



CITY OF YORKTON

Flood Mitigation Presentation

January 30, 2017

Chris Hallam, P.Eng.

Jeremie Bourgeois, P.Eng.



Background

- * Yorkton has experienced numerous large rain events in recent years that has caused flooding throughout the City
- * There are 11 locations identified by City staff where flooding regularly occurs that cause negative impacts to residents and business owners

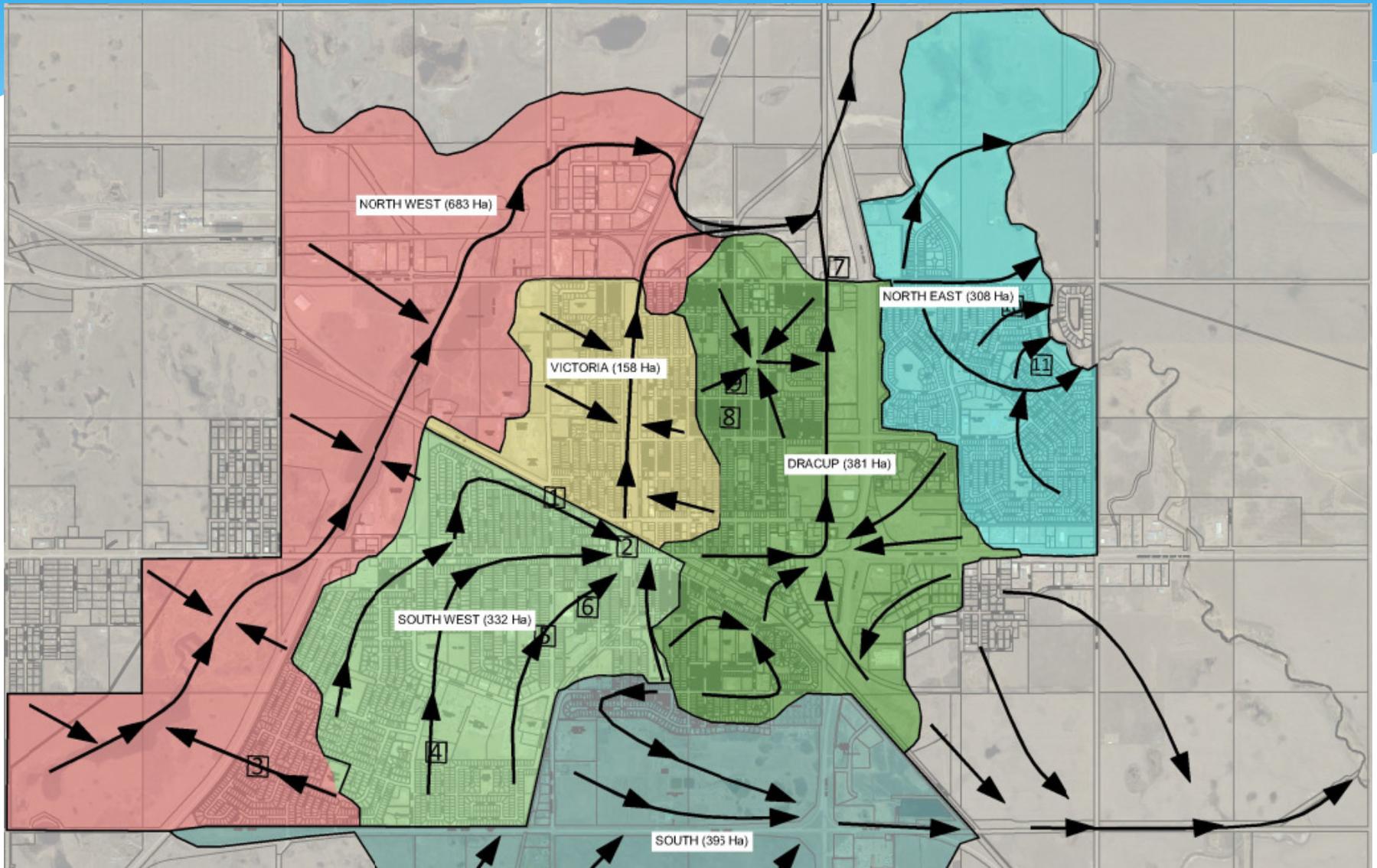
Scope of the Study

- * Identify problems with existing infrastructure to understand what is causing the flooding.
- * Propose solutions that will mitigate flooding at eleven(11) locations identified by City staff.
- * Provide conceptual budget cost estimates for proposed solutions.

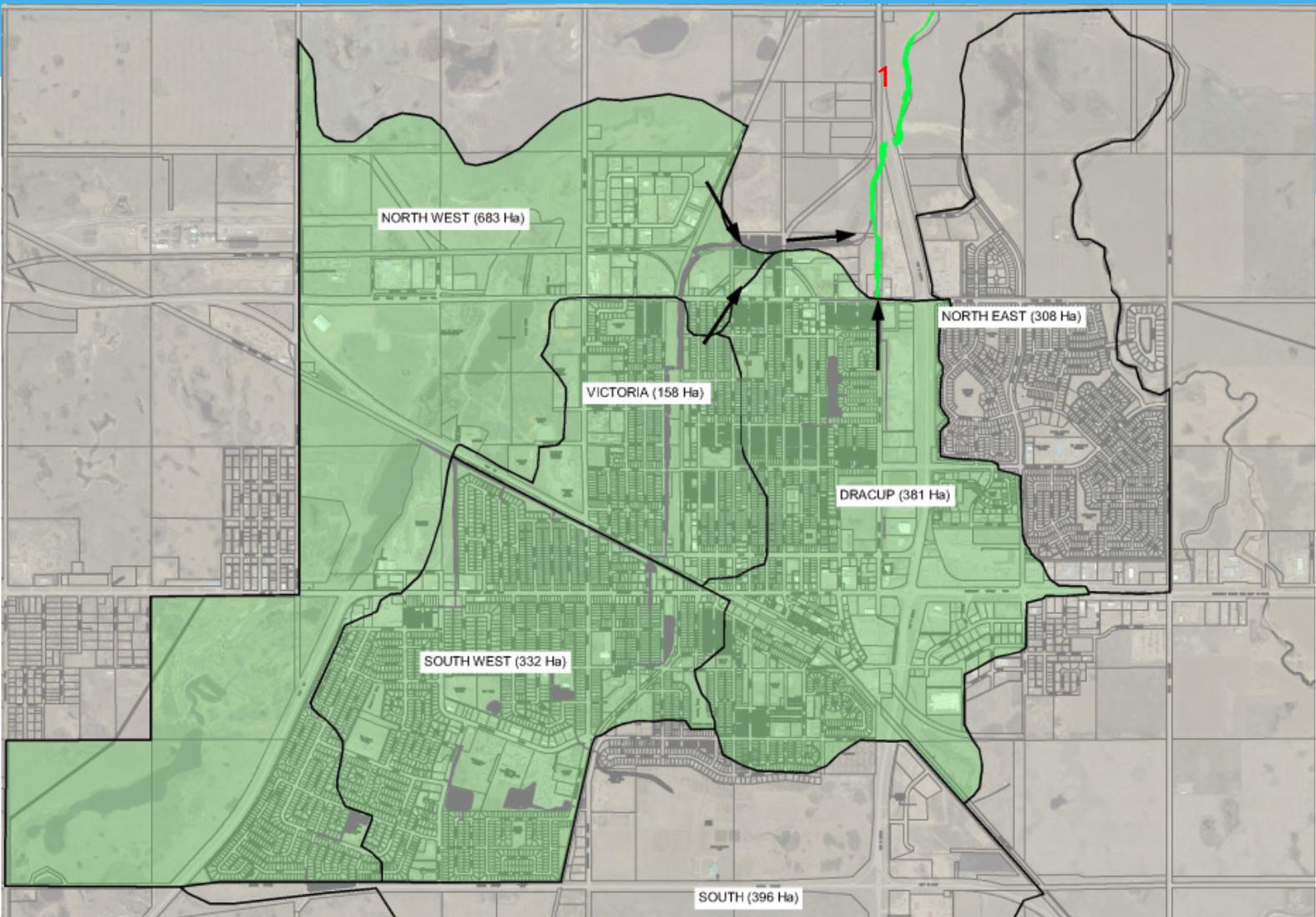
Points for Consideration

- * These are not the only options considered.
- * These are the options deemed to be the most effective both in terms of cost and overall impact.
- * Other factors will need to be considered.
- * Implementation order is important.

