

# Sussex Flood Risk Mitigation Master Plan

September 10, 2020



Public Presentation



# Outline

- Project History
- Future vs Historic Flood Risk
- Flood Risk Mitigation Projects
  - Gateway Mall Flood Berm
  - Trout Creek Flood Berm
  - East Town Limit Flow Diversion Channel
  - Parson Brook Flow Diversion Channel
  - Storm Sewer Upgrades (NW and NE)
- Next Steps



# Project History

- Repeated flooding culminating in 2014 and 2015 floods
- Studied historic flood risk and quantified future flood risks
- Updated flood risk mapping
- Identified and evaluated flood risk mitigation projects
- Constructed Gateway Mall Flood Berm
- Developed regional flood risk mitigation plan





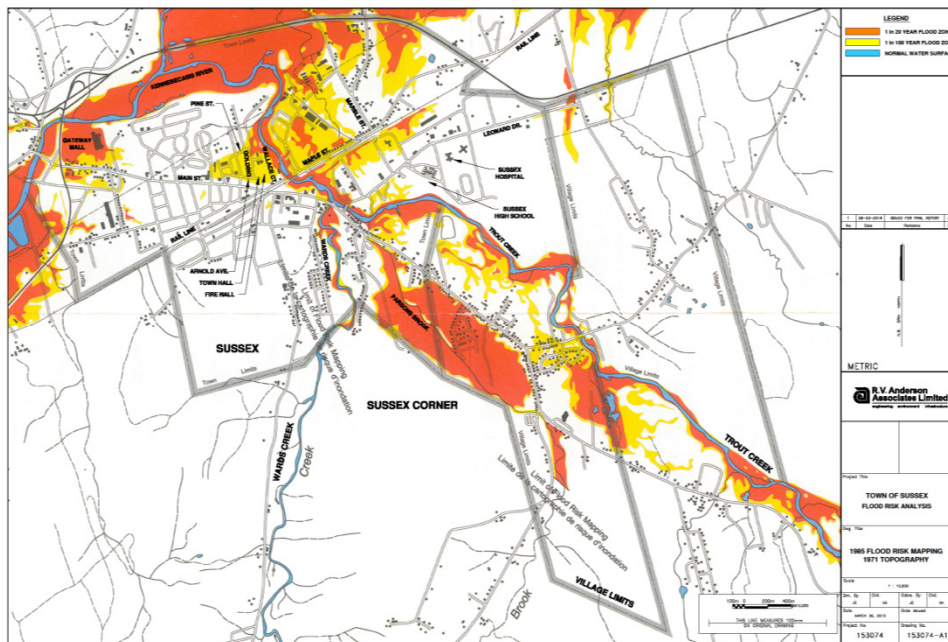
# Future vs Historic Flood Risk

- Year 2100 flood flows increase by 14.5% to 16.6% with:
  - Reduced ice jam flooding
  - Reduced winter and spring flooding
  - Increased fall flooding
- Year 2100 increases in flood levels:
  - 20 year event: 0.18 m to 0.29 m
  - 100 year event: 0.25 m to 0.36 m

