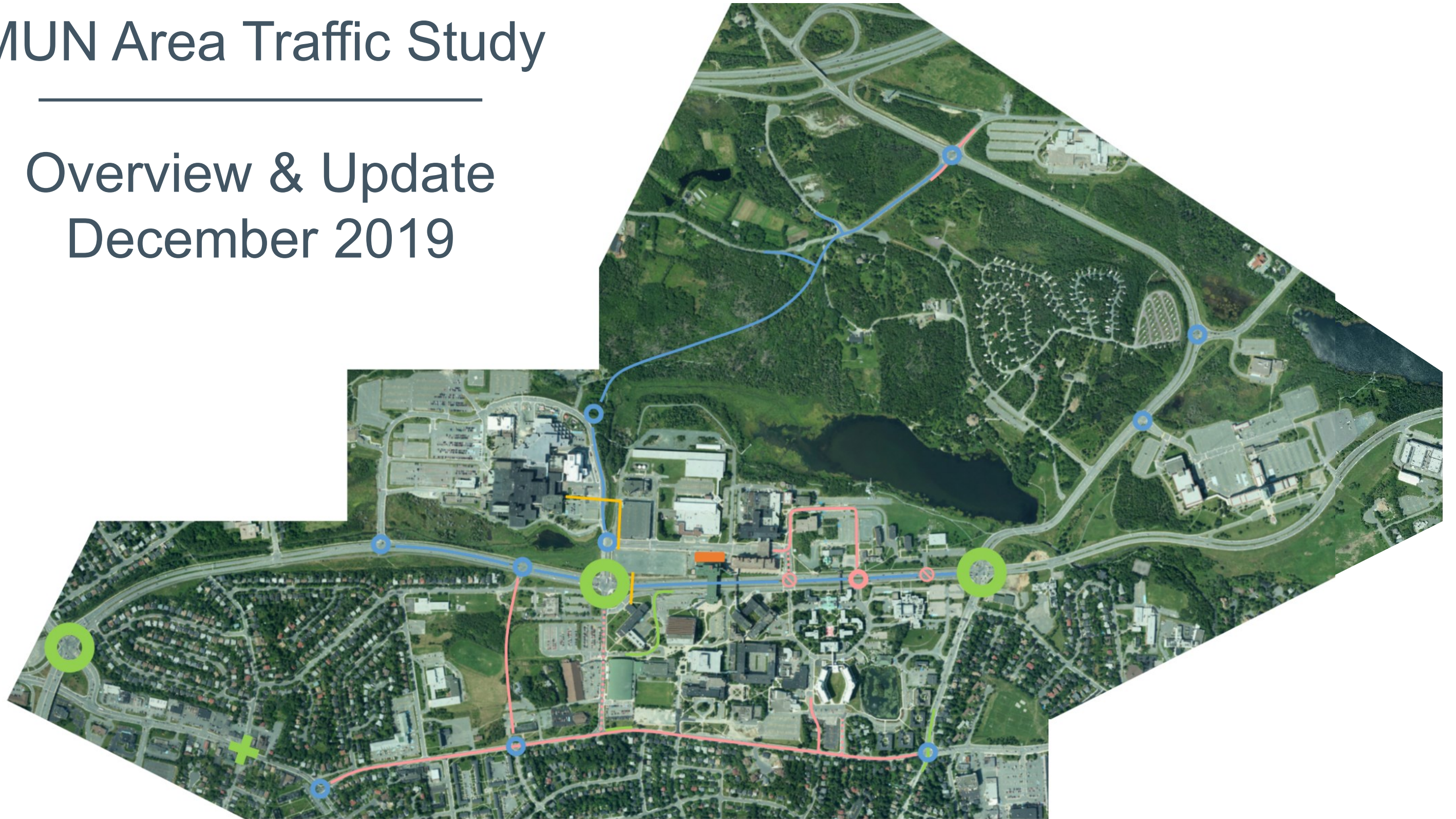


MUN Area Traffic Study

Overview & Update
December 2019



MUN Area Traffic Study

The MUN Area Traffic Study was commissioned in 2014.

The final report was accepted by Council in June 2017 and incorporated into the City's planning for development and capital works in the area.

MUN Area Traffic Study

Four interested parties are:

- i. The City of St. John's
- ii. Memorial University of Newfoundland
- iii. Eastern Health - Health Sciences Centre, General Hospital and Janeway Children's Health and Rehabilitation Centre
- iv. Government of Newfoundland and Labrador - Confederation Building

MUN Area Traffic Study

The focus of the terms of reference was on:

- traffic performance / congestion on the roads in the study area
- pedestrian safety on the MUN campus and crossing the roads in the study area
- public transit and transportation demand management
- a review of the recommendations from the 2007 MUN Campus Master Plan

Short Term Infrastructure

- a) Roundabout at Allendale & Prince Philip
- b) Roundabout at Clinch (east) & Prince Philip - includes Irwin's / Pedagogue realignment
- c) Roundabout at Thorburn & Prince Philip
- d) Turn lane upgrade at Westerland & Elizabeth
- e) Turn Lane upgrades at Bonaventure &

Pedestrian Safety

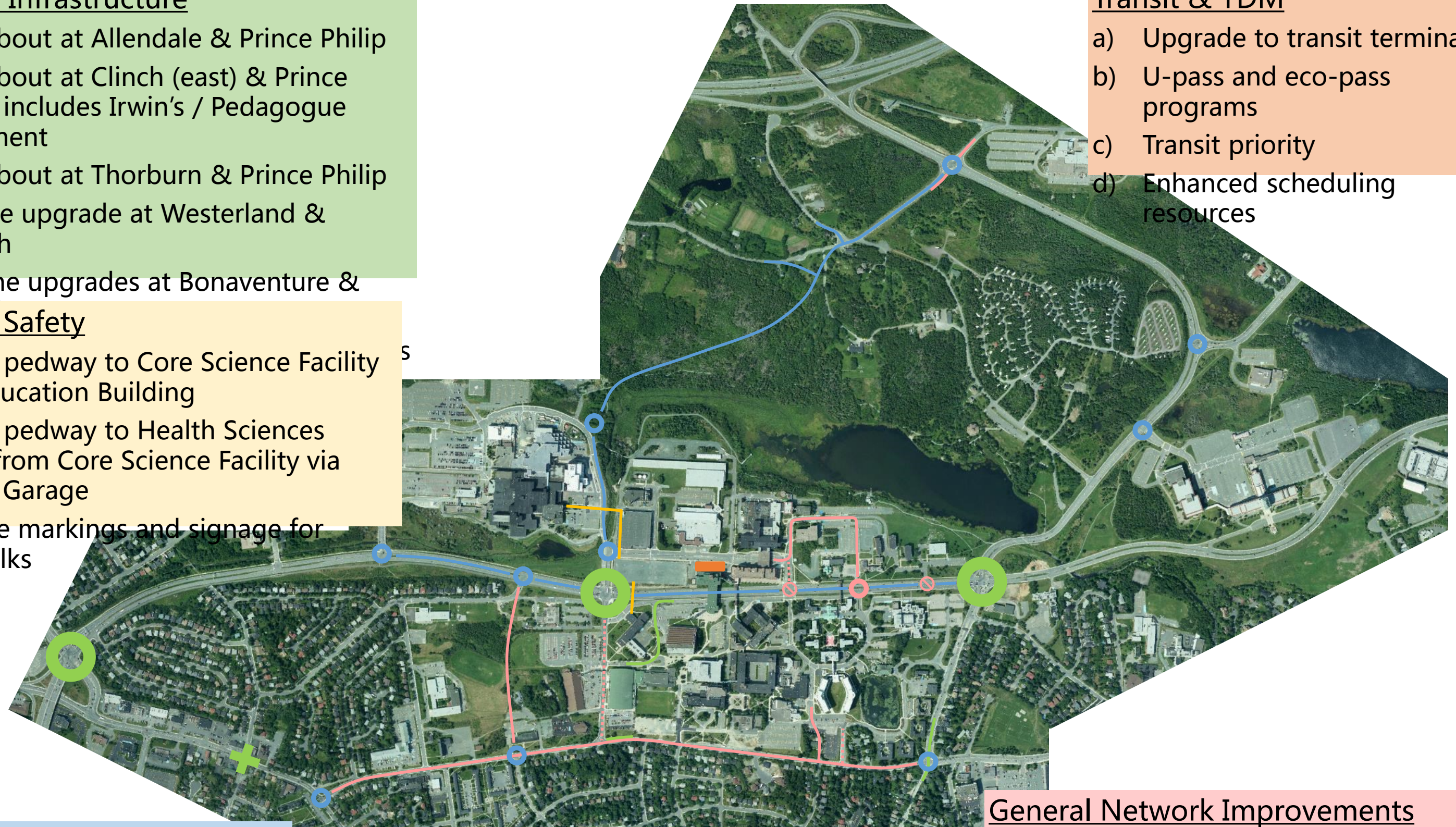
- a) Provide pedway to Core Science Facility from Education Building
- b) Provide pedway to Health Sciences Centre from Core Science Facility via Parking Garage
- c) Upgrade markings and signage for crosswalks

Long Term Infrastructure

- a) Roundabouts across network
- b) Corridor upgrades
- c) Pippy Park Link
- d) Gateways and other streetscaping