Existing Major Drainage

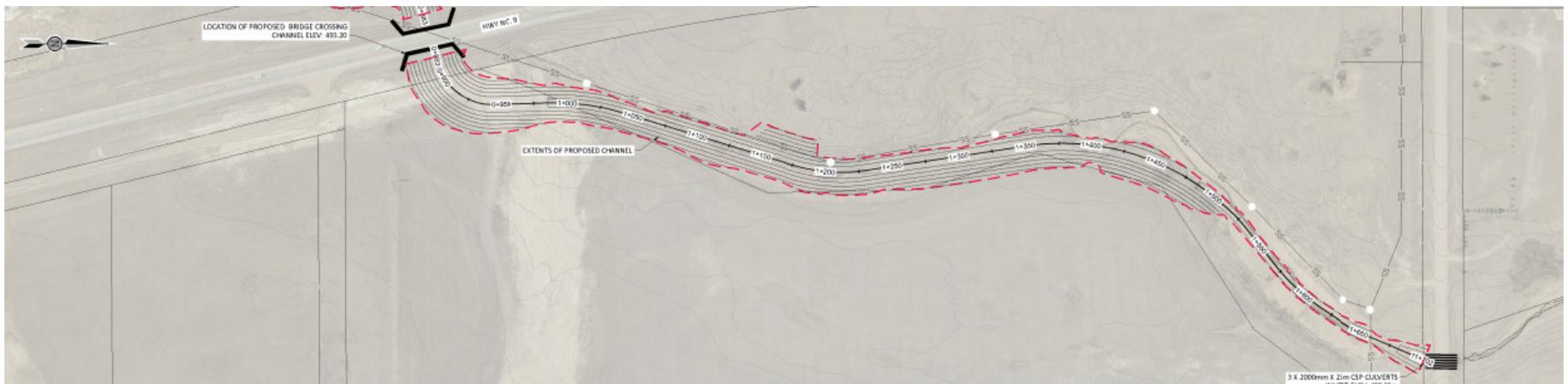
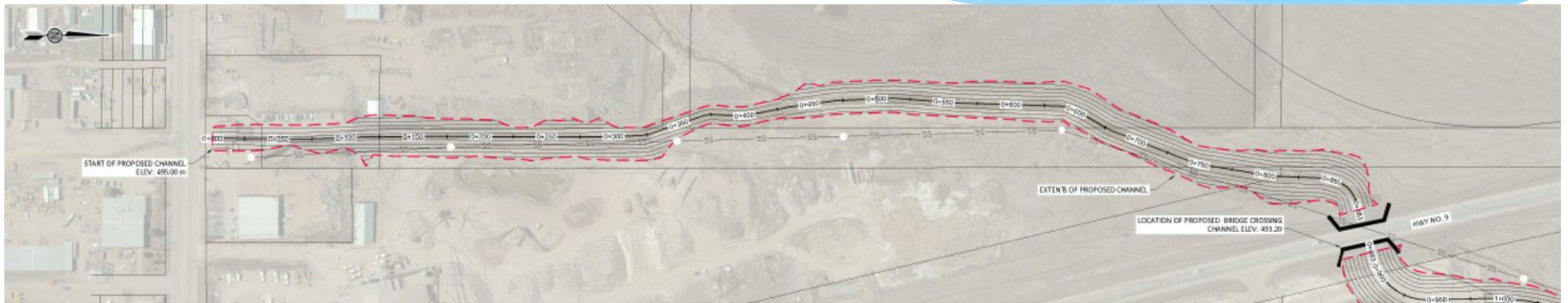