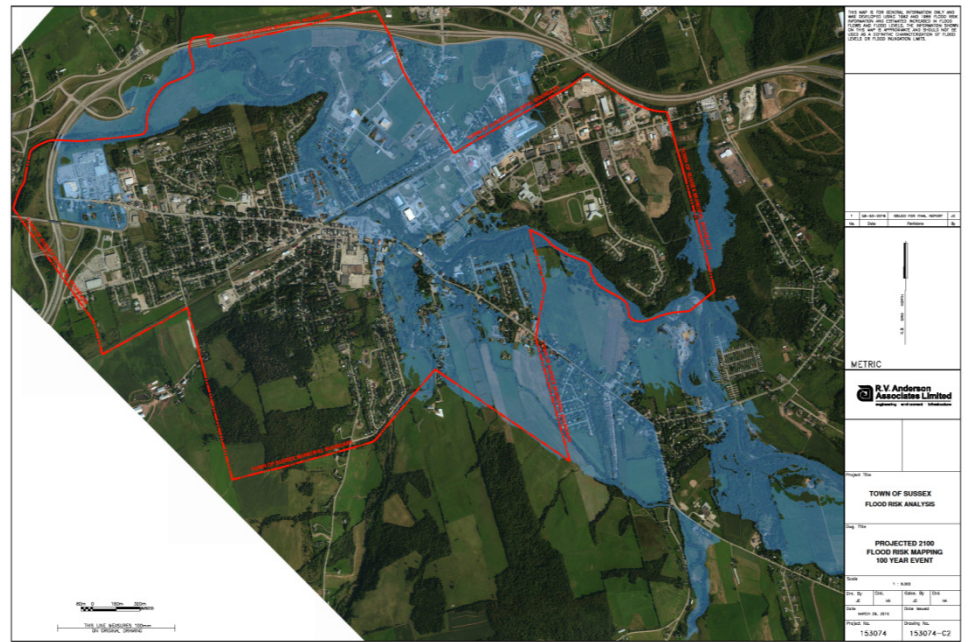




# Future vs Historic Flood Risk



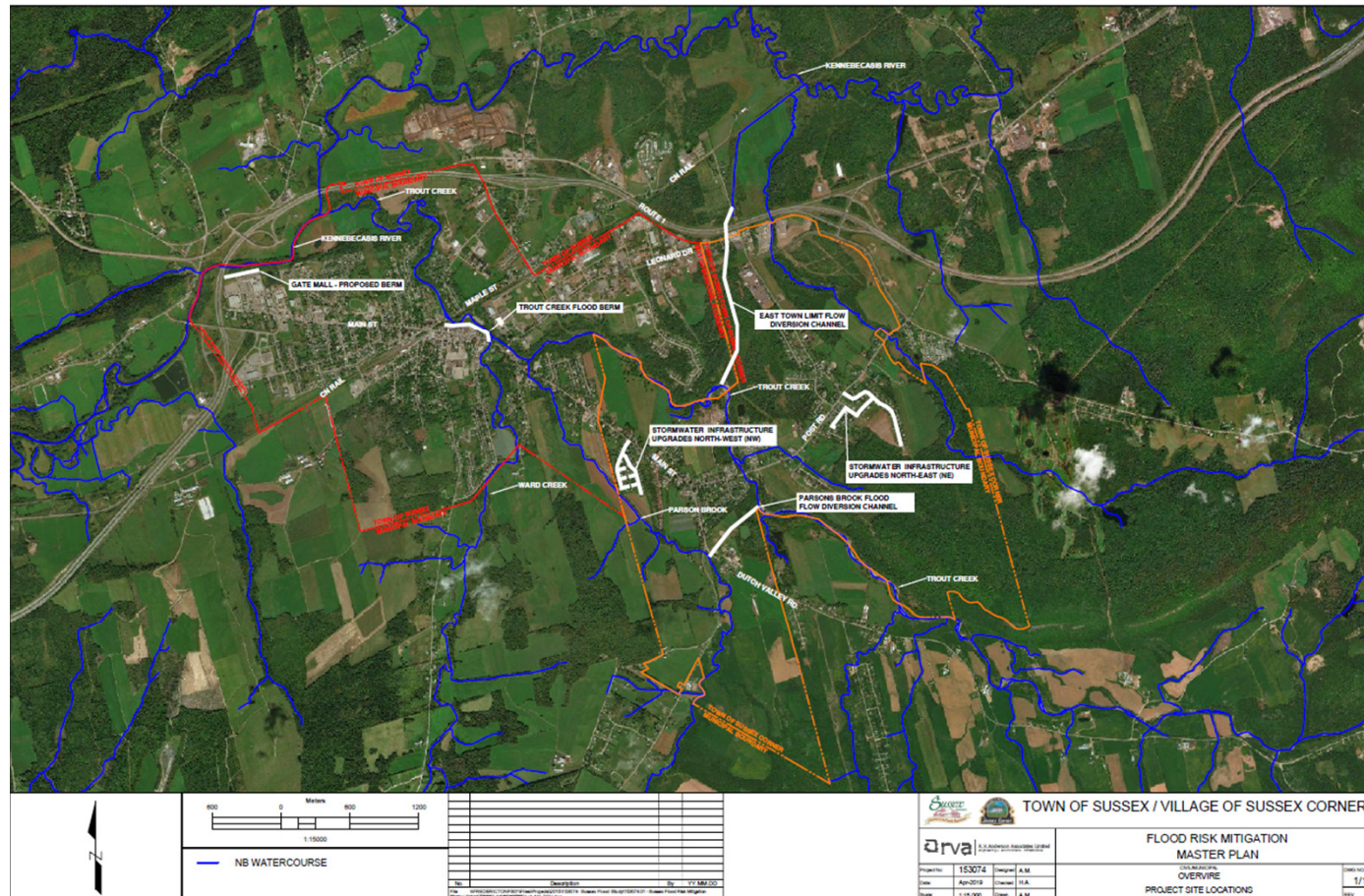
1985 Flood Risk Map



2100 Flood Risk Map



# Flood Risk Mitigation Projects

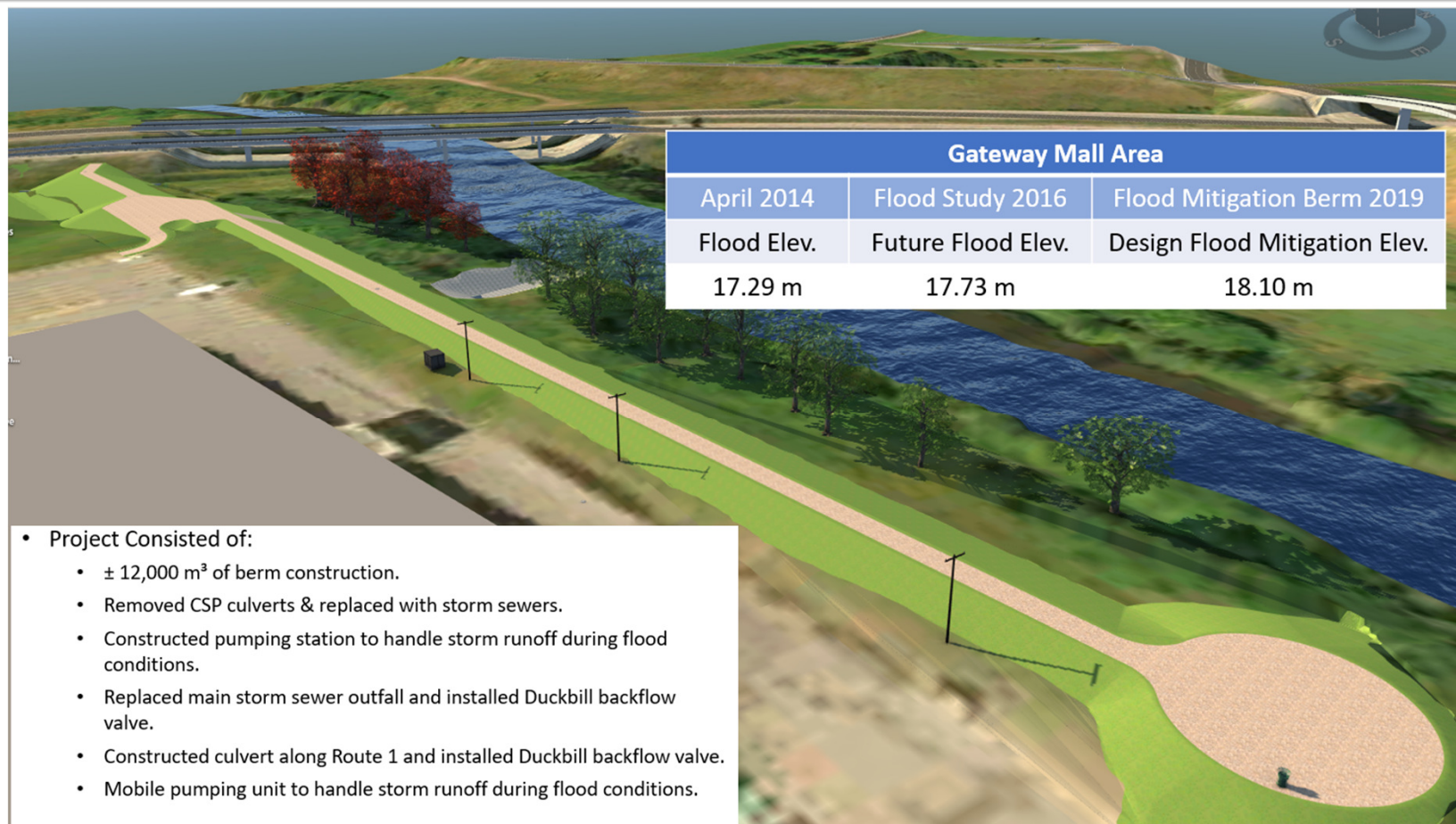


# Flood Risk Mitigation Projects

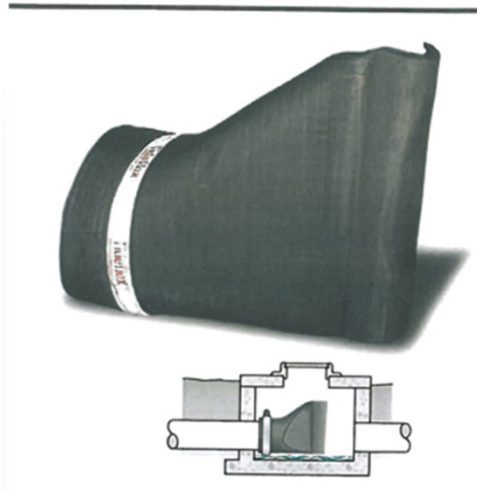
Project Title	Project Cost
Gateway Mall Flood Mitigation Berm	\$1,600,000
Trout Creek Flood Mitigation Berm	\$2,500,000
East Town Limit Flood Flow Diversion Channel	\$16,000,000
Parson Brook Flood Flow Diversion Channel	\$1,800,000
Stormwater Infrastructure Upgrades (NW)	\$1,600,000
Stormwater Infrastructure Upgrades (NE)	\$1,600,000
<b>Total Project Cost (excl. HST)</b>	<b>\$25,100,000</b>