Transit & TDM

- a) Upgrade to transit terminal
- b) U-pass and eco-pass programs
- c) Transit priority
- d) Enhanced scheduling resources



General Network Improvements

- a) Elizabeth corridor upgrade
- b) Morrissey realignment & adjustments
- c) Westerland realignment
- d) Russell realignment
- e) Turn lane upgrades at Mt. Scio & Allendale

Short Term Infrastructure

2 Roundabout at Allendale & Prince Philip

- b) Roundabout at Clinch (east) & Prince Philip - includes Irwin's / Pedagogue realignment
- c) Roundabout at Thorburn & Prince Philip
- d) Turn lane upgrade at Westerland & Elizabeth

6 Turn Lane upgrades at Bonaventure & Elizabeth

1) Study at Freshwater / Oxen Pond / Stamps Pedestrian Safety

3 Pedway to Core Science Facility from Education Building

- b) Provide pedway to Health Sciences Centre from Core Science Facility via Parking Garage

6 Upgrade markings and signage for crosswalks

Long Term Infrastructure

- a) Roundabouts across network
- b) Corridor upgrades
- c) Pippy Park Link
- d) Gateways and other streetscaping

Transit & TDM

4 Upgrade to transit terminal

1 U-Pass

- c) Transit priority
- d) Enhanced scheduling resources

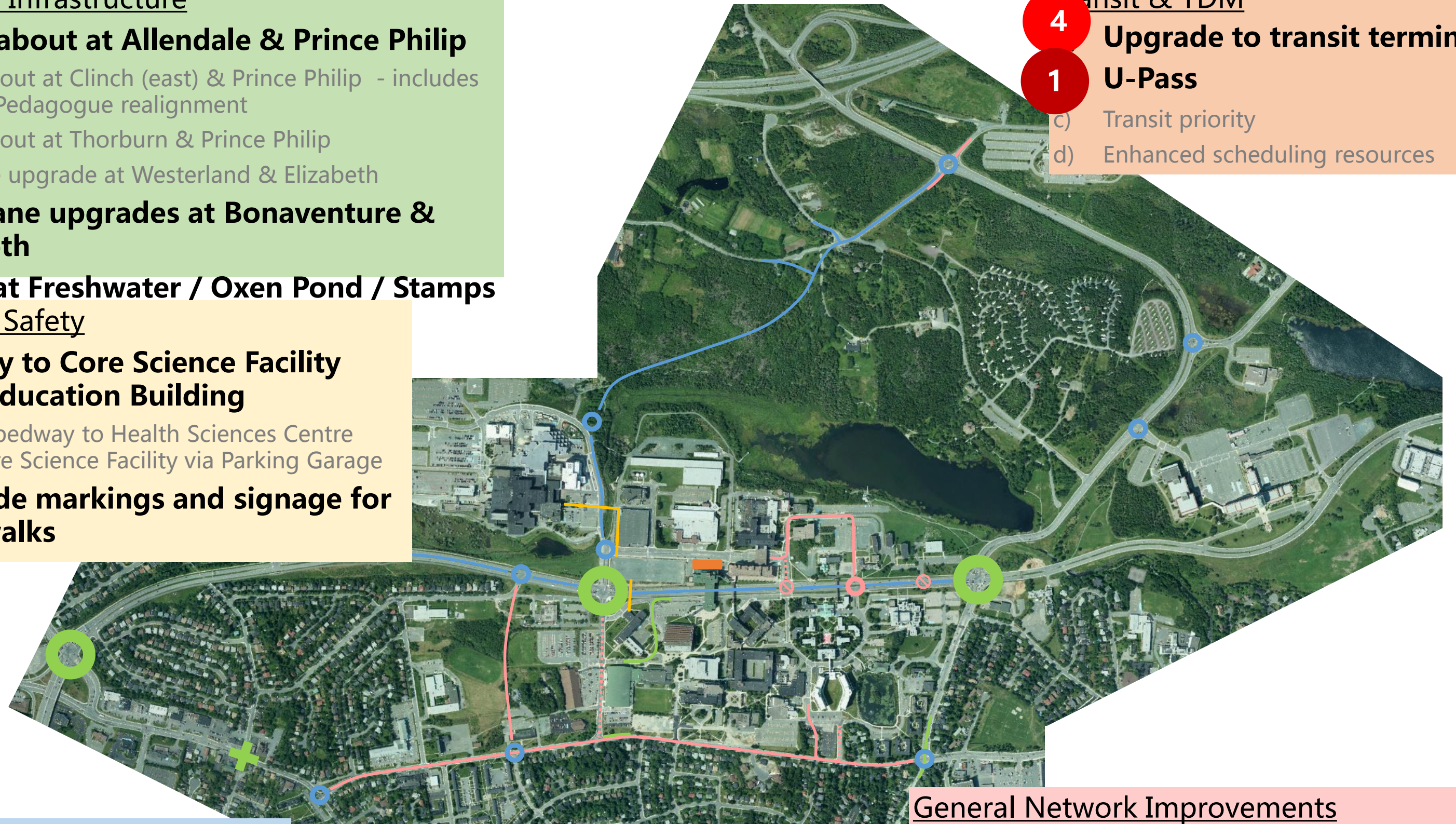
General Network Improvements

- a) Elizabeth corridor upgrade
- b) Morrissey realignment & adjustments

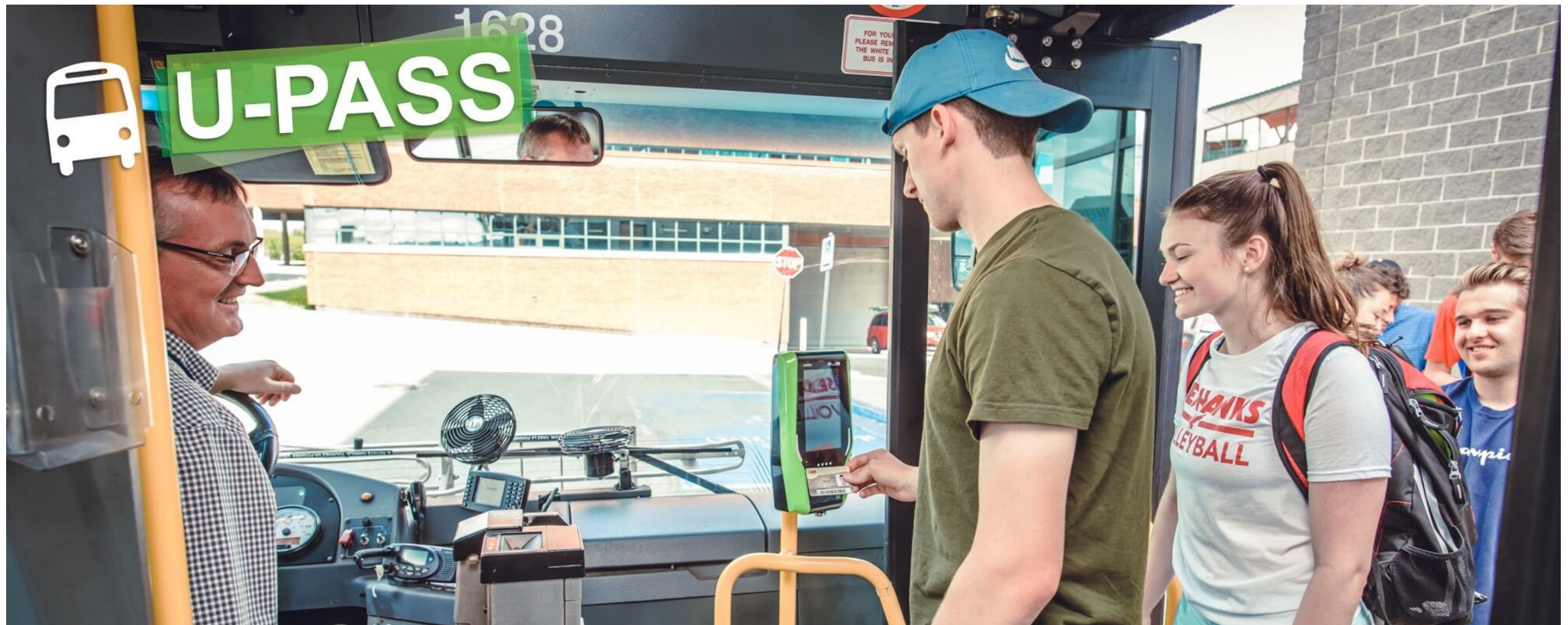
5 Westerland realignment

- c) Russell realignment

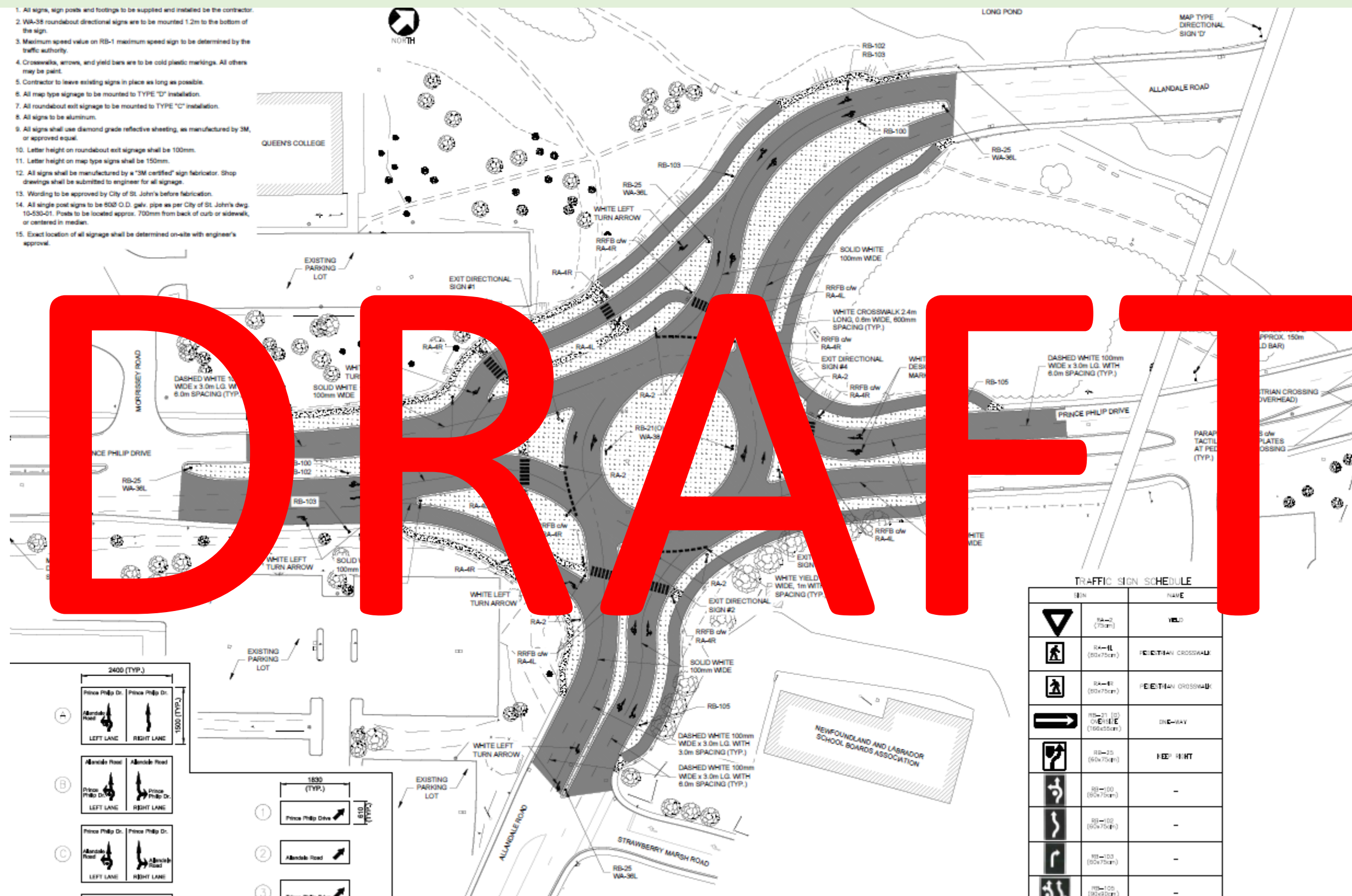
6 Turn lane upgrades at Mt. Scio & Allendale



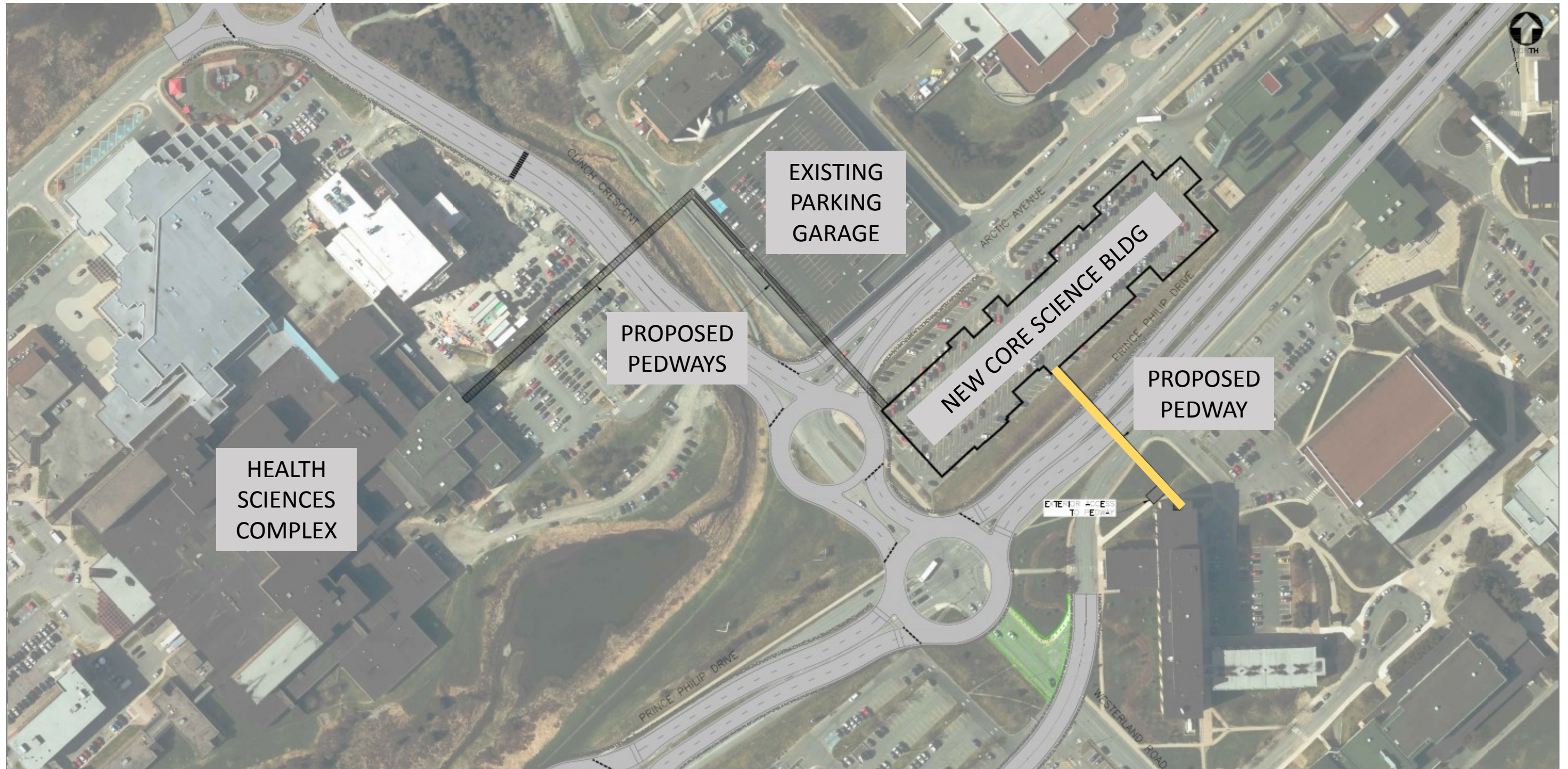
Priority #1 Student U-Pass



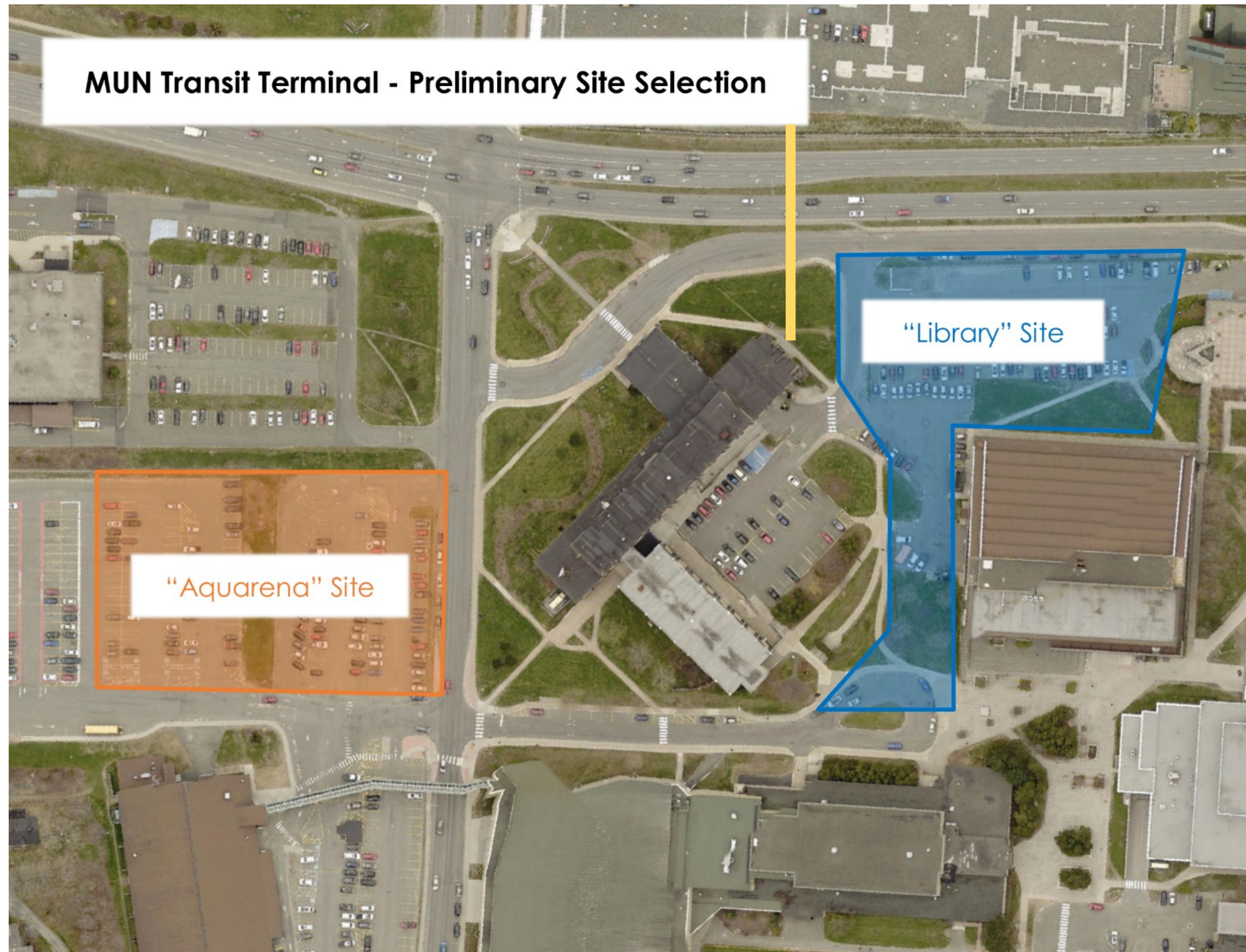
Priority #2 Roundabout at Allendale & Prince Philip