North Channel Drainage Area

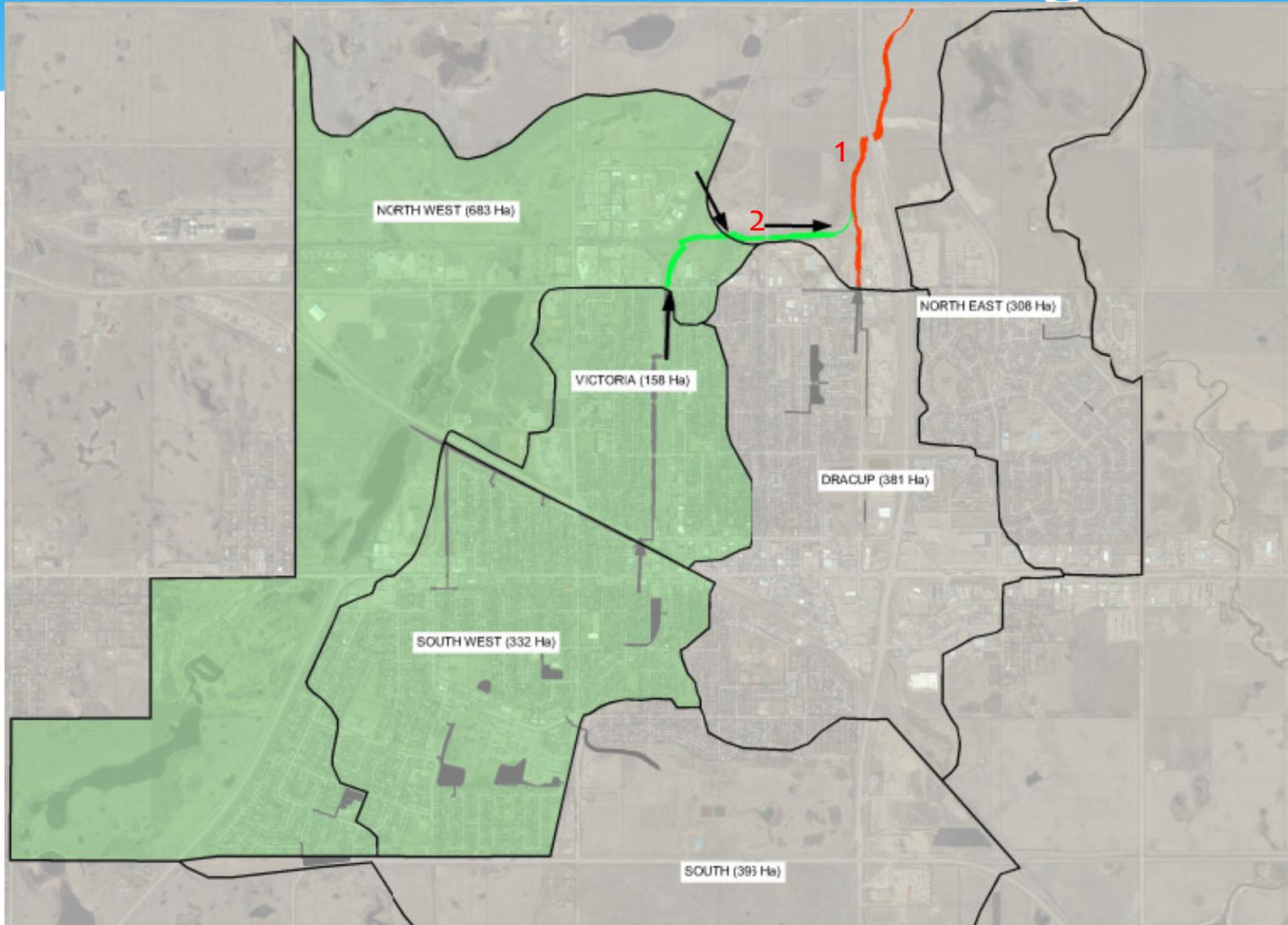


Proposed North Drainage Channel Upgrades

Implementation Order: 1 – Detailed Design in Progress



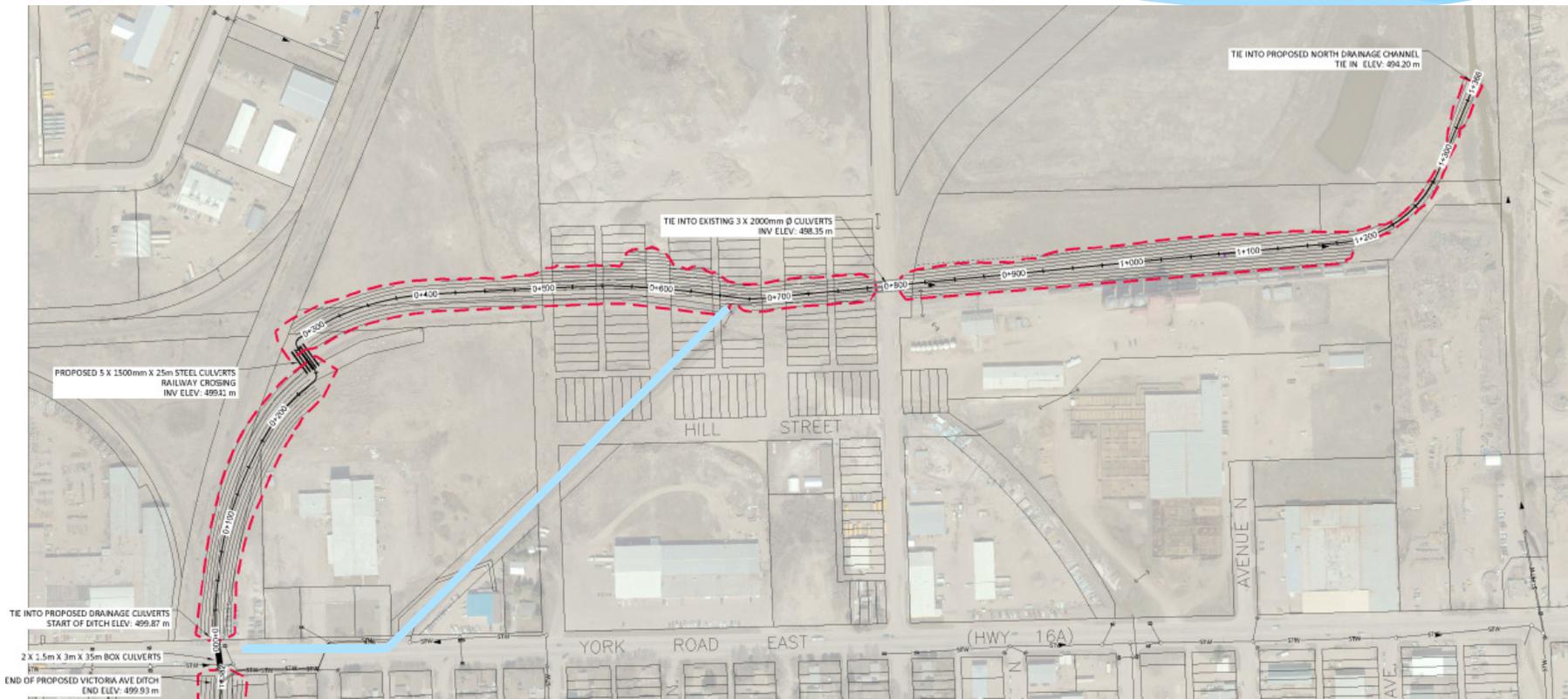
North-Central Channel Drainage Area



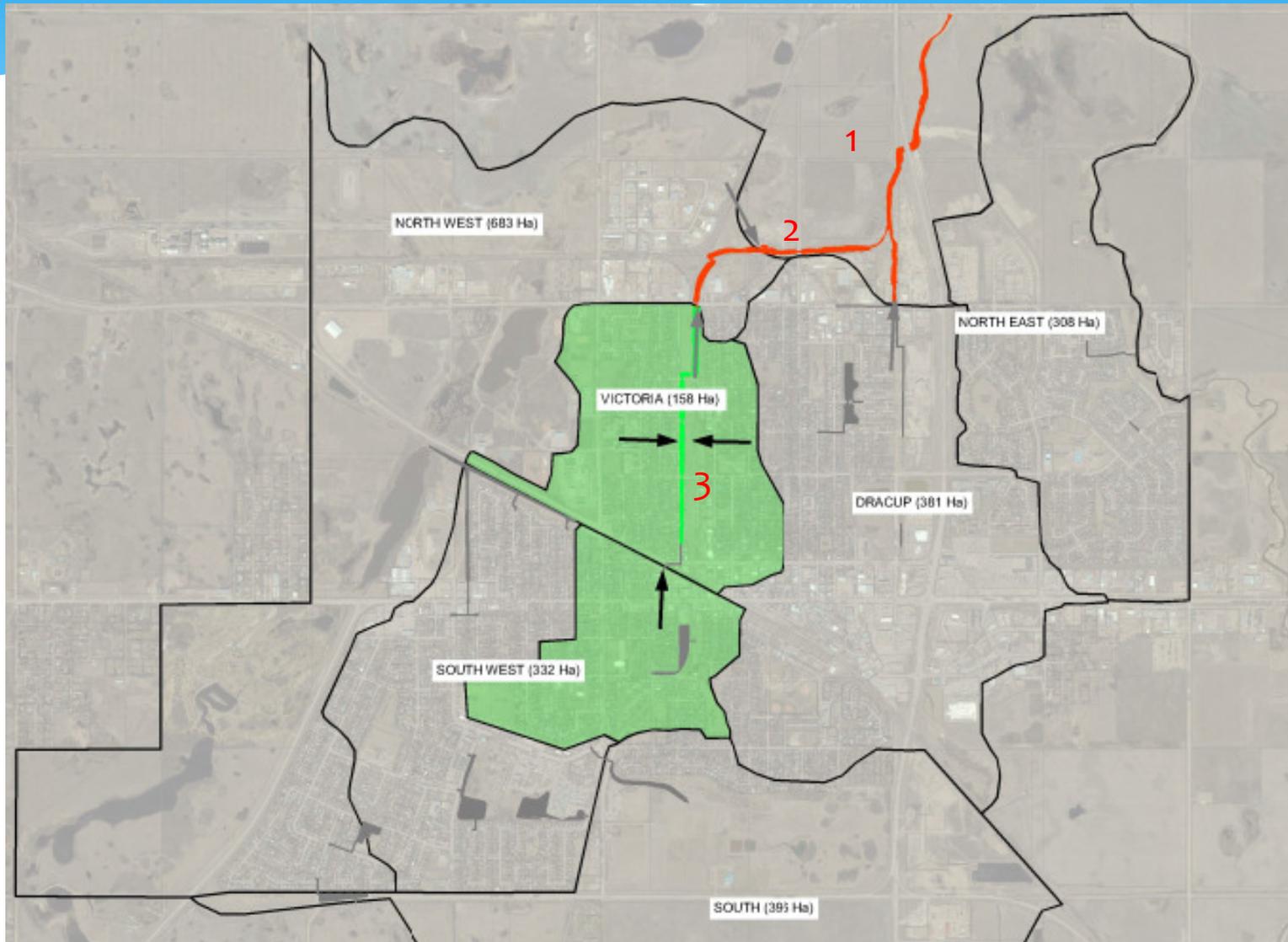
North-Central Channel Upgrades

Estimated Cost: \$3,960,000

Implementation Order: 2