# Gateway Mall Flood Berm (constructed in 2019)

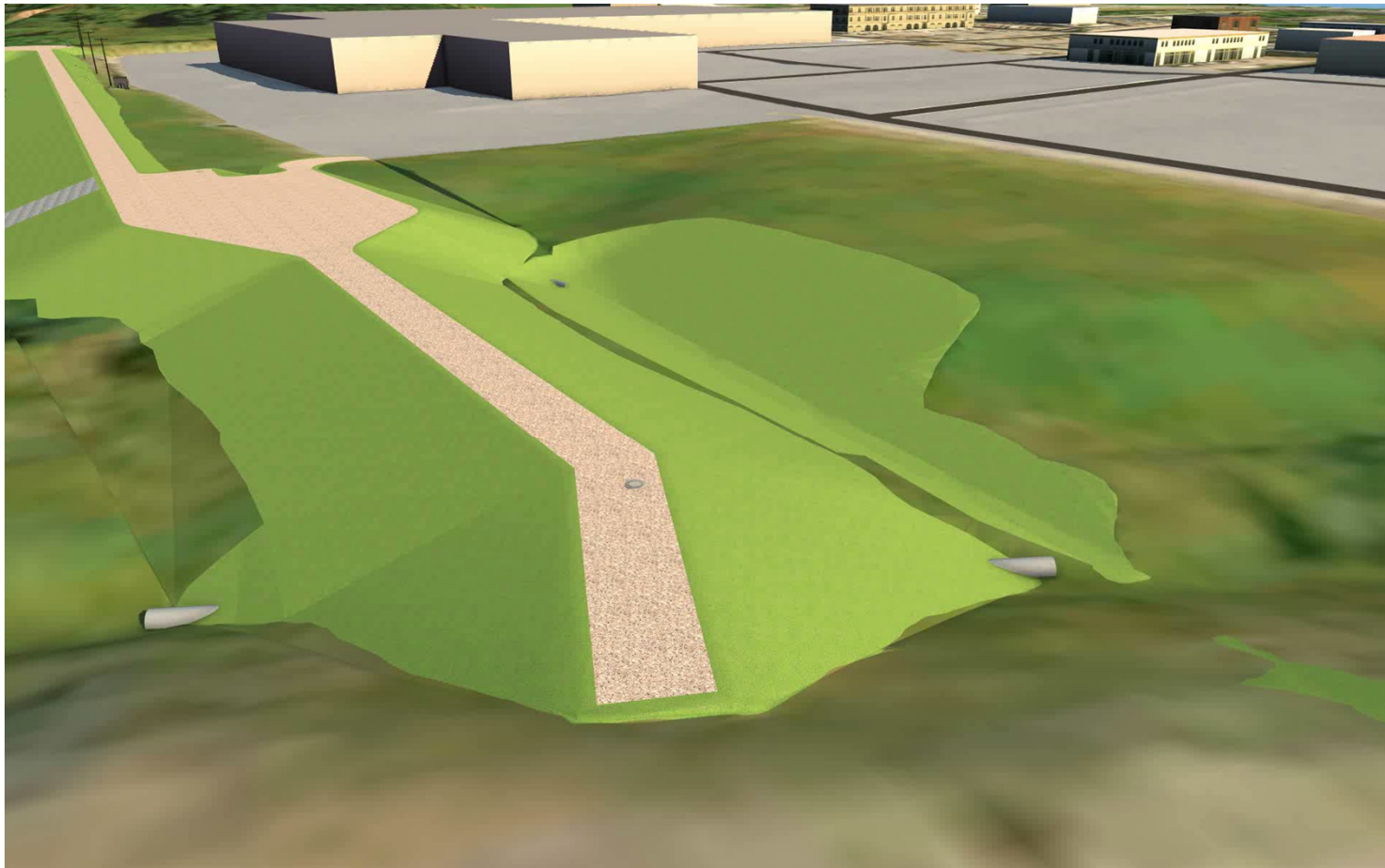


# Gateway Mall Duckbill Valves



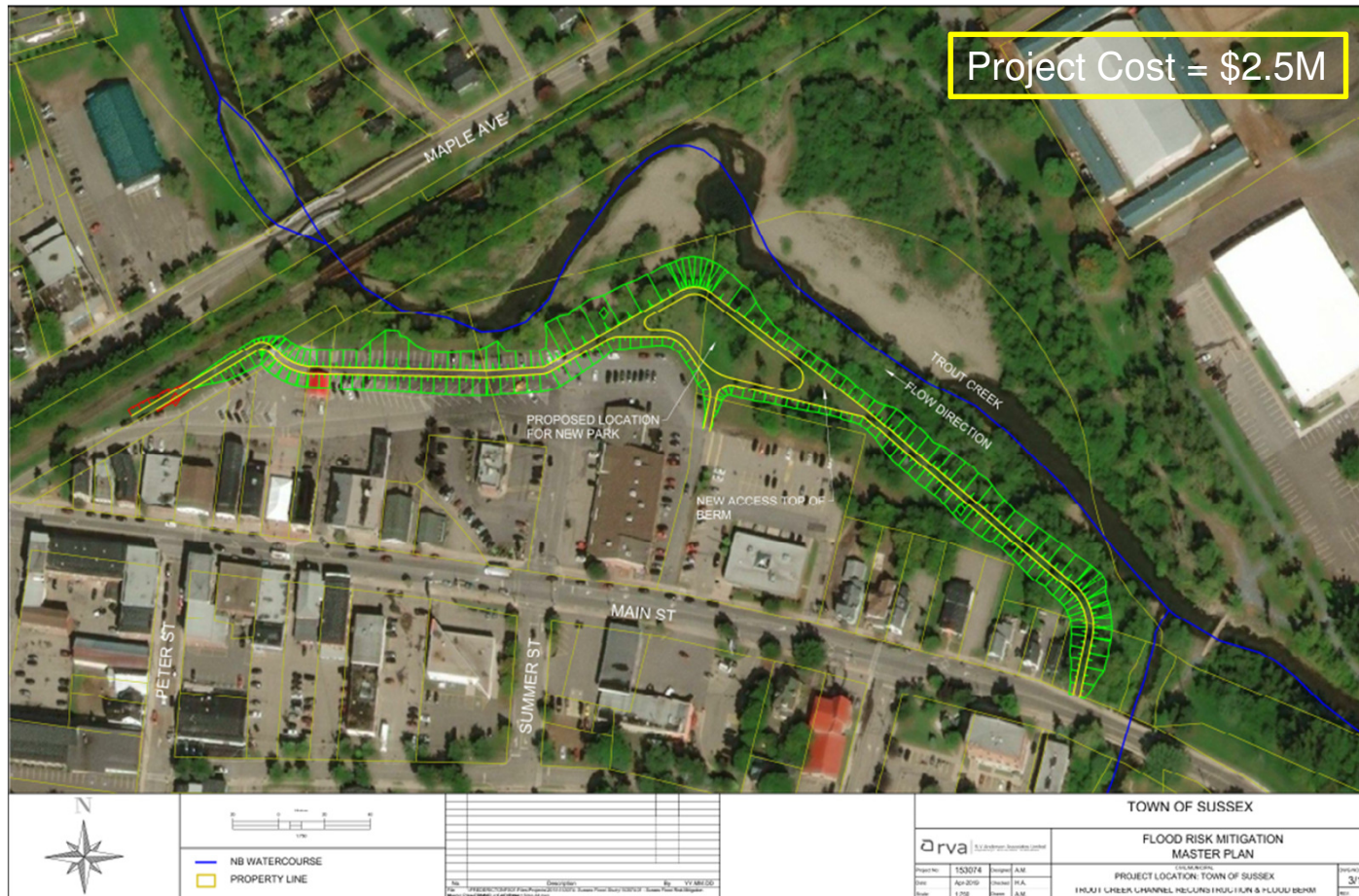