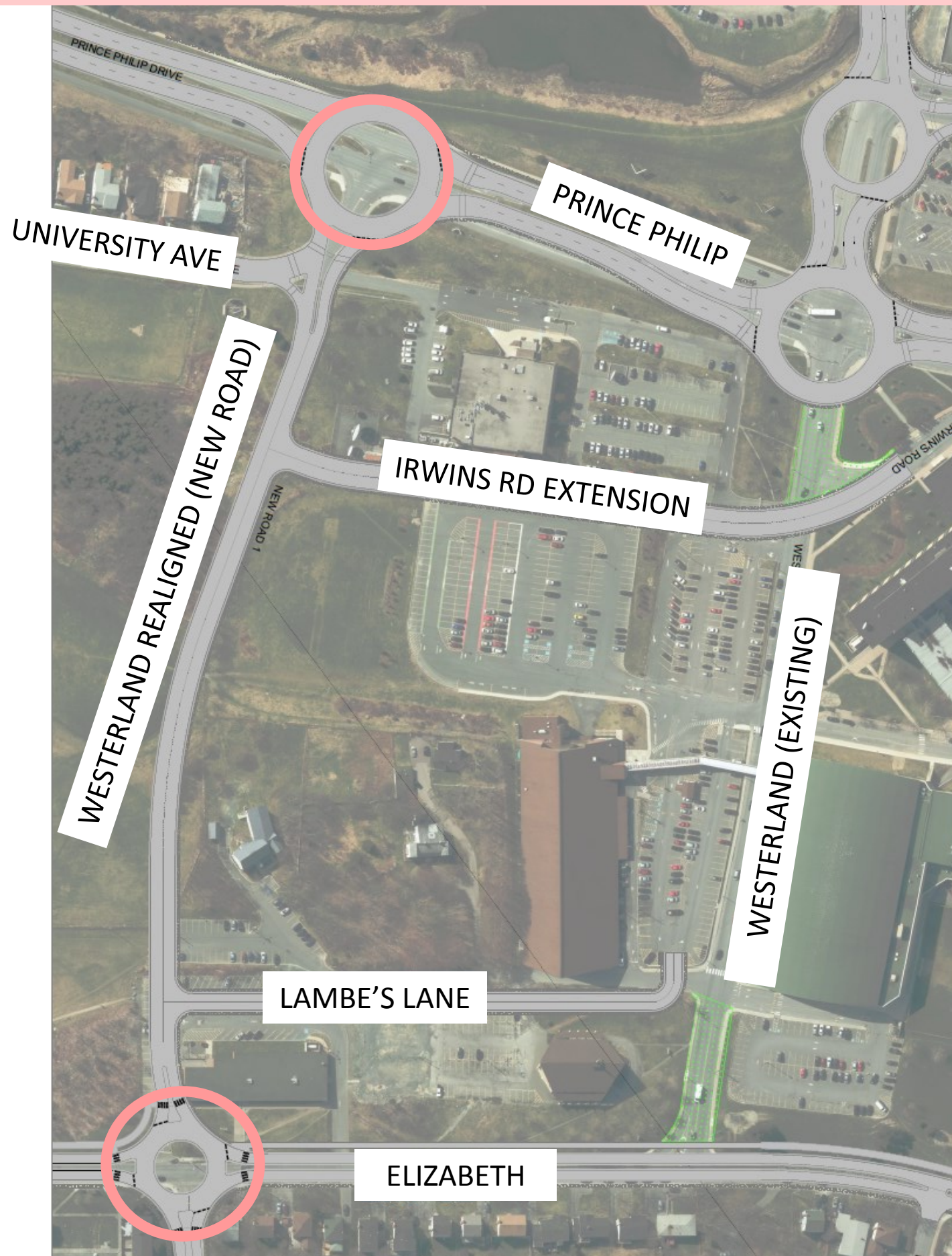
Priority #3 Pedway between Education & Core Science Facility