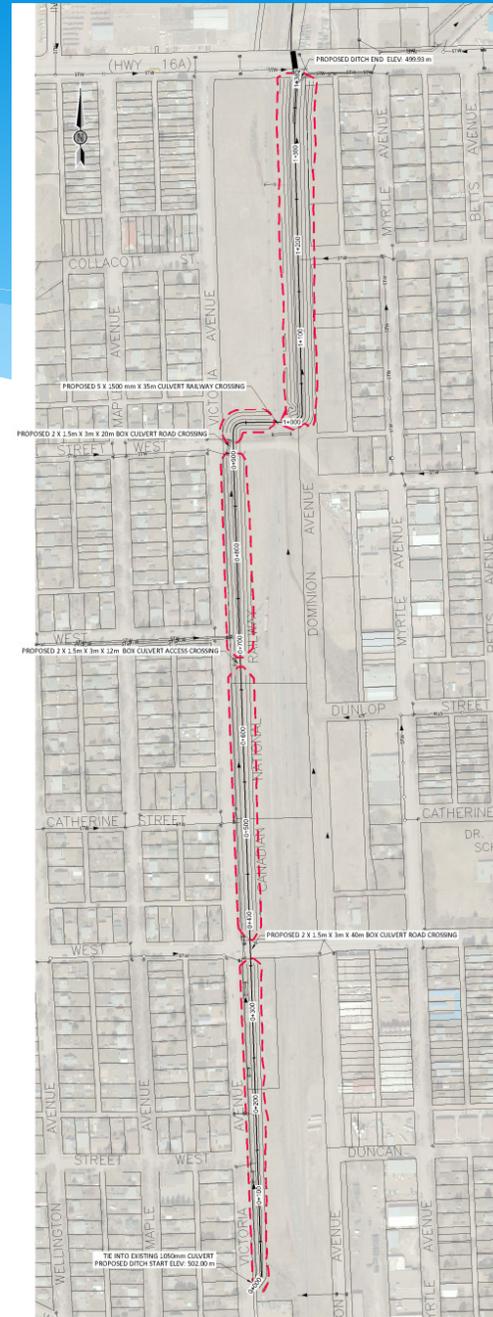
Victoria Channel Drainage Area



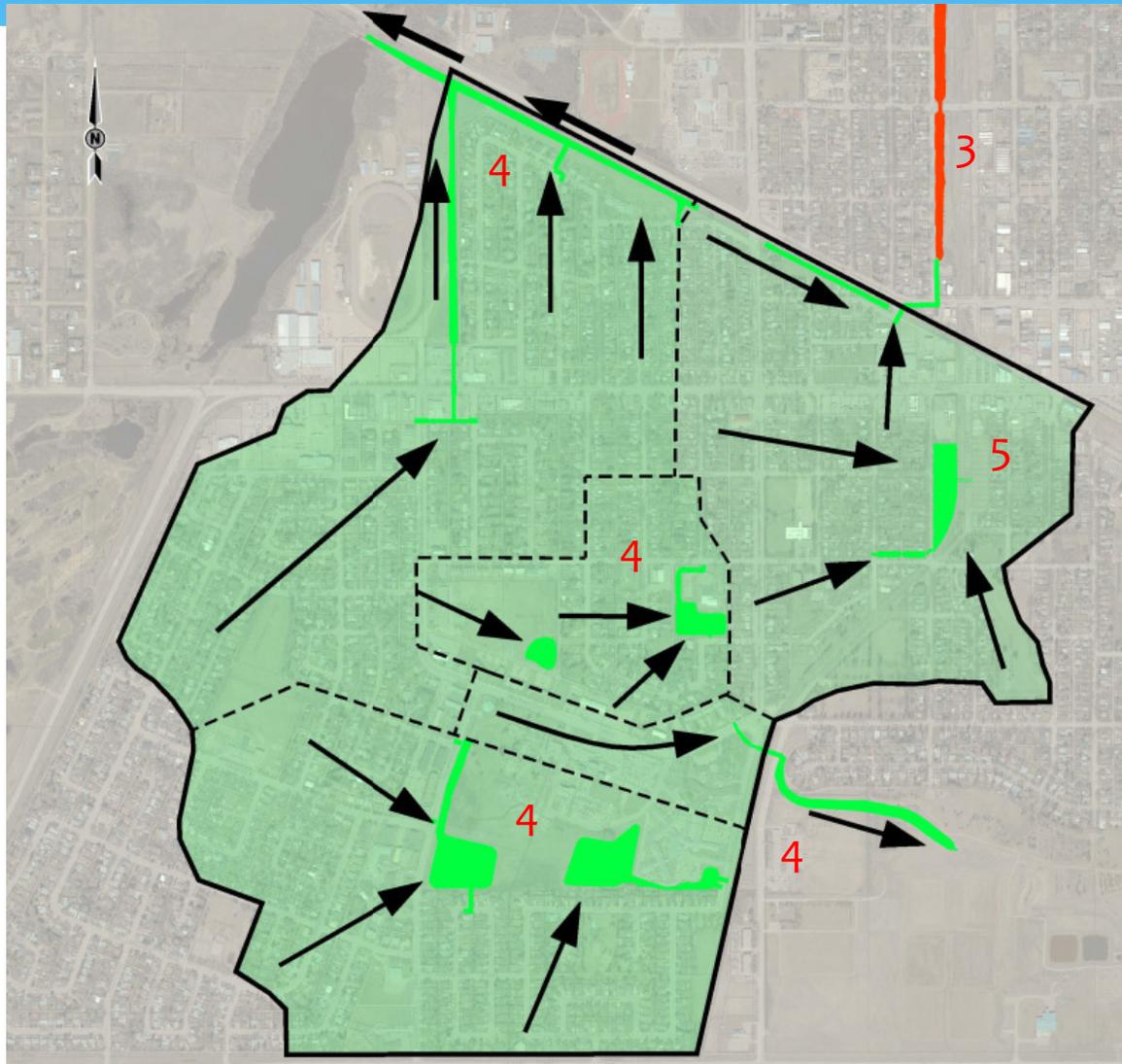
Victoria Channel Upgrades

Estimated Cost: \$4,320,000

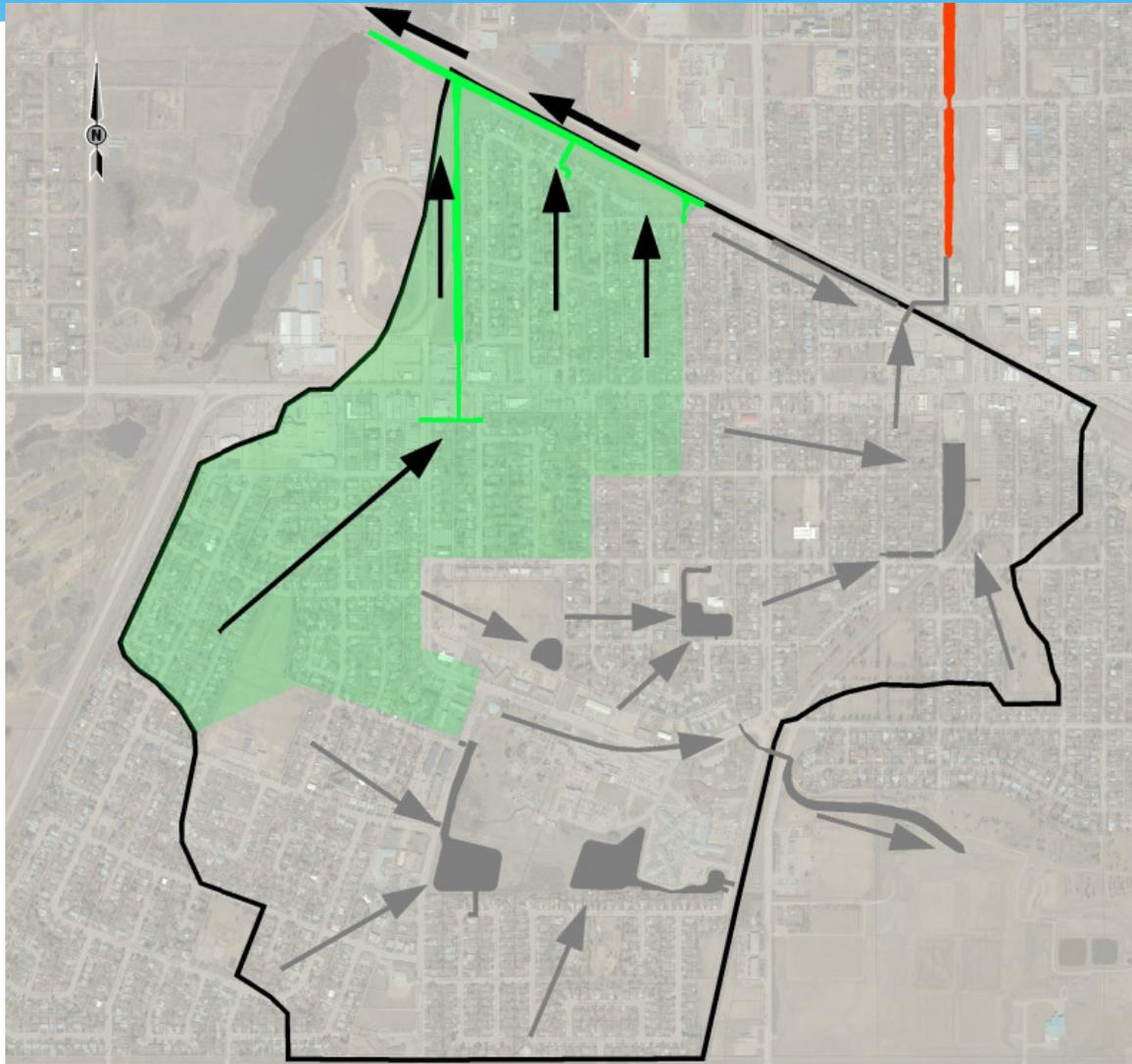
Implementation Order: 3



South-West Drainage Improvements Overview



Exhibition & Bailey Drive Diversion Channels



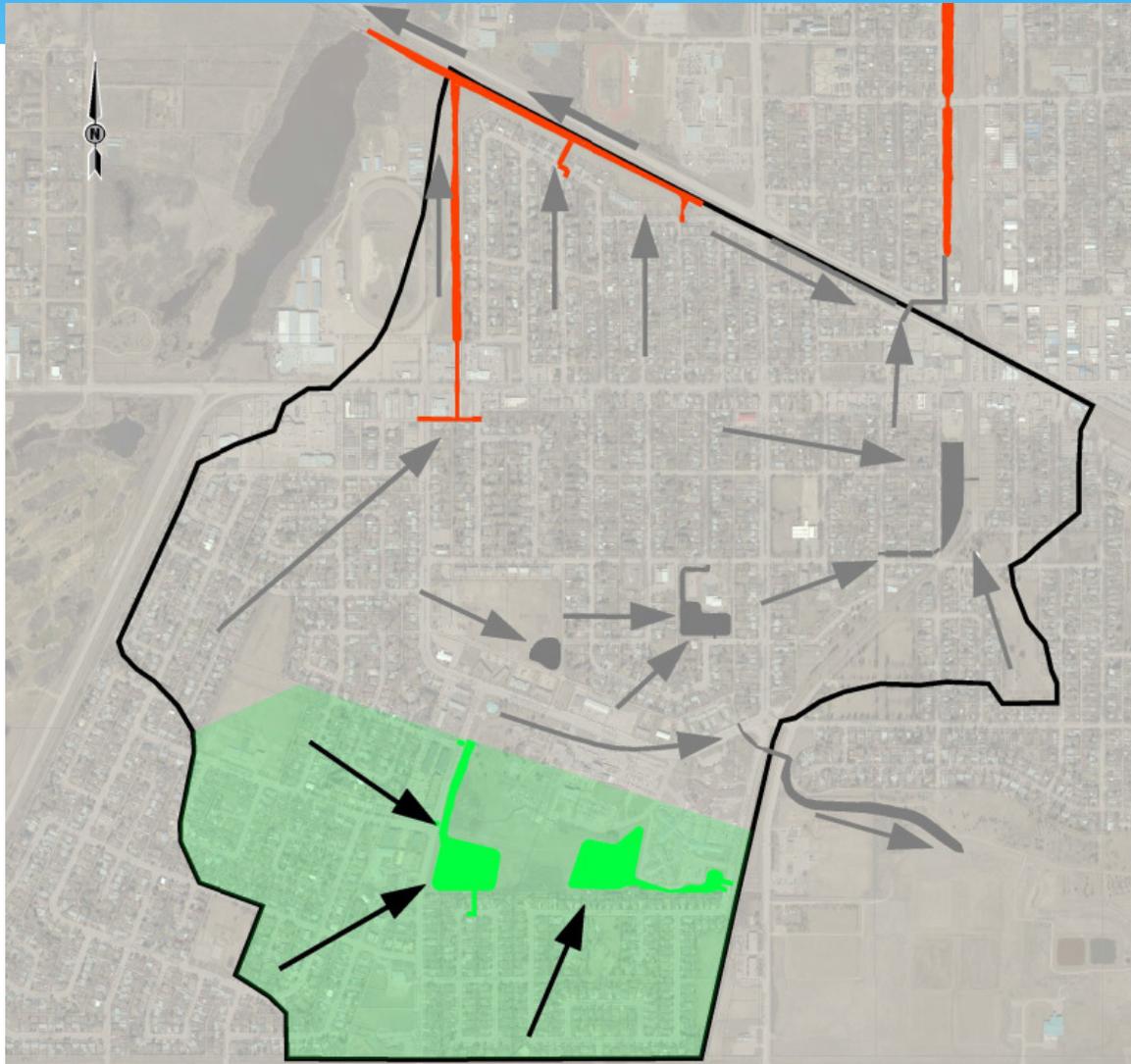
Exhibition & Bailey Drive Diversion Channels