## Gateway Mall Flood Berm (constructed in 2019)

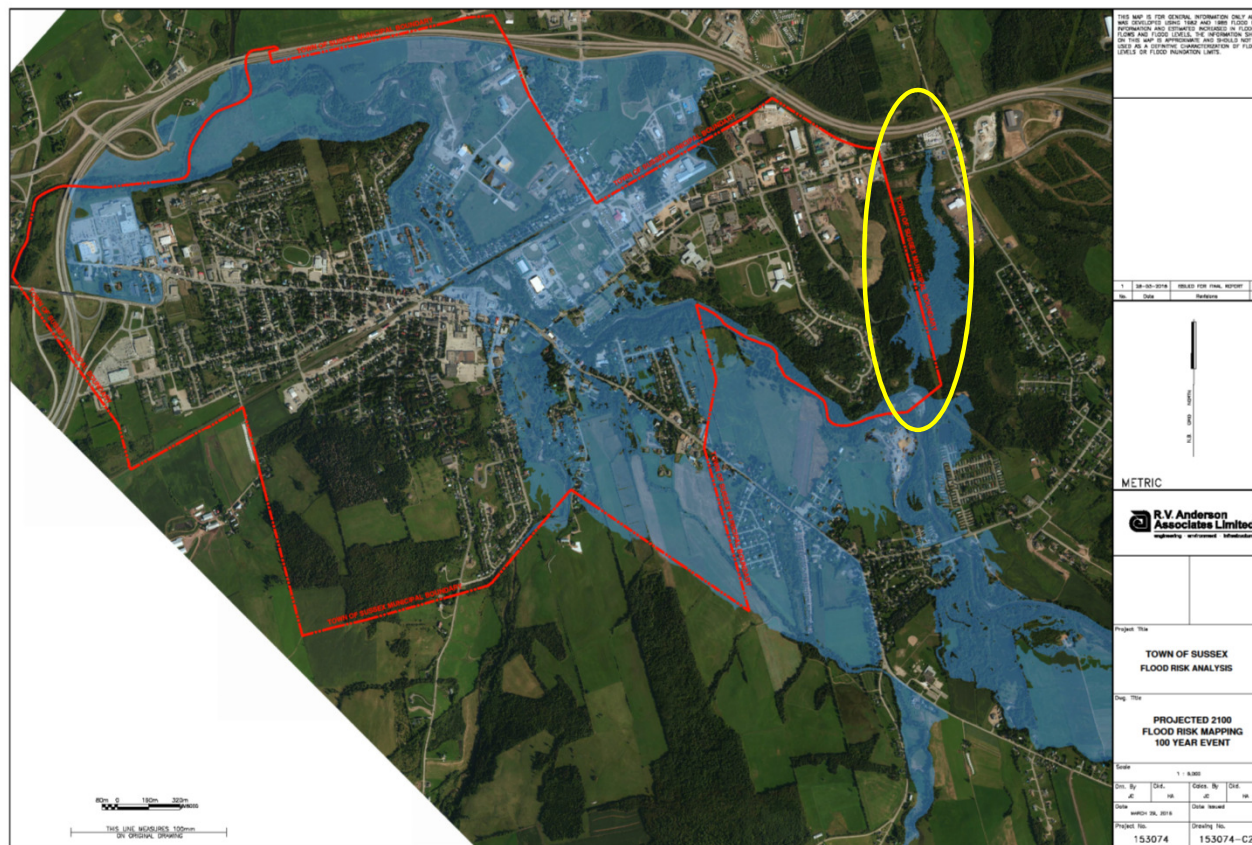




# Trout Creek Flood Berm

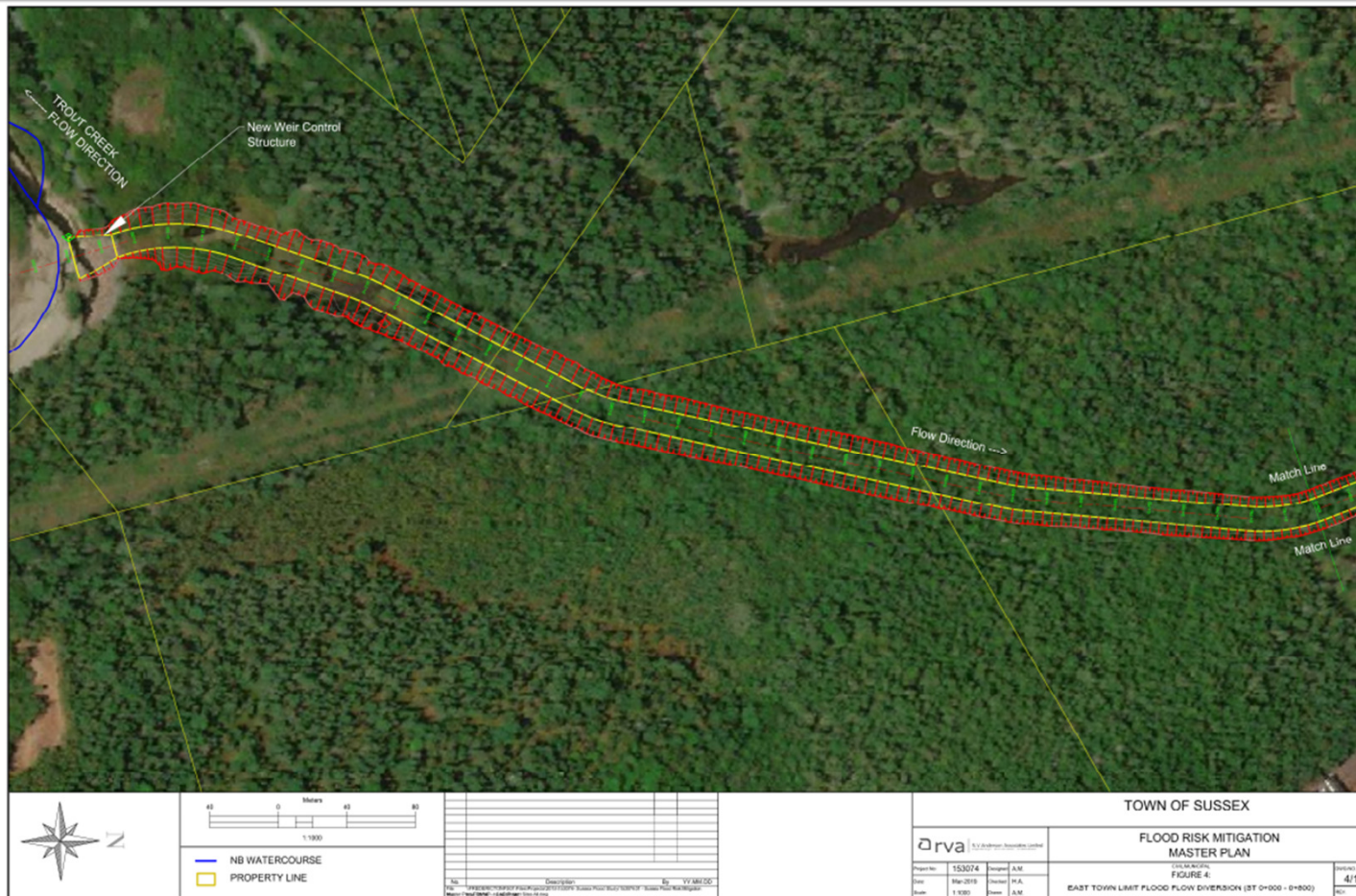