Priority #4 MUN Transit Terminal



Priority #5 Westerland Road Realignment



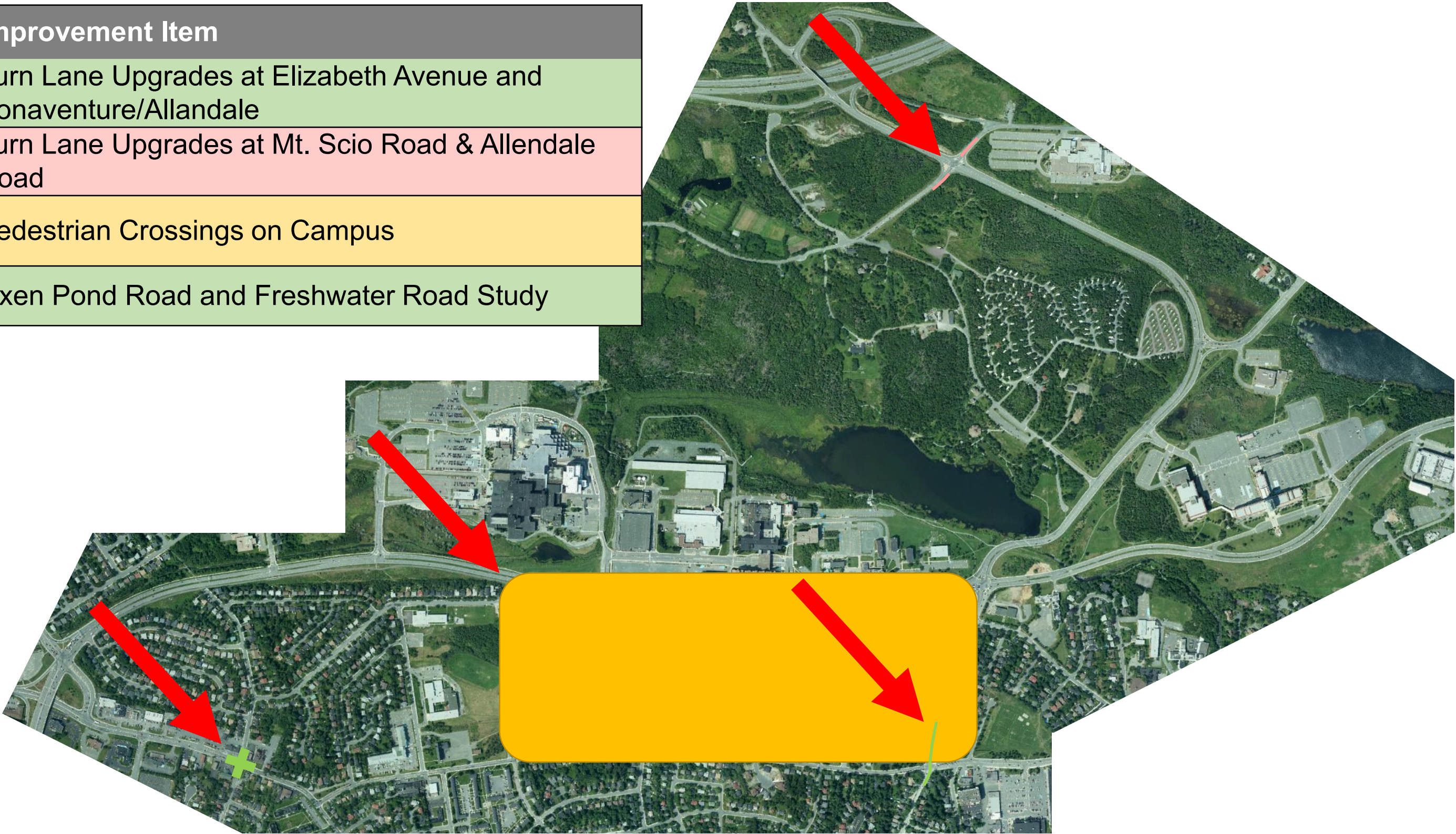
+ Roundabout at Prince Philip

+ Roundabout at Elizabeth

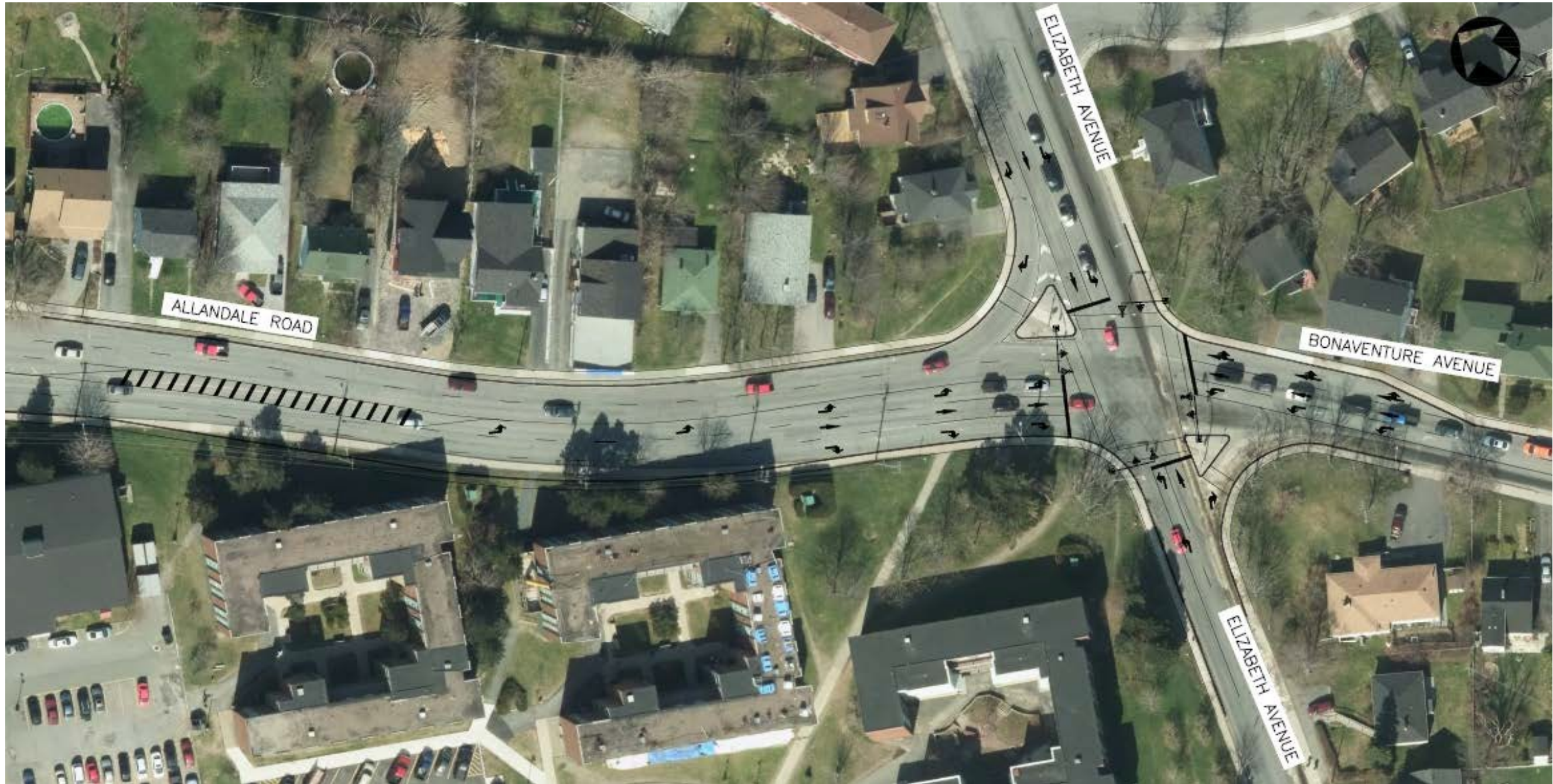
Crosswalk improvements Installed 2015



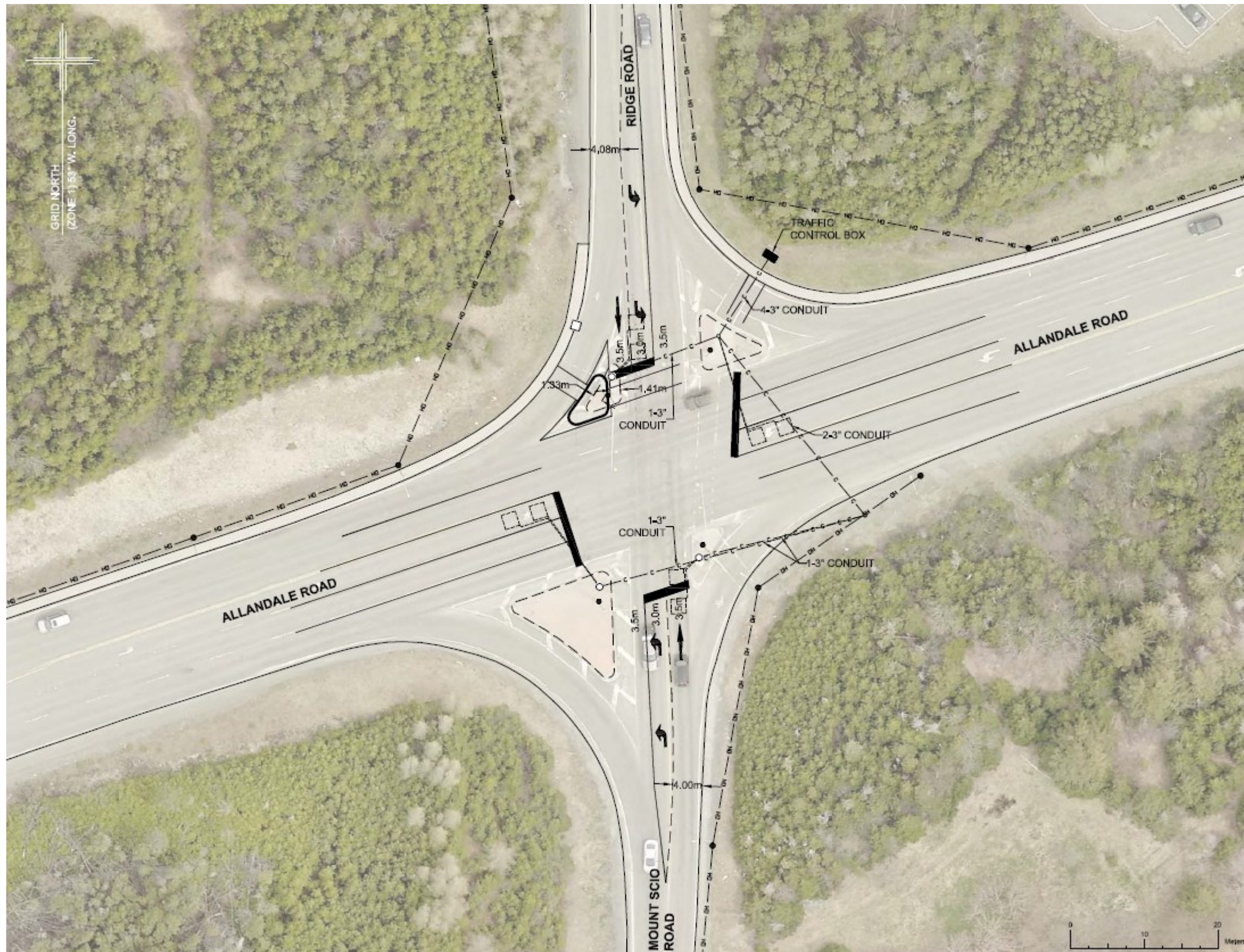
Priority	Improvement Item
6	Turn Lane Upgrades at Elizabeth Avenue and Bonaventure/Allendale
	Turn Lane Upgrades at Mt. Scio Road & Allendale Road
	Pedestrian Crossings on Campus
	Oxen Pond Road and Freshwater Road Study