Estimated Cost: \$4,620,000

Implementation Order: 4



Hospital Detention Ponds



Hospital Detention Ponds

Estimated Cost: \$4,180,000

Implementation Order: 4



Gladstone Logan Green Diversion Channel



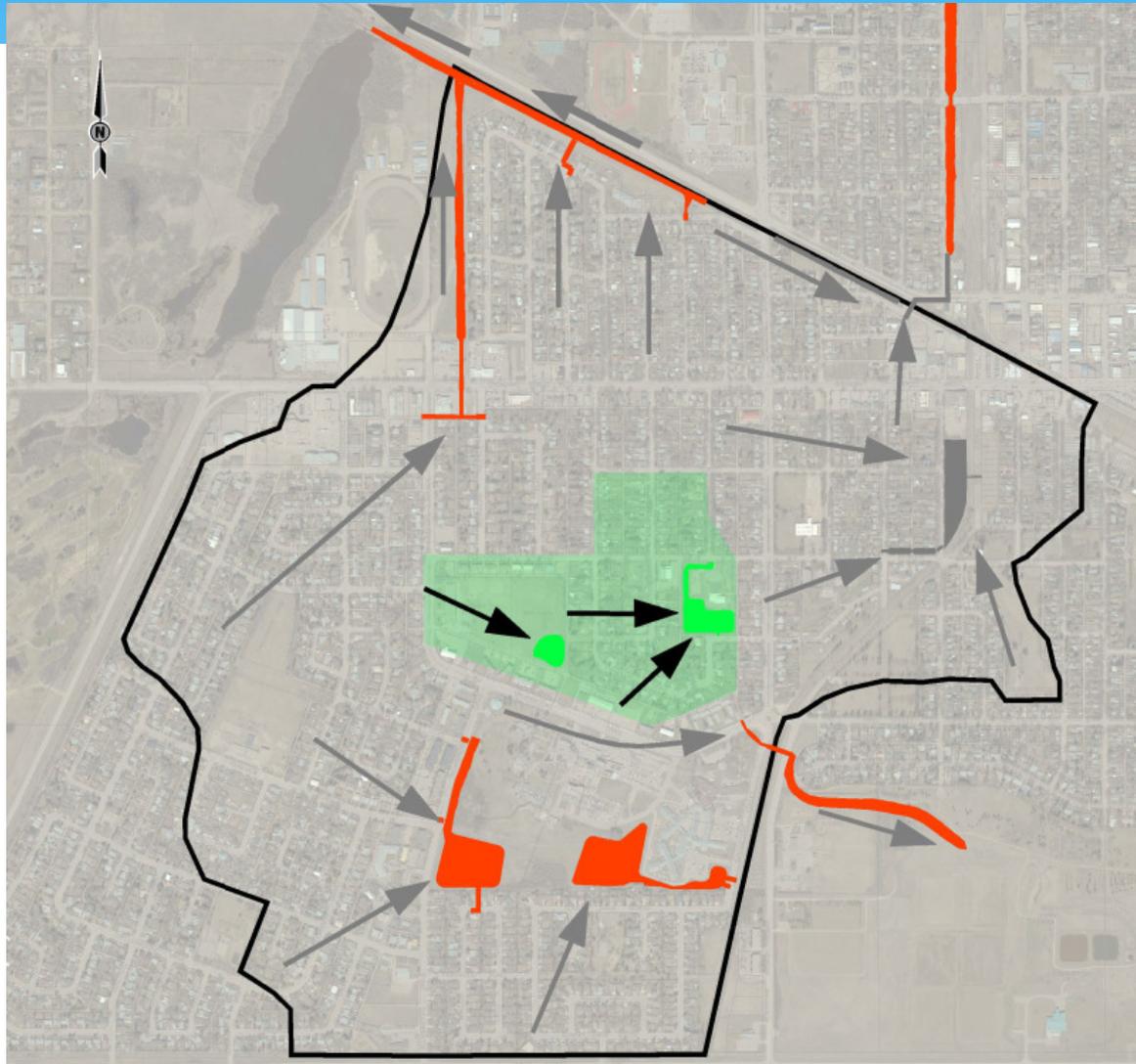
Gladstone - Logan Green Diversion Channel