# East Town Limit Flow Diversion Channel



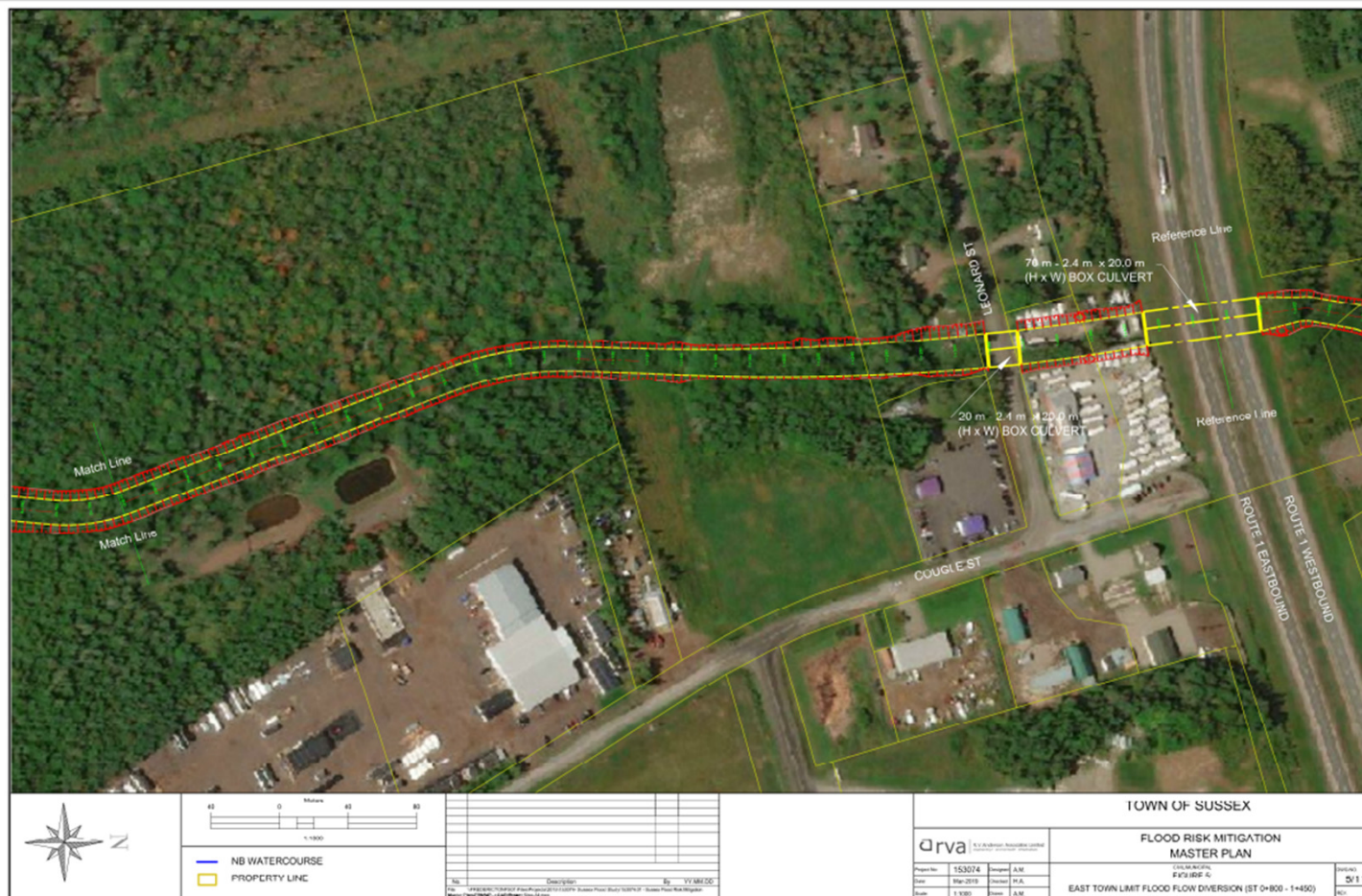


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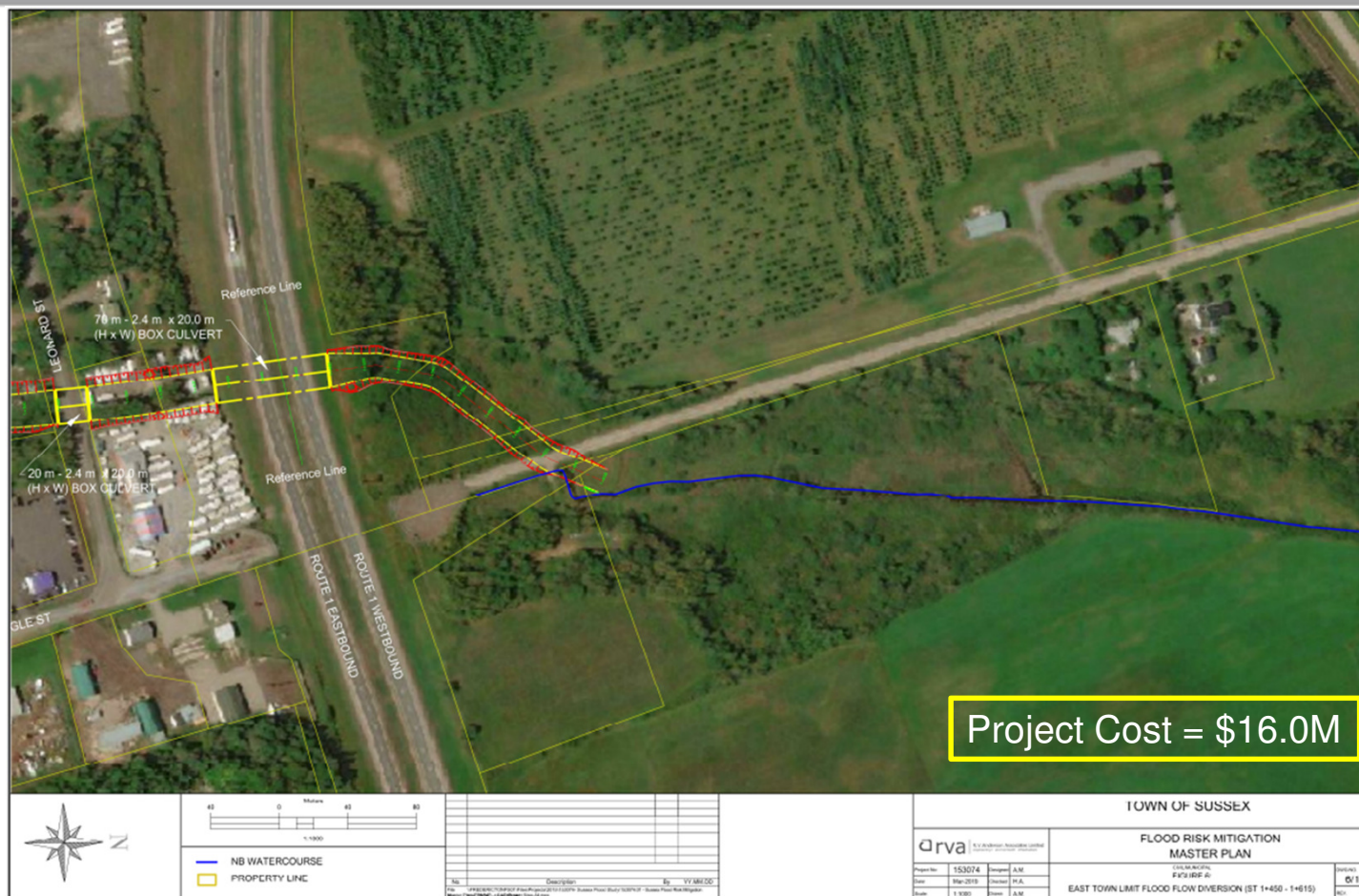




