         165.82         166.03         0.000164         2.44         109.49         46.00         0.33           Reach 3         6263         Max WS         ProAgincourt2D_Reg_Current_NEW4         189.80         166.85         165.82         166.03         0.000164         2.44         109.49         46.00         0.33           Reach 3         6263         Max WS         ProAgincourt2D_Reg_ProAdT_v6         189.80         160.85         165.82         166.03         0.000119         2.23         124.35         49.70         0.33           Reach 3         6205         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.72         160.89         165.87         166.01         0.00096         2.02         182.89         111.61         0.33           Reach 3         6205         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.72         160.89         165.87         166.01         0.00096         2	Reach 3	6270	Max WS	Highland ProAgincourt2D Reg Current NEW4	180 54	161 20	165 70		166.05	0.000164	2 / /	100.40	46.00	0.50
Reach 3         6263         Max WS         ProAgincourt2D_Reg_ProAdT_v6         189.80         160.85         165.82         166.03         0.000119         2.23         124.35         49.70         0.33           Reach 3         6205         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.72         160.89         165.87         166.01         0.000096         2.02         182.89         111.61         0.33           Reach 3         6205         Max WS         ProAgincourt2D_Reg_ProRdT_v6         189.72         160.89         165.87         166.01         0.00096         2.02         182.89         111.61         0.33           Reach 3         6154         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.72         160.79         165.83         166.03         0.000119         2.14         152.56         99.81         0.33														0.39
Reach 3         6263         Max WS         ProAgincourt2D_Reg_ProAdT_v6         189.80         160.85         165.82         166.03         0.000119         2.23         124.35         49.70         0.33           Reach 3         6205         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.72         160.89         165.87         166.01         0.000096         2.02         182.89         111.61         0.33           Reach 3         6205         Max WS         ProAgincourt2D_Reg_ProRdT_v6         189.72         160.89         165.87         166.01         0.00096         2.02         182.89         111.61         0.33           Reach 3         6154         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.72         160.79         165.83         166.03         0.000119         2.14         152.56         99.81         0.33	Reach 2	6262	Max M/S	Highland ProAgineouri2D, Pog. Current NEW4	100.00	100.05	100 00		160.00	0.000440	0.00	104.05	40.70	0.00
Reach 3         6205         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.72         160.89         165.87         166.01         0.000096         2.02         182.89         111.61         0.33           Reach 3         6205         Max WS         ProAgincourt2D_Reg_ProRdTr_v6         189.72         160.89         165.87         166.01         0.000096         2.02         182.89         111.61         0.33           Reach 3         6154         Max WS         Highland_ProAgincourt2D_Reg_Current_NEW4         189.72         160.79         165.83         166.03         0.000119         2.14         152.58         99.81         0.33														0.33
Reach 3         6205         Max WS         ProAgincount2D_Reg_ProAdTr_v6         189.72         160.89         165.87         166.01         0.000096         2.02         182.89         111.61         0.33           Reach 3         6154         Max WS         Highland_ProAgincount2D_Reg_Current_NEW4         189.72         160.79         165.83         166.03         0.000119         2.14         152.58         99.81         0.33	Reach 2	6205	MaxiNC		400 70	460.00	405.07		400.01	0.000000	0.00	400.00	444.04	0.00
														0.30
	Reach 2	6154	Max M/C	Highland ProAgineourt2D, Pog. Current NEW4	100.70	100 70	100 00		160.00	0.000440	0.44	450.50	00.01	0.00
														0.33

HEC-RAS River: Bendale Branch Reach: Reach 3 Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach 3	6135	Max WS	Highland_ProAgincourt2D_Reg_Current_NEW4	189.72	160.74	165.81	163.70	166.02	0.000116	2.13	149.54	139.28	0.33
Reach 3	6135	Max WS	ProAgincourt2D_Reg_ProRdTr_v6	189.72	160.74	165.81	163.70	166.02	0.000116	2.13	149.54	139.28	0.33