Estimated Cost: \$2,260,000

Implementation Order: 4



BMX & St. Mary's Park Detention Ponds



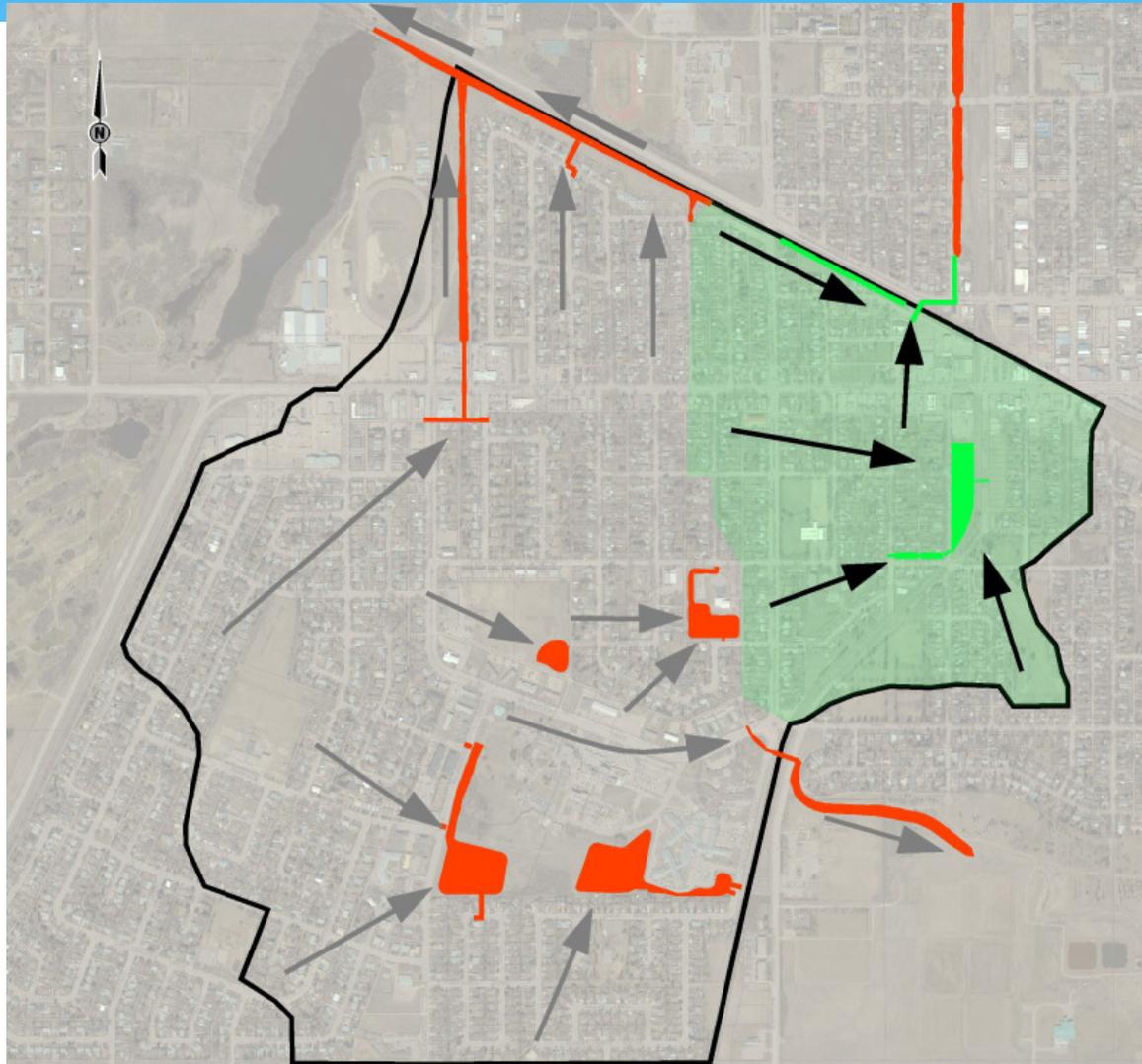
BMX & St. Mary's Park Detention Ponds

Estimated Cost: \$1,540,000

Implementation Order: 4



Laurier Avenue Detention Pond & Maple Avenue Diversion



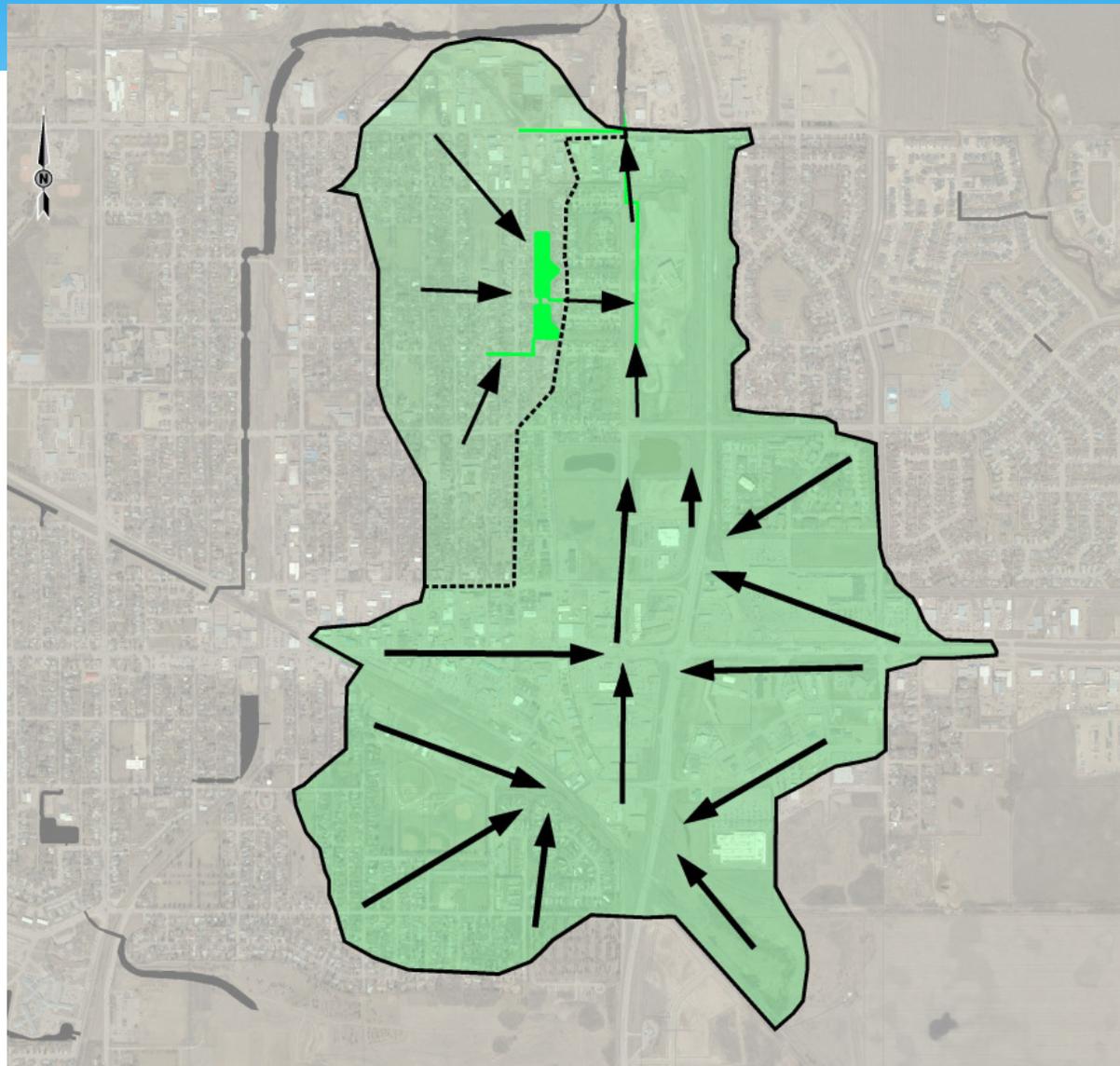
Laurier Avenue Detention Pond

Estimated Cost: \$6,140,000

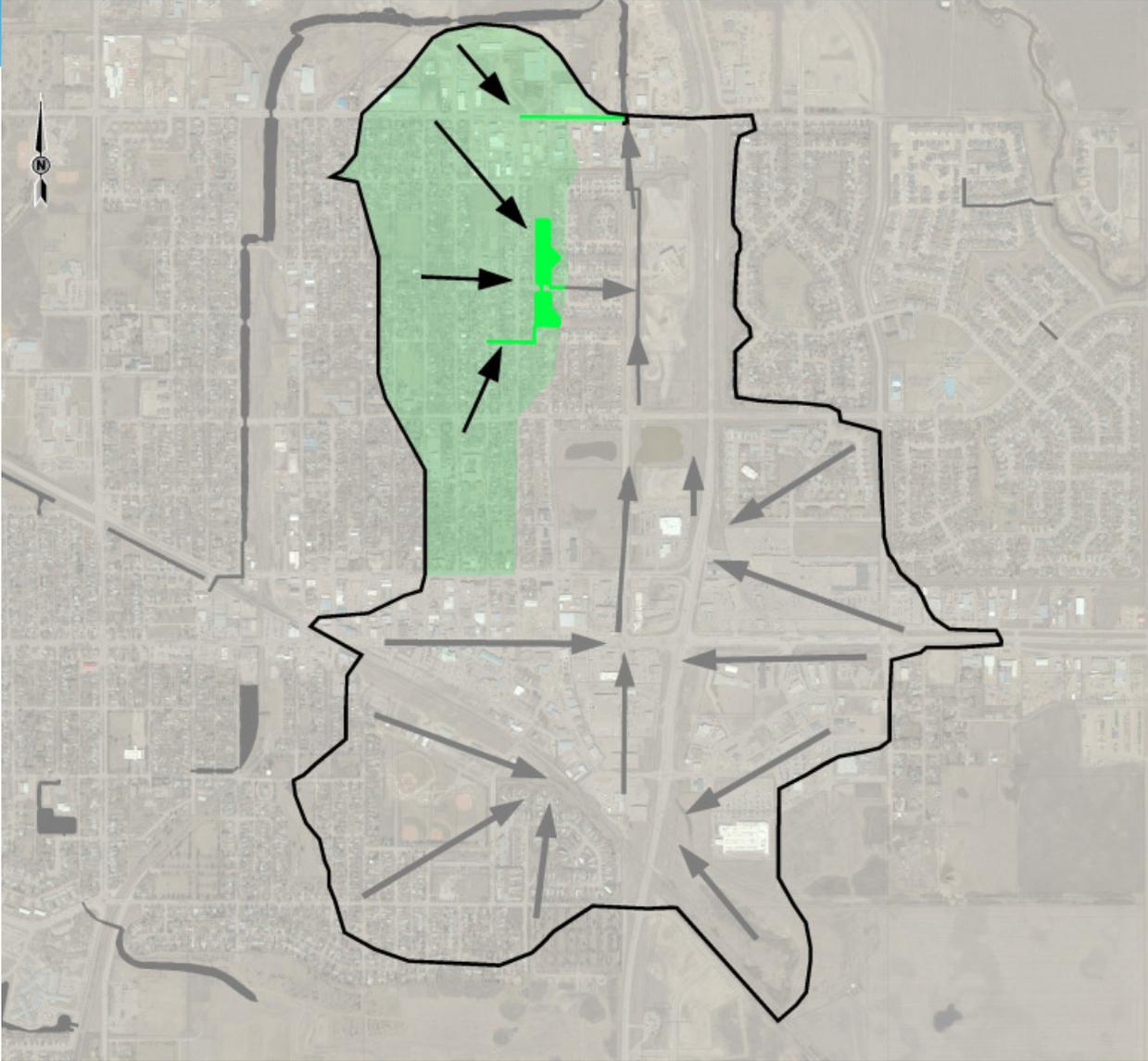
Implementation Order: 5



Dracup Drainage Area



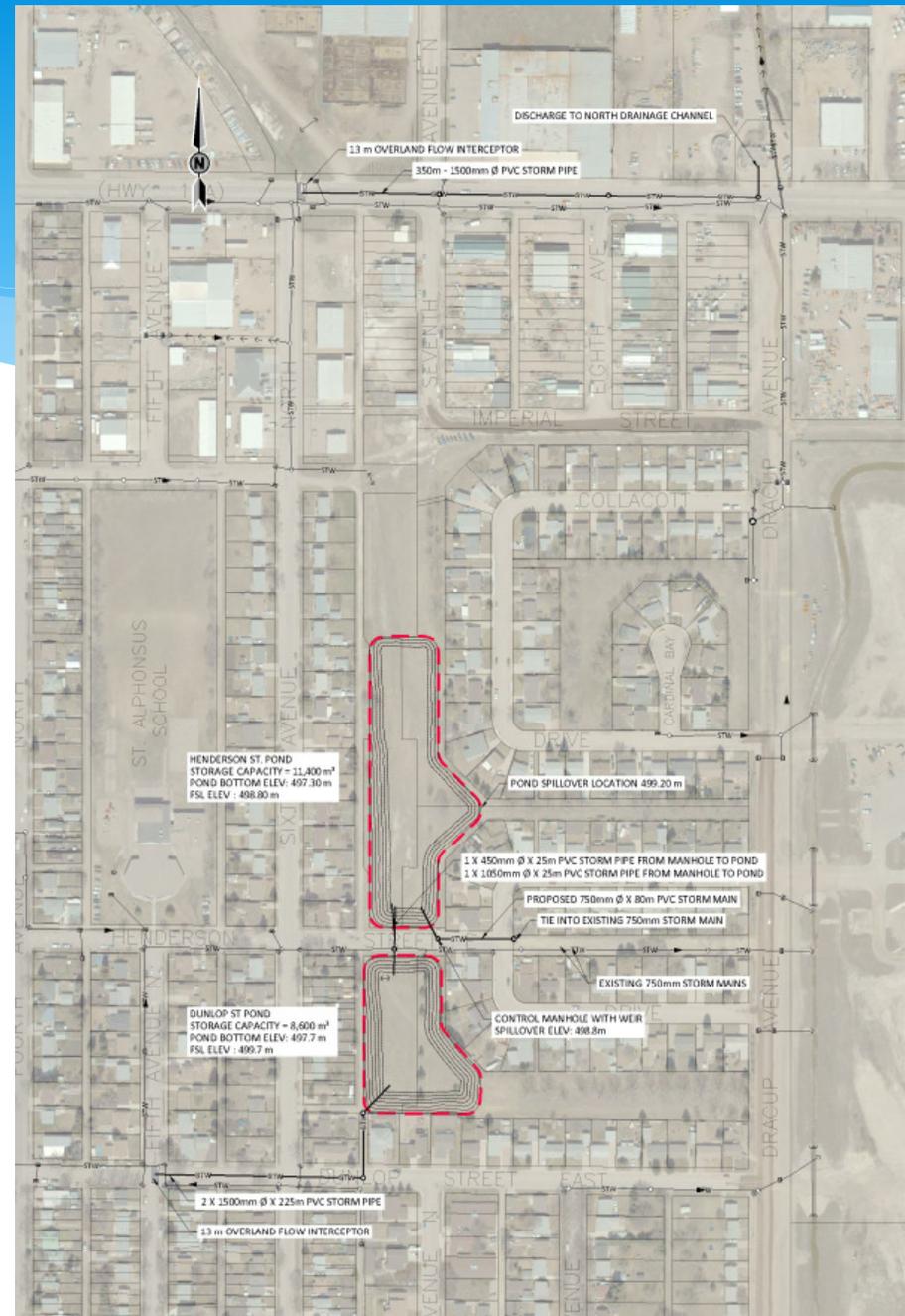
Henderson Street Detention Ponds



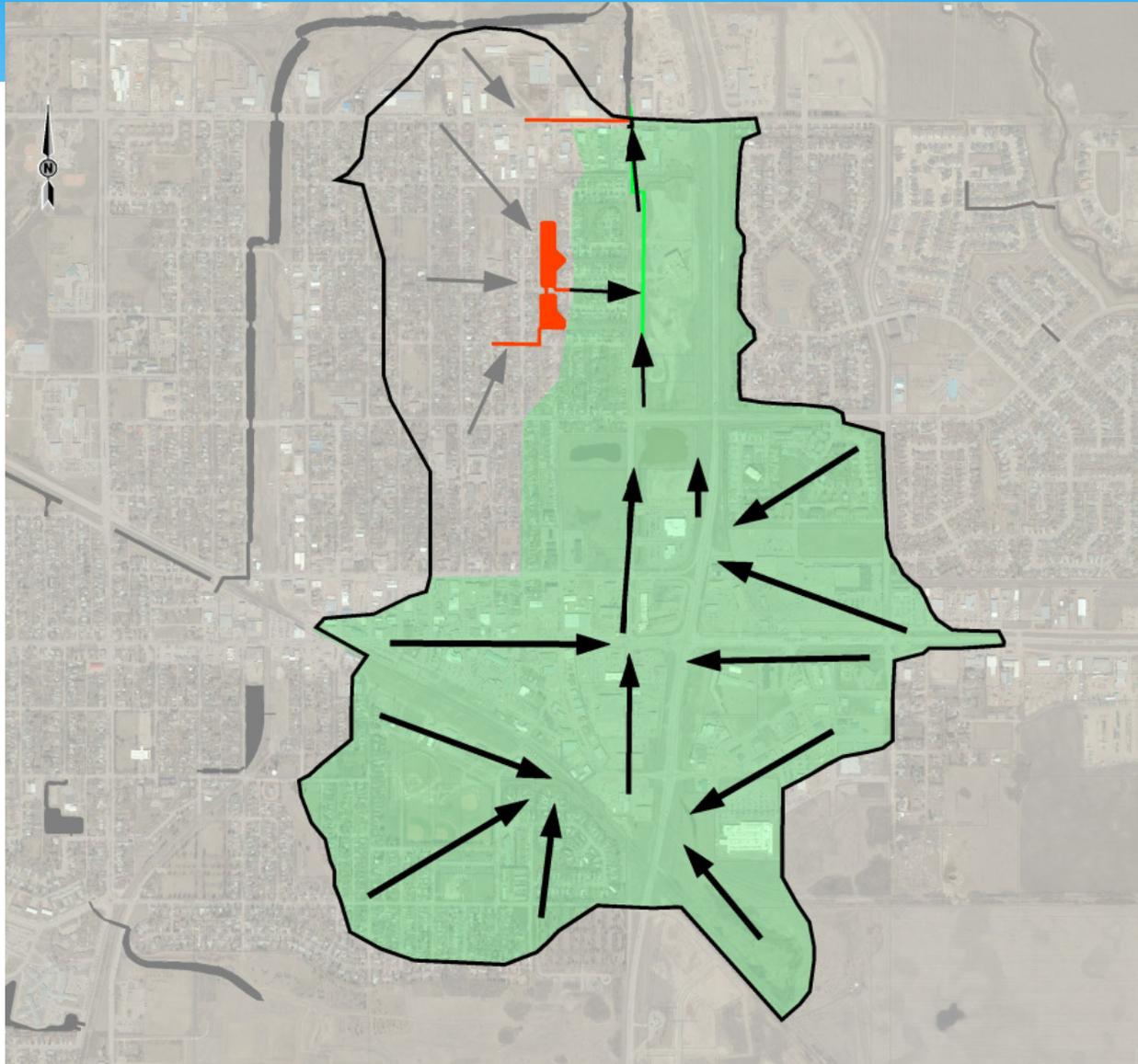
Henderson Street Detention Ponds

Estimated Cost: \$5,910,000

Implementation Order:
Anytime After 1



Dracup Avenue North Channel Upgrades



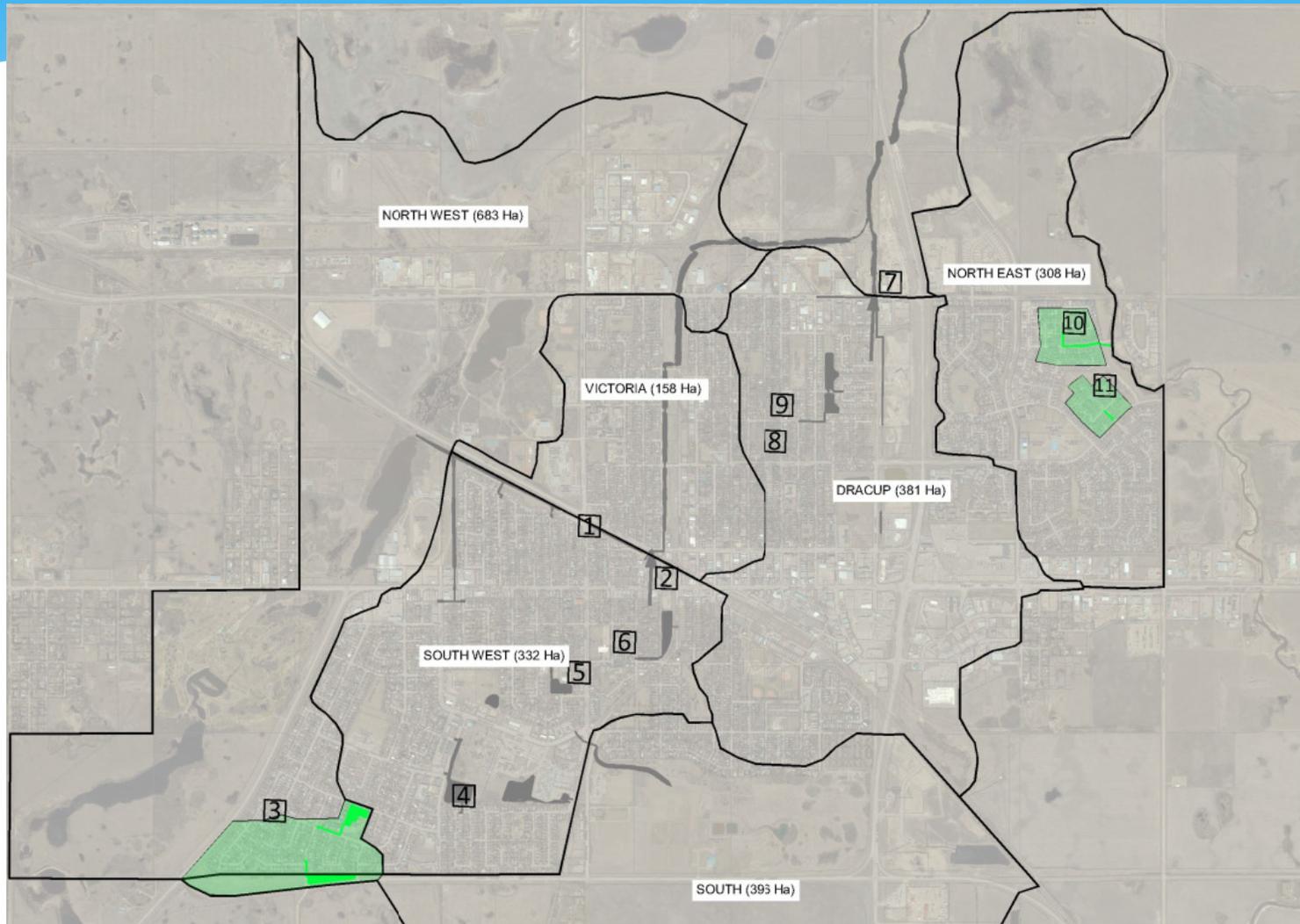
Dracup Avenue North Channel Upgrades

Estimated Cost: \$1,910,000

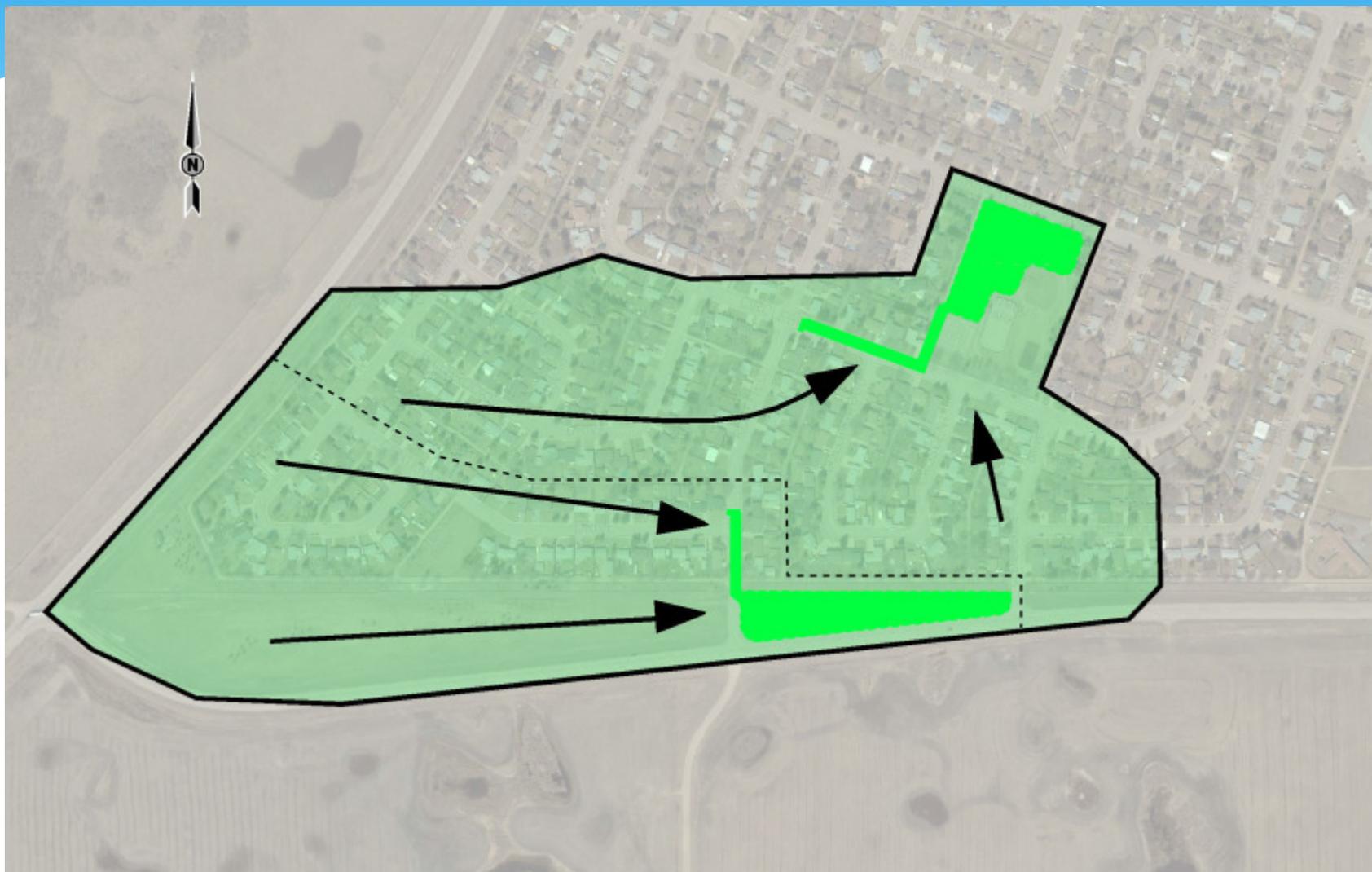
Implementation Order:
Anytime After 1



Non-Dependant Mitigation Projects