Priority #6 Turn lane upgrades at Elizabeth & Bonaventure



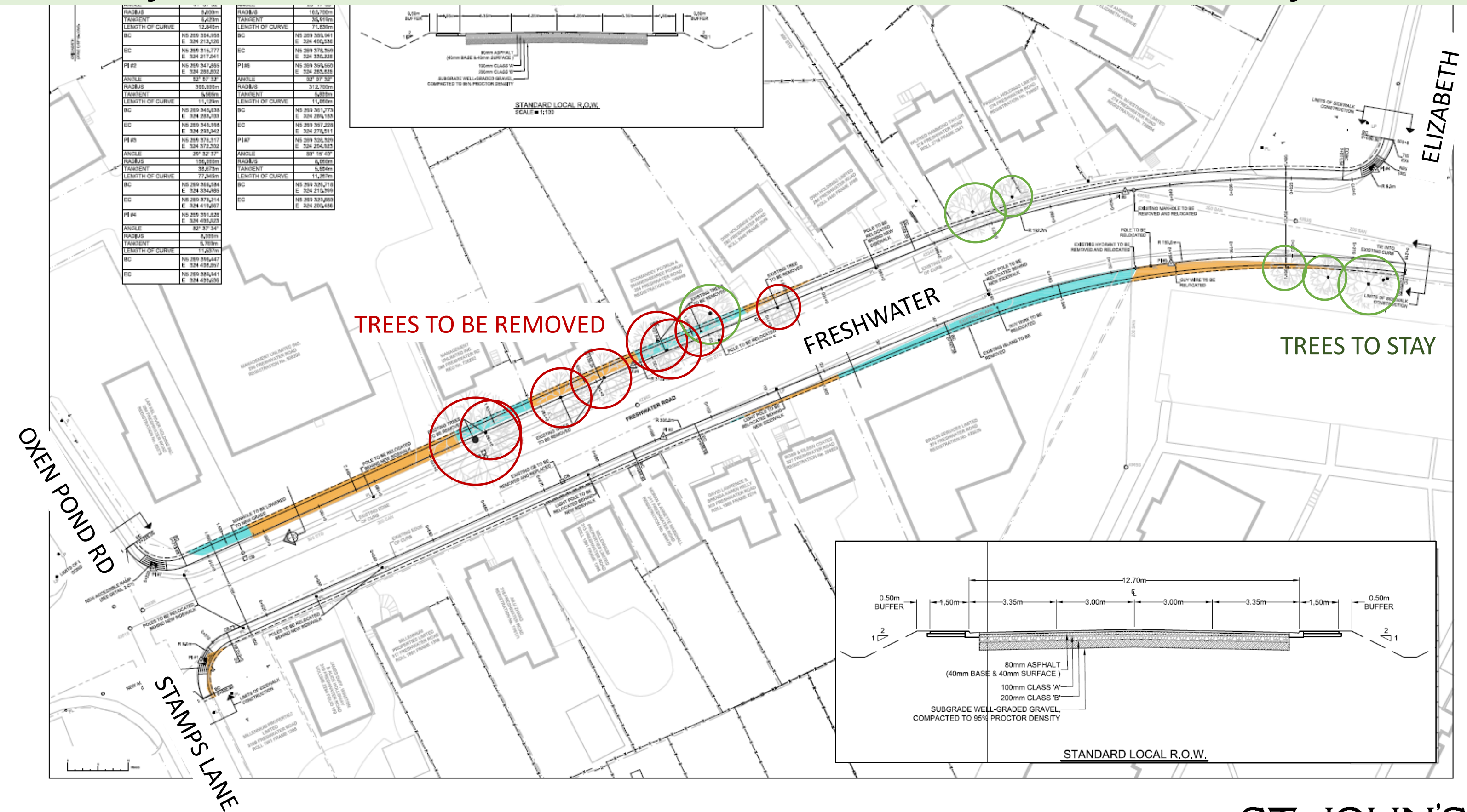
Priority #6 Turn Lane Upgrades at Mt. Scio Road & Allendale Road



Priority #6 Pedestrian Crossing Improvements on Campus



Priority #6 Oxen Pond Road and Freshwater Road Study



Short Term Infrastructure

2 Roundabout at Allendale & Prince Philip

- b) Roundabout at Clinch (east) & Prince Philip - includes Irwin's / Pedagogue realignment
- c) Roundabout at Thorburn & Prince Philip
- d) Turn lane upgrade at Westerland & Elizabeth

6 Turn Lane upgrades at Bonaventure & Elizabeth

1 Study at Freshwater / Oxen Pond / Stamps

Pedestrian Safety

3 Pedway to Core Science Facility from Education Building

- b) Provide pedway to Health Sciences Centre from Core Science Facility via Parking Garage

6 Upgrade markings and signage for crosswalks

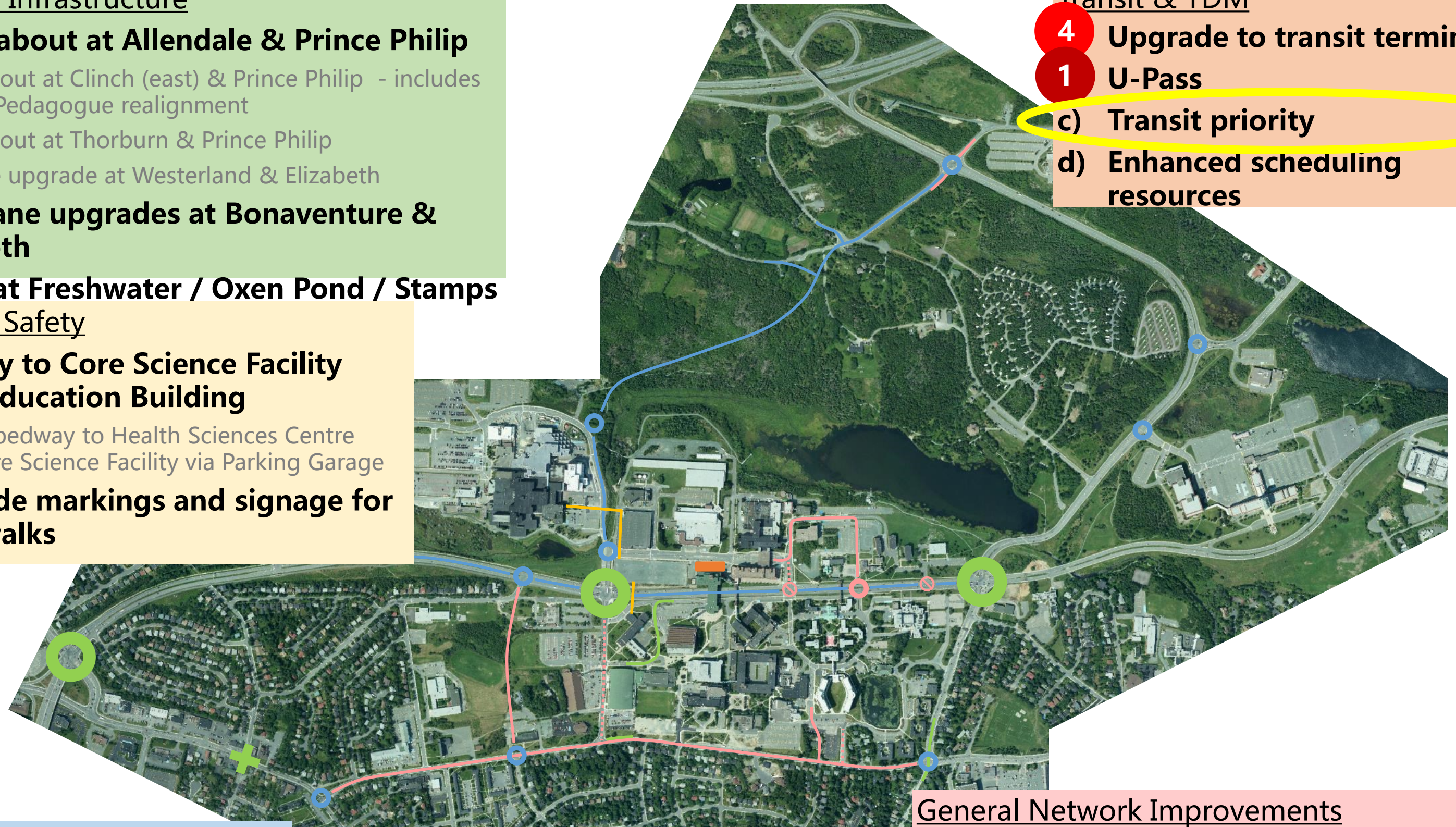
Transit & TDM

4 Upgrade to transit terminal

1 U-Pass

c) Transit priority

d) Enhanced scheduling resources



Long Term Infrastructure

- a) Roundabouts across network
- b) Corridor upgrades
- c) Pippy Park Link
- d) Gateways and other streetscaping