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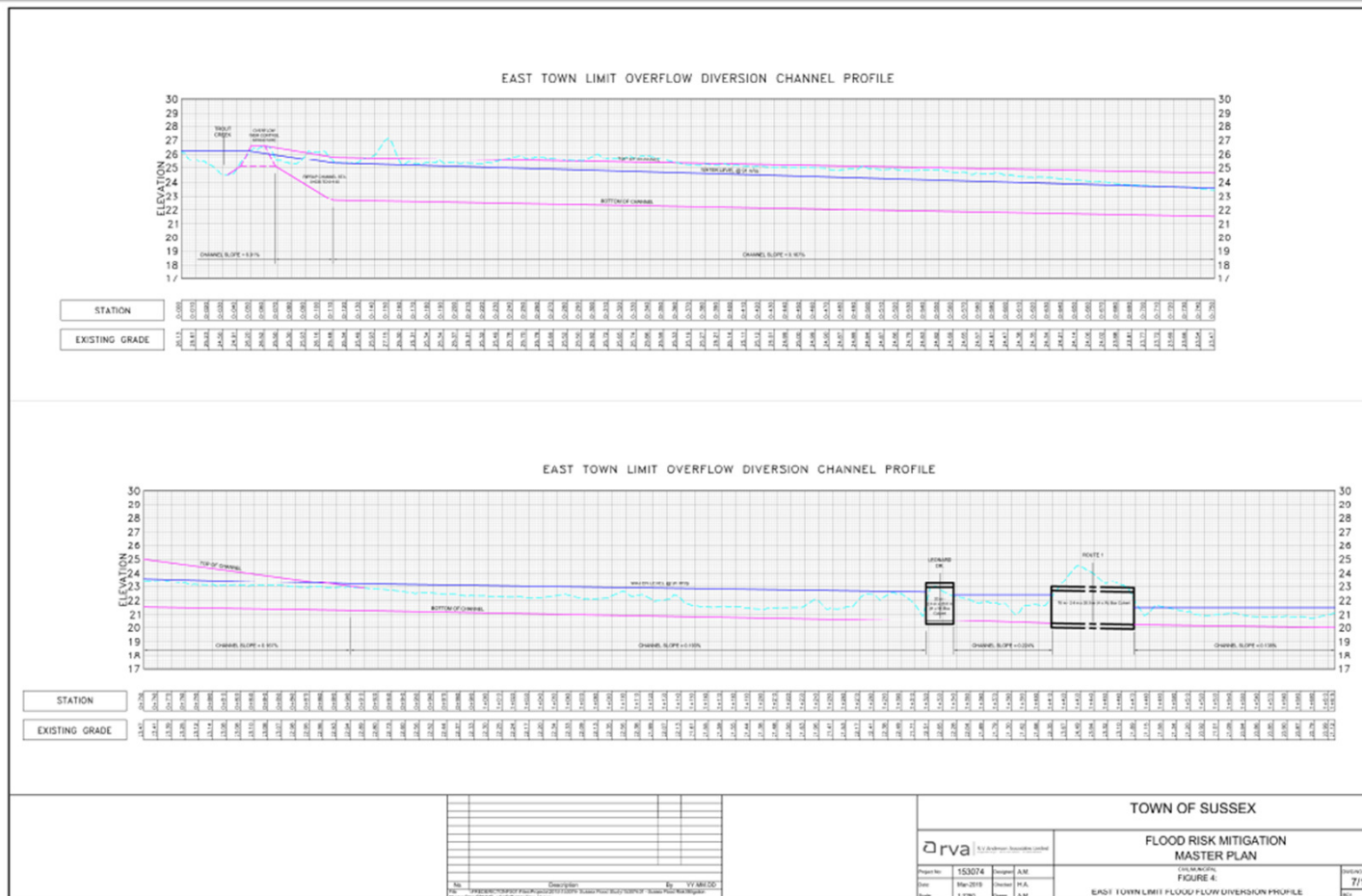


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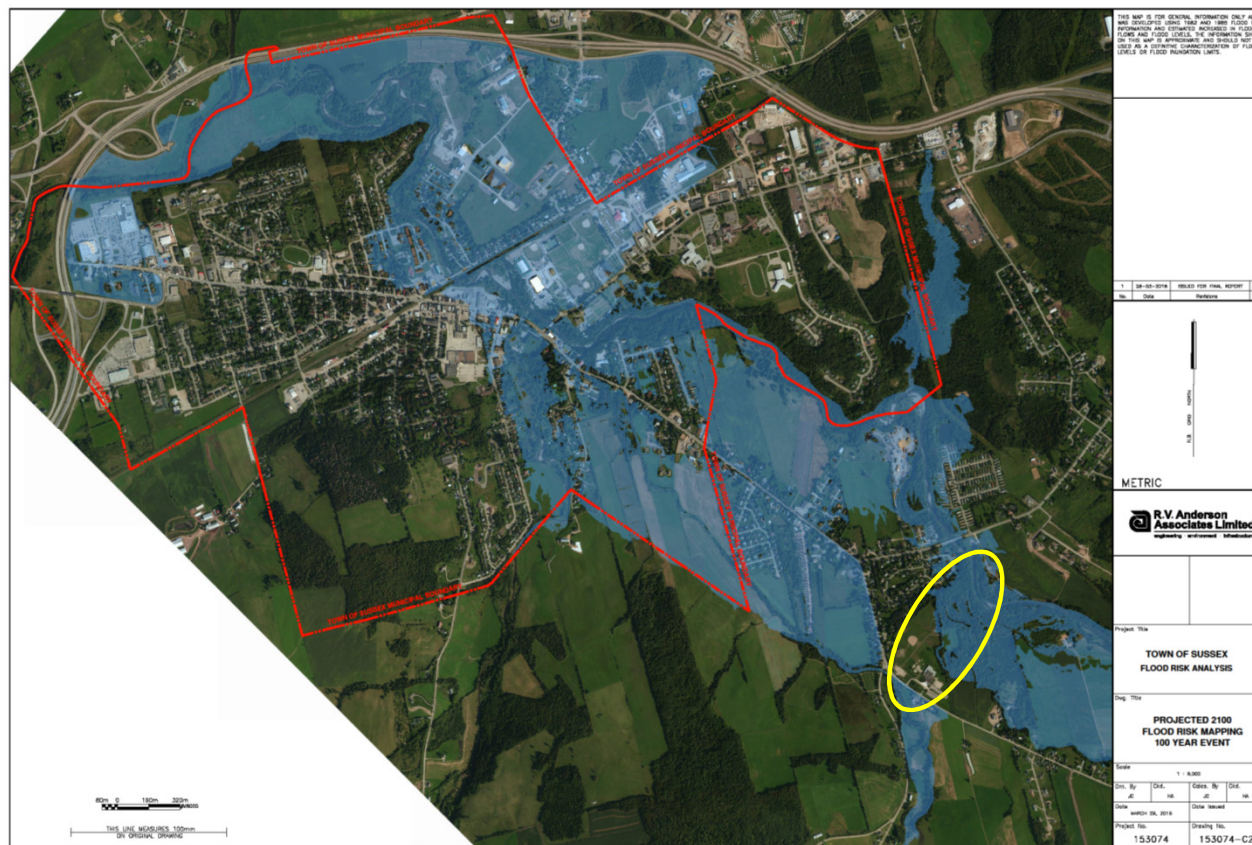