Circlebrooke Drive Ponds



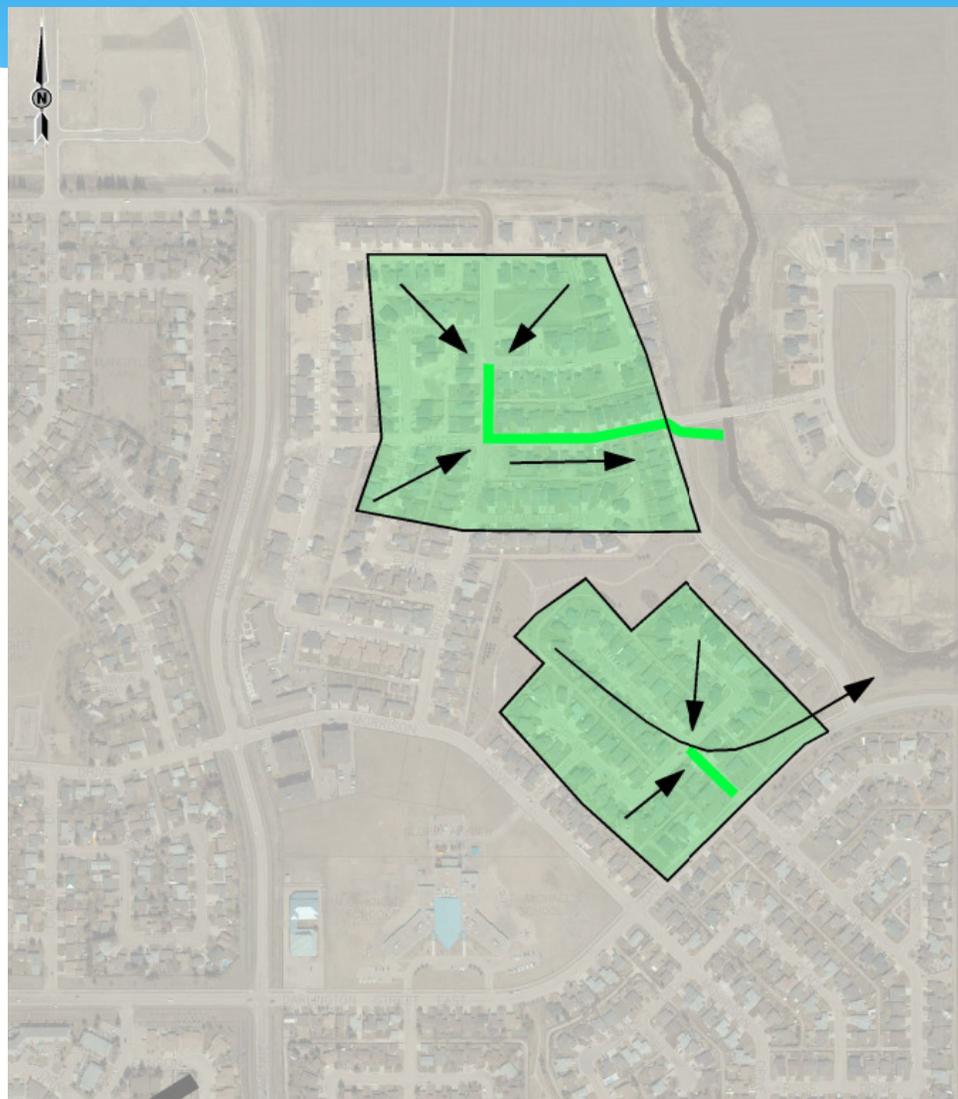
Circlebrooke Drive Detention Ponds

Estimated Cost: \$3,110,000

Implementation Order: Anytime



Whitesand Drive – Aspen Place



Whitesand Drive and Aspen Cove Storm Sewer Upgrades



Whitesand Drive/Madge Way Upsize

Estimated Cost: \$1,630,000

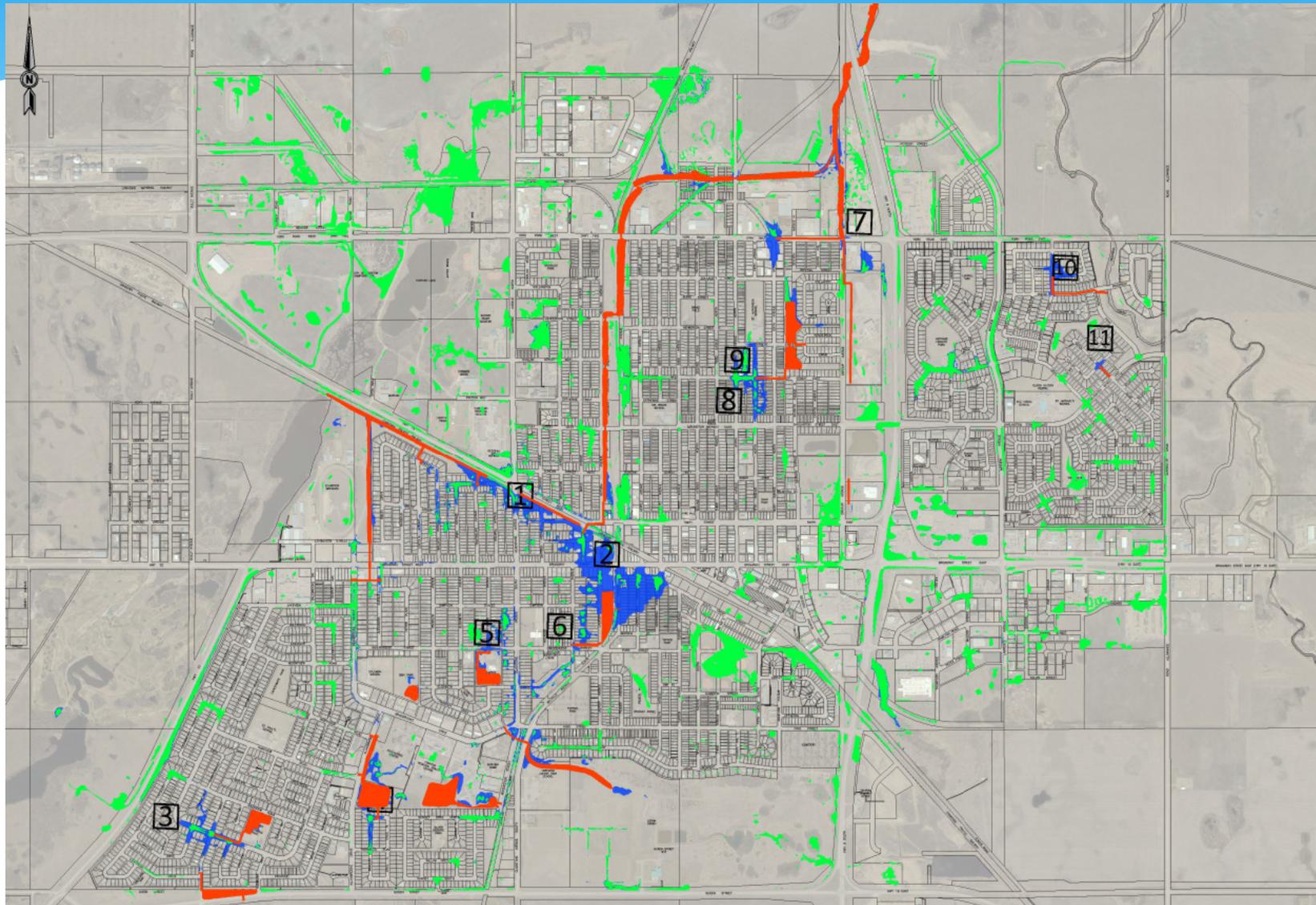
Implementation Order: Anytime

Aspen Place Upsize

Estimated Cost: \$410,000

Implementation Order: Anytime

Mitigated vs Existing



Flood Mitigation Plan Costs & Construction Summary

PROJECT DESCRIPTION	Conceptual Cost Estimate	Implementation Order
North Drainage Channel Upgrade	Previously Approved	1
North-Central Drainage Channel Upgrade	\$ 3,960,000	2
Victoria Avenue Drainage Ditch Upgrade	\$ 4,320,000	3
Exhibition Grounds/Bailey Drive Diversion Ditches	\$ 4,620,000	4
Hospital Detention Ponds	\$ 4,180,000	4
Gladstone Avenue/Logan Green Diversion Ditch	\$ 2,260,000	4
BMX Park and St. Mary's Detention Ponds	\$ 1,640,000	4
Laurier Avenue Detention Pond & Maple Avenue Diversion	\$ 6,310,000	5
Fifth Avenue & Henderson Detention Ponds	\$ 5,910,000	Anytime after 1
Dracup Avenue North Channel Upgrades	\$ 1,910,000	Anytime after 1
Circlebrooke Drive & Riverview Road Detention Ponds	\$ 3,110,000	Anytime
Madge Way/Whitesand Drive Storm Sewer Upsize	\$ 1,060,000	Anytime
Aspen Place Storm Sewer Upsize	\$ 410,000	Anytime
TOTAL*	\$ 39,690,000	

Conclusions

- * Other options are possible, however, may be less effective both in terms of cost and overall impact.
- * Implementation order is important, to an extent.
- * Some projects are not dependent on others.
- * Proposed projects can accommodate flood mitigation measures for other problem areas.
- * Some projects need to take into consideration other factors before decisions are made.
- * Total estimated cost to complete proposed solutions :
\$39,960,000.00

Thank-You!