General Network Improvements

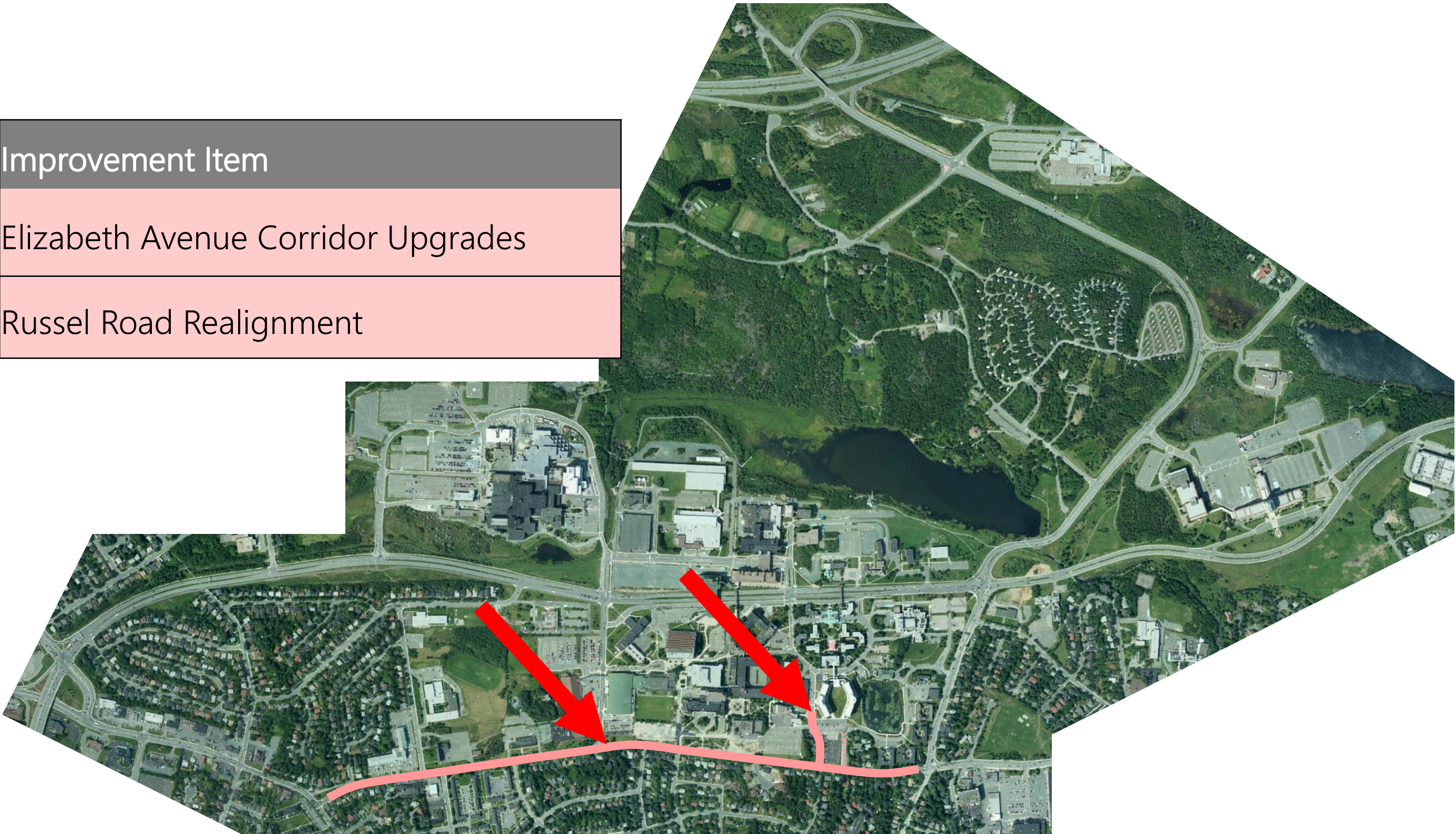
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5 Westerland realignment

- d) Russell realignment

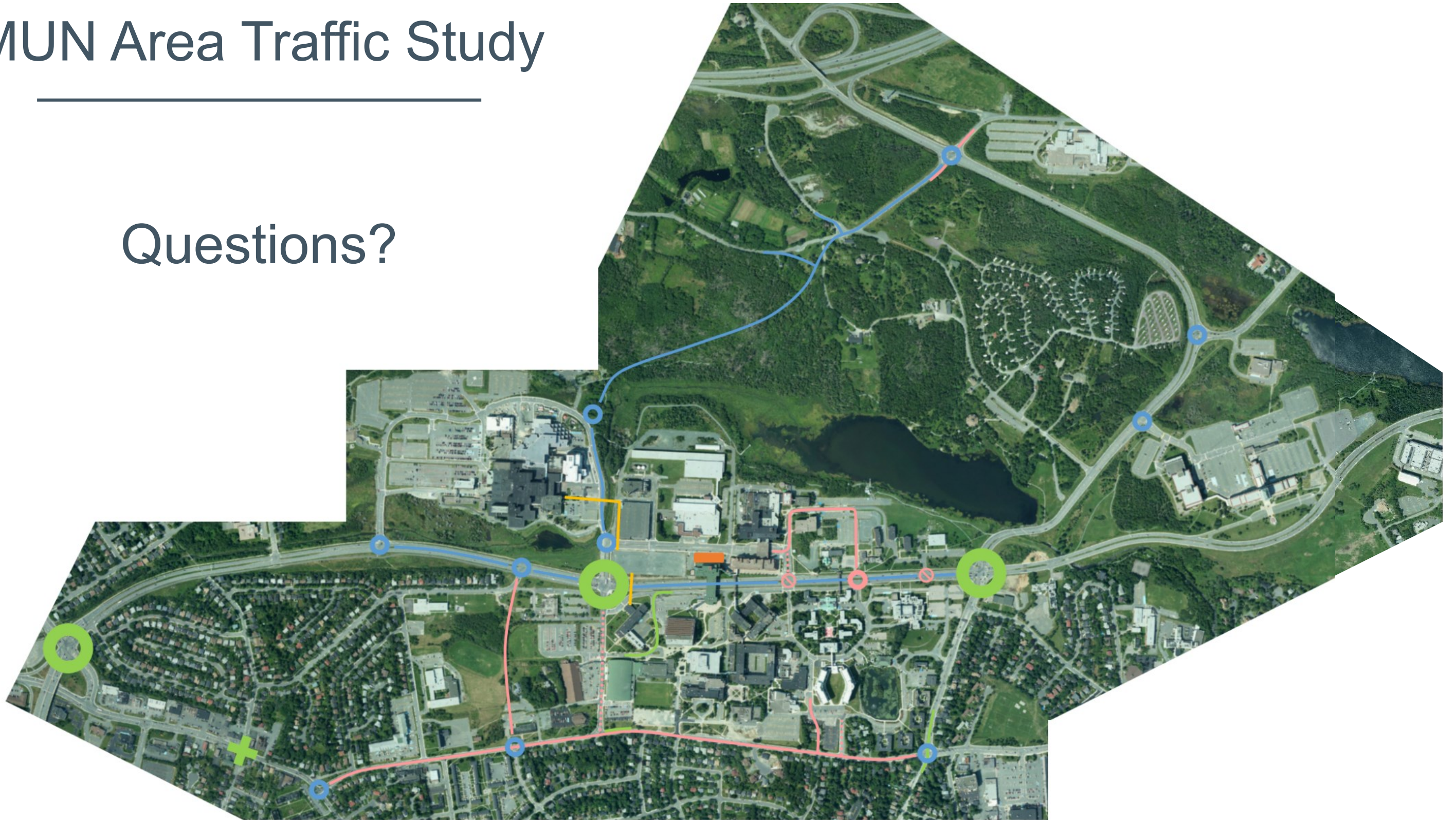
6 Turn lane upgrades at Mt. Scio & Allendale

Priority	Improvement Item
10	Elizabeth Avenue Corridor Upgrades
	Russel Road Realignment



MUN Area Traffic Study

Questions?



MUN Area Traffic Study

Road infrastructure costs are estimated based on surface works only. They do not include property acquisition, utility relocation, work required on underground services, etc. They should not be considered as full project costs.

Funding split has been proposed to all partners. No funding agreements are in place.