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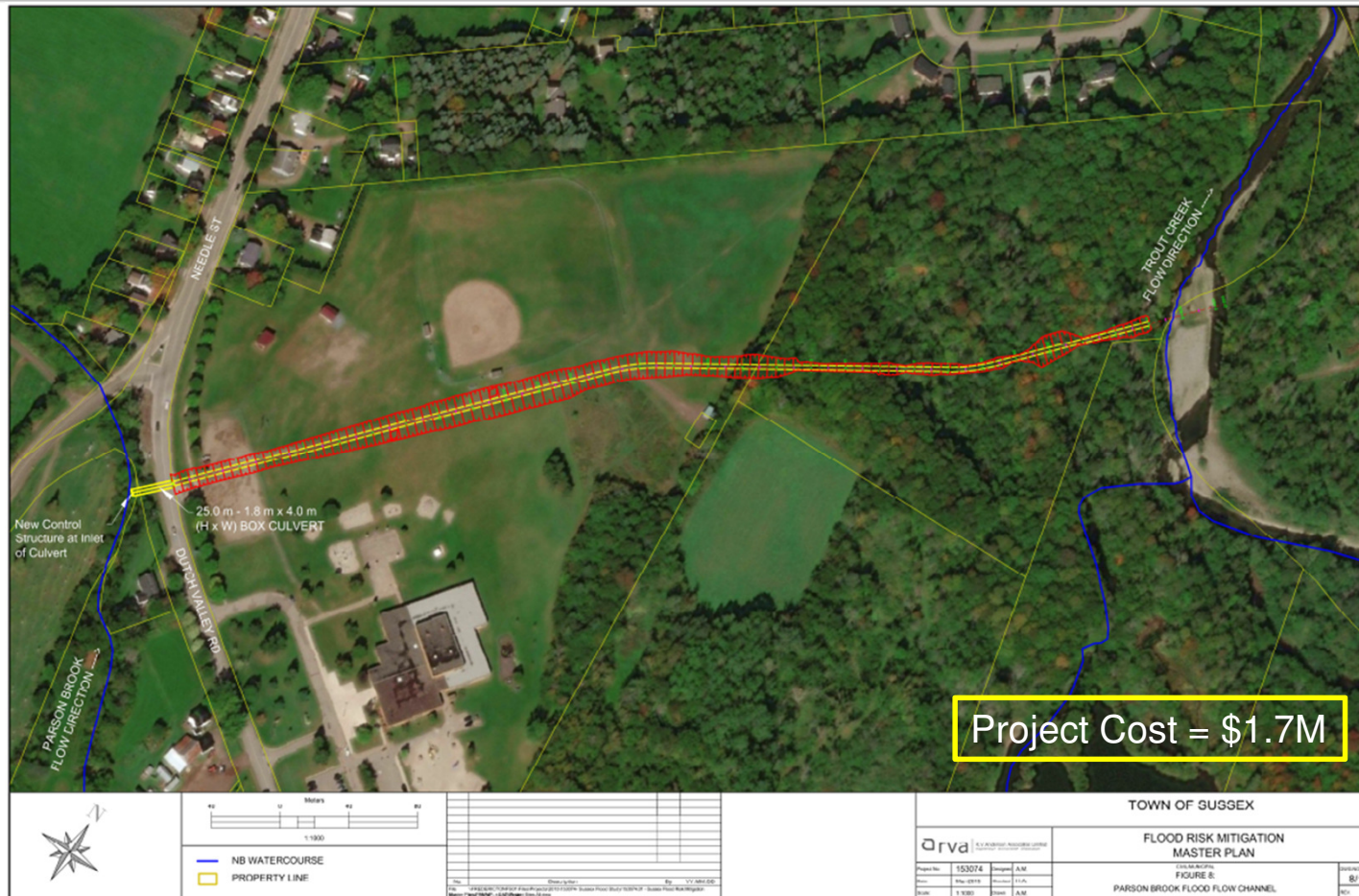




# Parson Brook Flow Diversion Channel

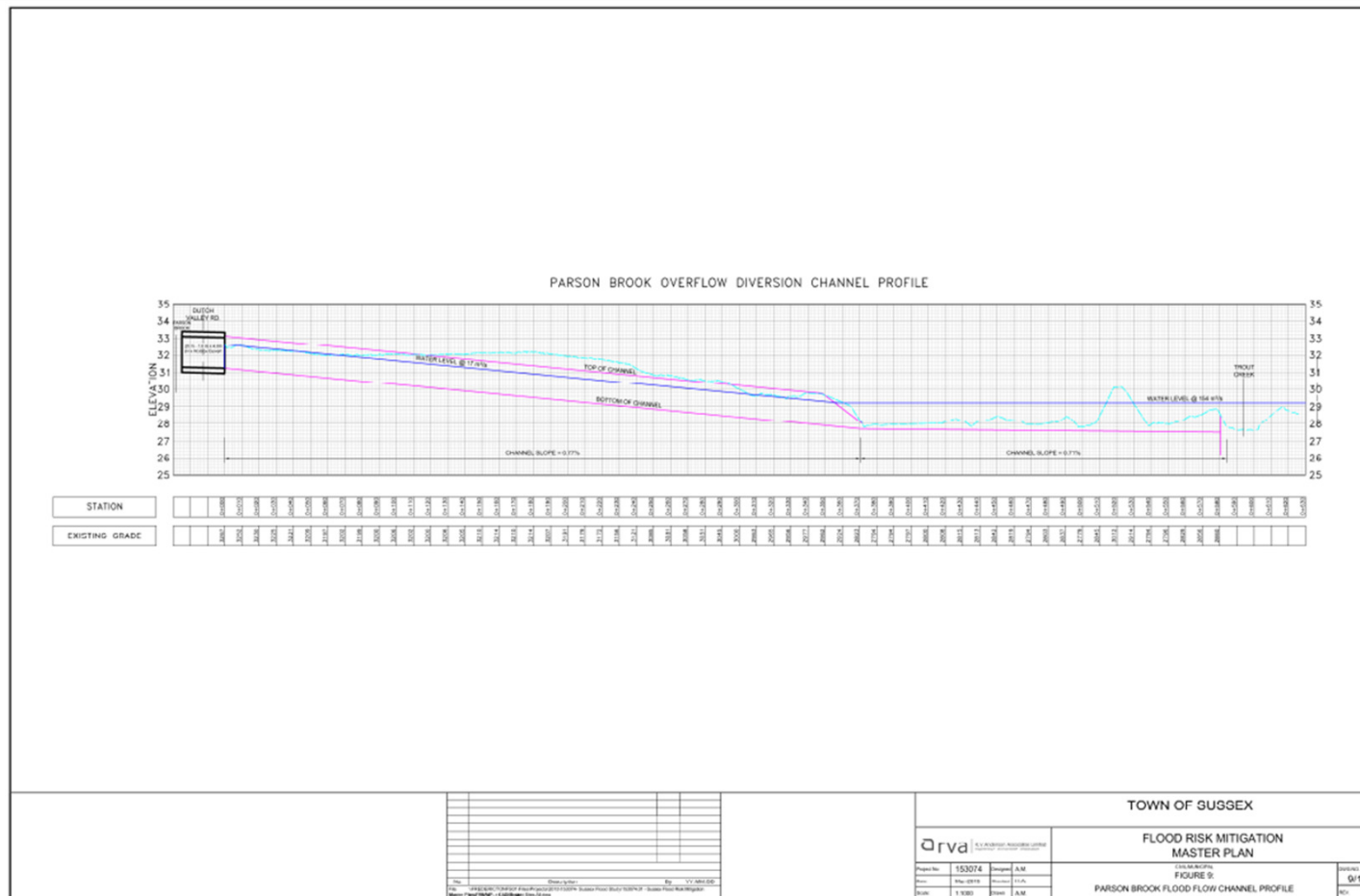


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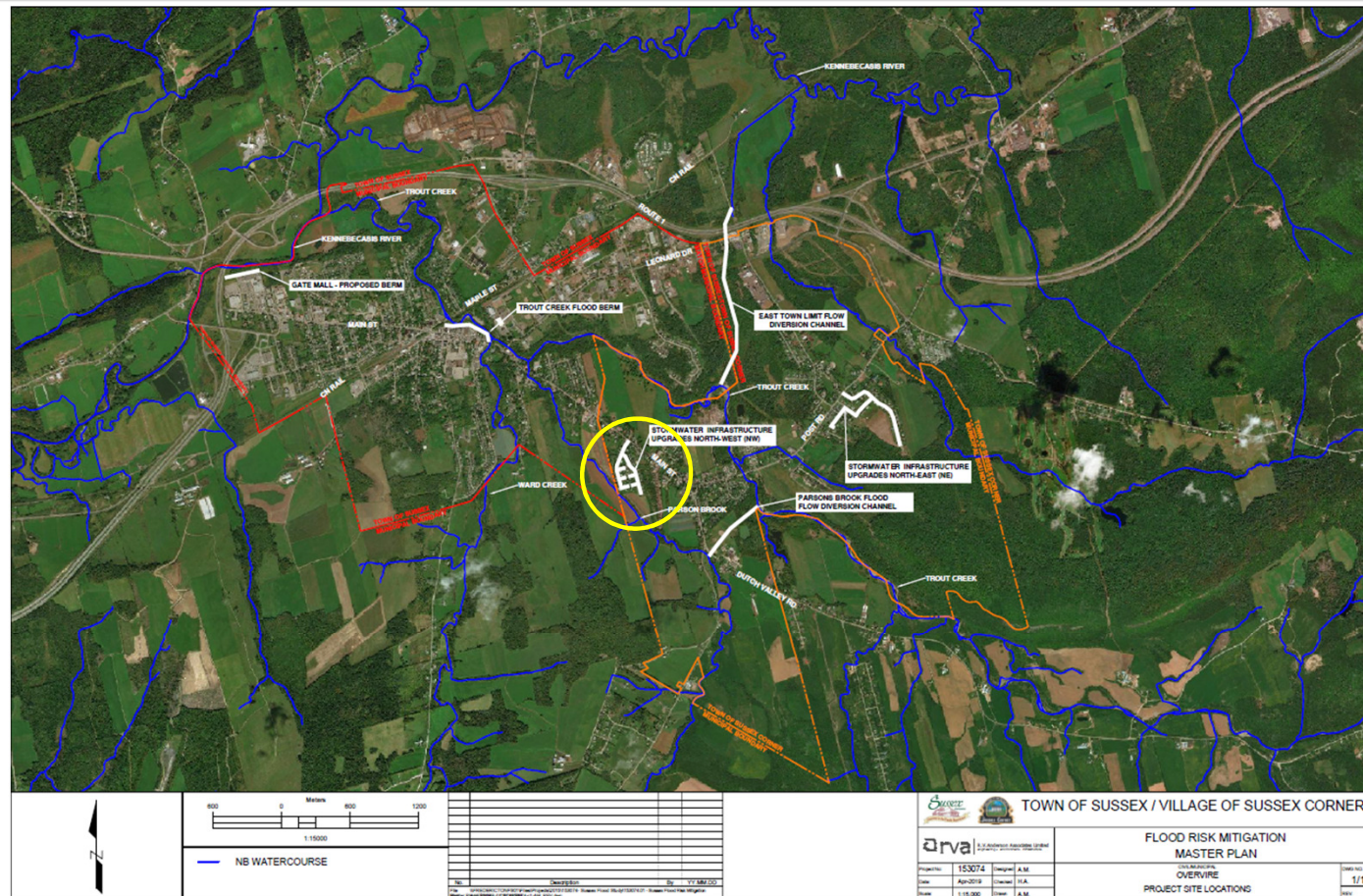




# Parson Brook Flow Diversion Channel



# Flood Risk Mitigation Projects



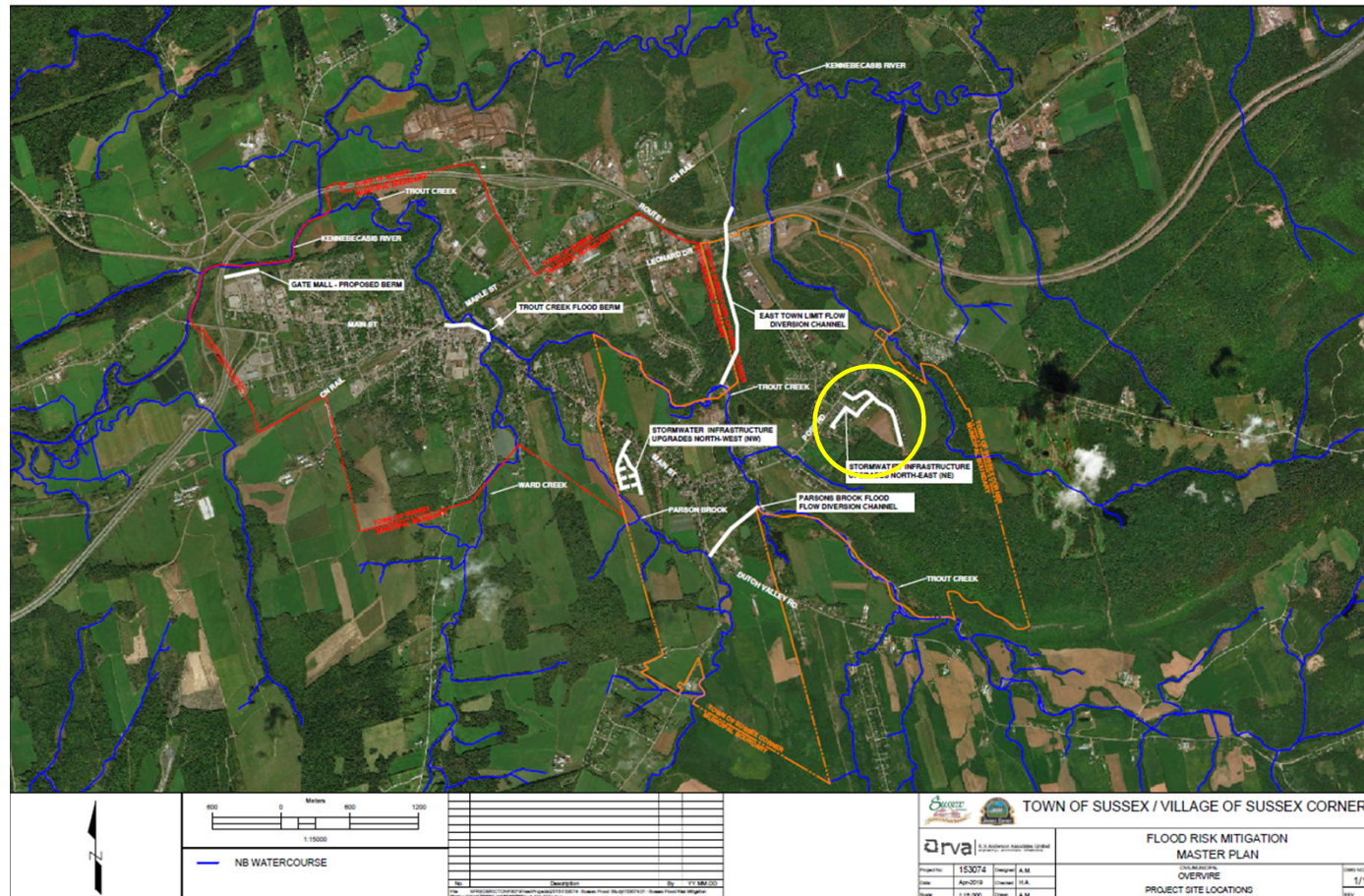


# Stormwater Infrastructure Upgrades (NW)





# Flood Risk Mitigation Projects





# Stormwater Infrastructure Upgrades (NE)



# Next Steps

- Identify next project(s)

Project Title	Project Cost
<del>Gateway Mall Flood Mitigation Berm</del>	<del>\$1,600,000</del>
?? Trout Creek Flood Mitigation Berm ??	\$2,500,000
?? East Town Limit Flood Flow Diversion Channel ??	\$16,000,000
?? Parson Brook Flood Flow Diversion Channel ??	\$1,800,000
?? Stormwater Infrastructure Upgrades (NW) ??	\$1,600,000
?? Stormwater Infrastructure Upgrades (NE) ??	\$1,600,000
<b>Total Project Cost (excl. HST)</b>	<b>\$25,100,000</b>

- Confirm flood risk changes (plus and minus)
- Confirm return on investment (\$\$ saved per \$ spent)
- Apply for Federal and Provincial funding



## Questions and Comments

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