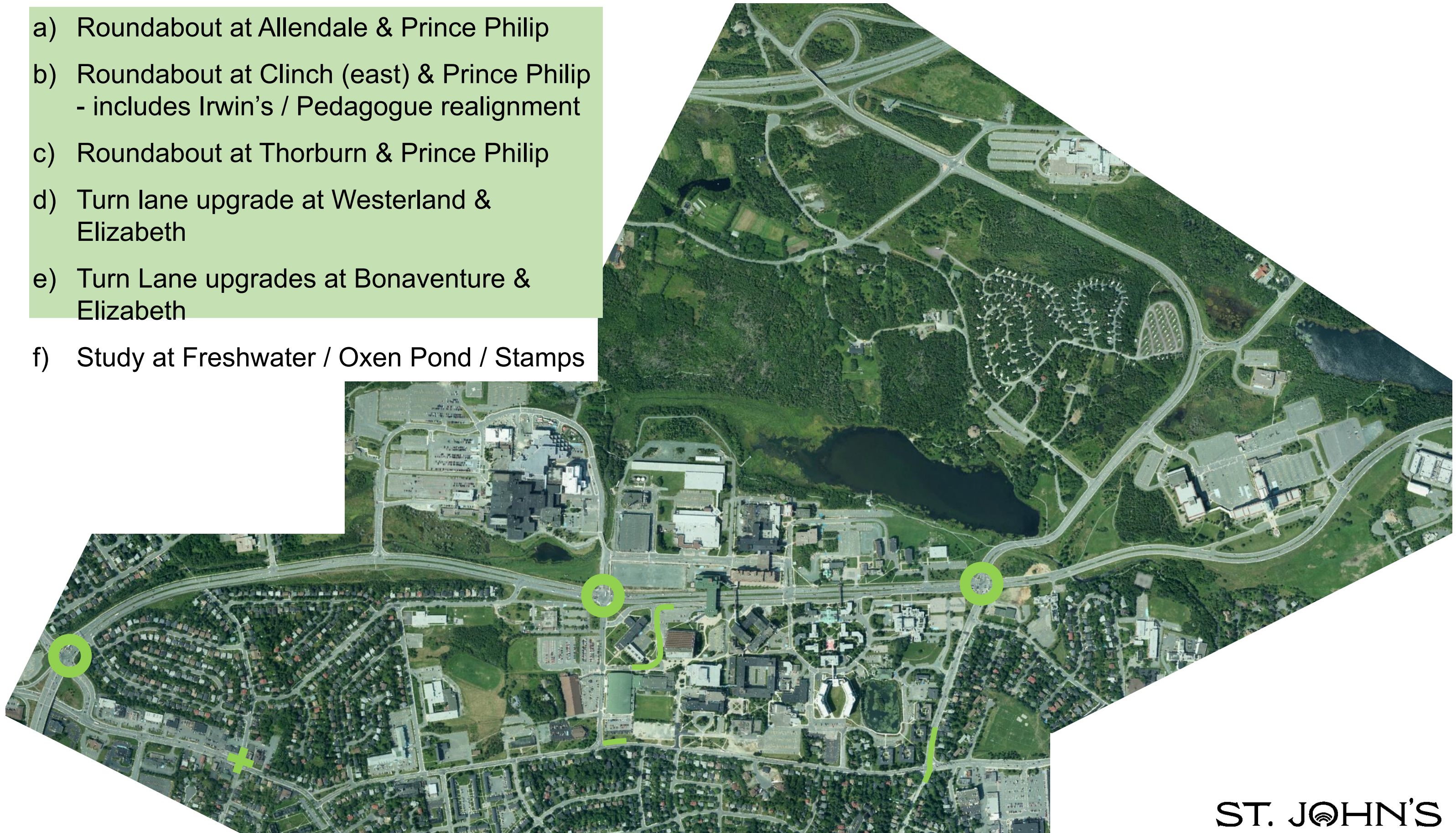
Priority	Improvement Item (short term projects)	Cost Estimate	Cost Ref	Funding
1	U-Pass	Revenue neutral		User fee
2	Roundabout Prince Philip Drive and Allandale Road Prince Philip Improvements	\$1.6M \$300K	A.1 ½B.6	75% Province 25% City
3	Pedway Education Building to Core Science Facility	\$4.5M	Pedway Costs	100% Province
4	MUN Transit Terminal	Dependant on scope and location		33% Federal 33% Province 33% City
5	Westerland Road Realignment (including Extension of Irwin's Road and Lambe's Lane) Roundabout at Prince Philip Roundabout at Elizabeth Prince Philip Improvements	\$1M \$900K \$600K \$400K	B.ii B.E B.B ½(B.3+B.4)	100% Province 75% P / 25% C 50% P / 50% C 75% P / 25% C
6	Turn Lane Upgrades at Elizabeth Avenue and Bonaventure/Allandale	\$200K	A.4	75% Province 25% City
	Turn Lane Upgrades at Mt. Scio Road & Allendale Road	\$55K	City of St. John's Internal	75% Province 25% City
	Pedestrian Crossings on Campus	Minor improvements not estimated		100% Province
	Oxen Pond Road and Freshwater Road Study (Infrastructure recommendations to follow study)	To be completed by staff		100% City
7	Roundabout Prince Philip Drive and Clinch Crescent (East)/Westerland Road Prince Philip Improvements	\$1.2M \$400K	A.2 ½(B.4+B.5)	75% Province 25% City

Priority	Improvement Item (short term projects)	Cost Estimate	Cost Ref	Funding
8	Prince Philip and Livyer's Loop	<u>Parkway</u>	B.G ½(B.5+B.6)	<u>Parkway</u>
	Roundabout	\$1.1M		75% Province
	Prince Philip Improvements	\$550K	B.8	25% City
	Closure of Morrissey Road at Prince Philip and realignment	<u>Internal MUN</u>		<u>Internal MUN</u>
	Multi-purpose Underpass	\$250K		100% Province
		Unknown		
9	Pedway Core Science Facility to Parking Garage	\$3M	Pedway Costs	100% Province
	Pedway Parking Garage to Health Sciences Complex (excludes service redundancy)	\$3M		
10	Elizabeth Avenue Corridor Upgrades	\$1.6M	B.1 + B.2	50% Province 50% City
	Russel Road Realignment	Not estimated		50% Province 50% City
11	Roundabout Prince Philip Drive/Columbus Drive and Thorburn Road	\$1.8M	A.3	75% Province 25% City
12	Turn Lane Upgrades at Westerland Road & Elizabeth Avenue	\$150K	A.5	50% Province 50% City

Priority	Improvement Item (Long Term – not to be requested at this time)	Cost Estimate	Cost Ref	Funding
13	Roundabout Elizabeth Avenue and Allandale Road/Bonaventure Avenue	\$1M	B.C	50% Province 50% City
14	Roundabout Prince Philip Drive and Clinch Crescent (West) Prince Philip Improvements	\$900K \$250K	B.D ½B.3	75% Province 25% City
15	Roundabout Clinch Crescent and Arctic Avenue	\$750K	B.I	100% Province
16	Roundabout Freshwater Road and Elizabeth Avenue	\$750K	B.A	100% City
17	Roundabout Allandale Road and Confederation Building Entrance	\$750K	B.L	75% Province 25% City
18	New Clinch Crescent Connector with Mt. Scio Road Roundabout at Clinch Improvements to Clinch	\$3M \$750K \$300K	B.i B.J B.7	100% Province
19	Roundabout Allandale Road and Mt. Scio Road	\$1.2M	B.K	50% Province 50% City
20	Roundabout Allandale Road and Higgins Line	\$750K	B.M	50% Province 50% City

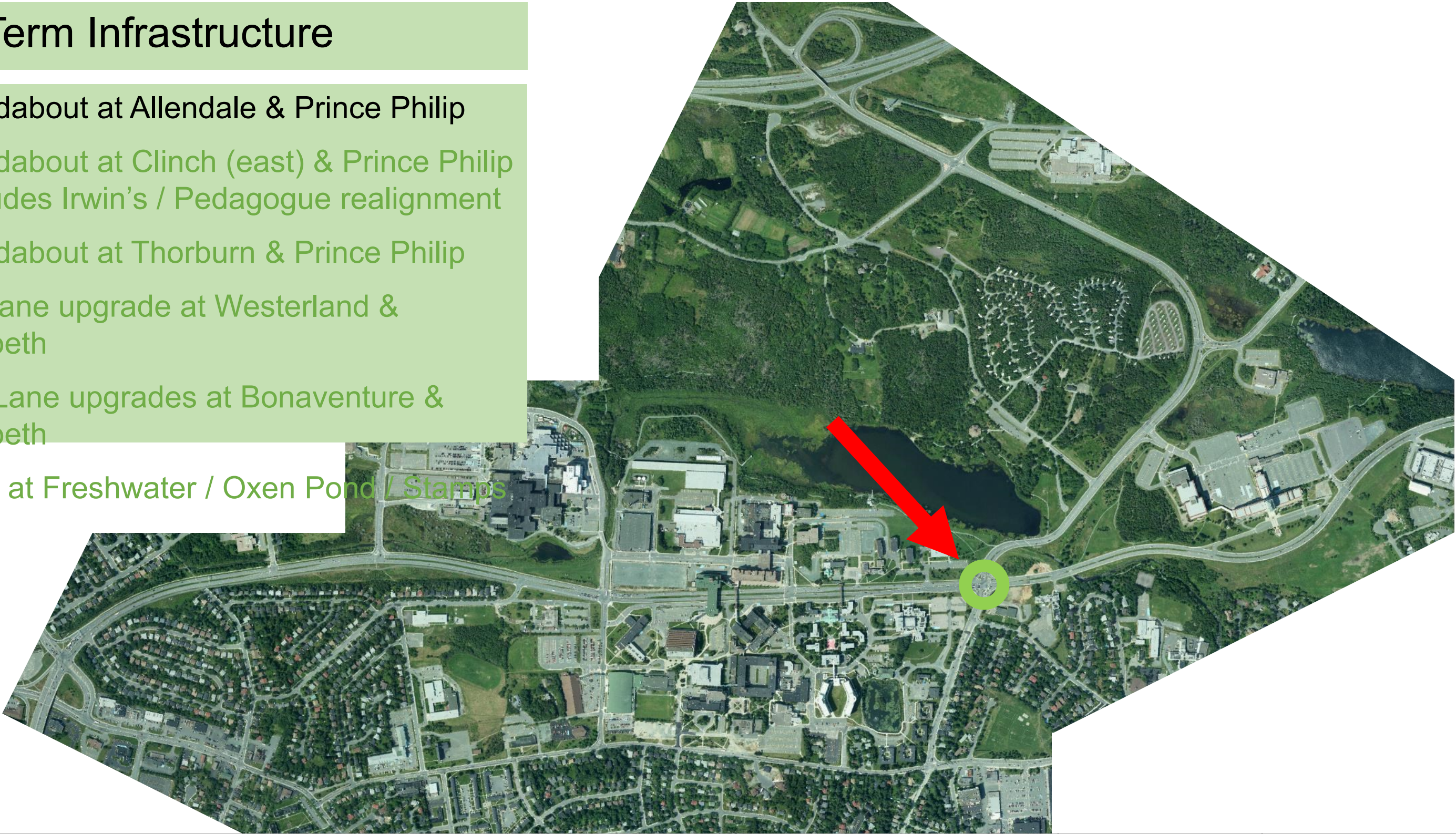
Short Term Infrastructure

- a) Roundabout at Allendale & Prince Philip
- b) Roundabout at Clinch (east) & Prince Philip
- includes Irwin's / Pedagogue realignment
- c) Roundabout at Thorburn & Prince Philip
- d) Turn lane upgrade at Westerland & Elizabeth
- e) Turn Lane upgrades at Bonaventure & Elizabeth
- f) Study at Freshwater / Oxen Pond / Stamps



Short Term Infrastructure

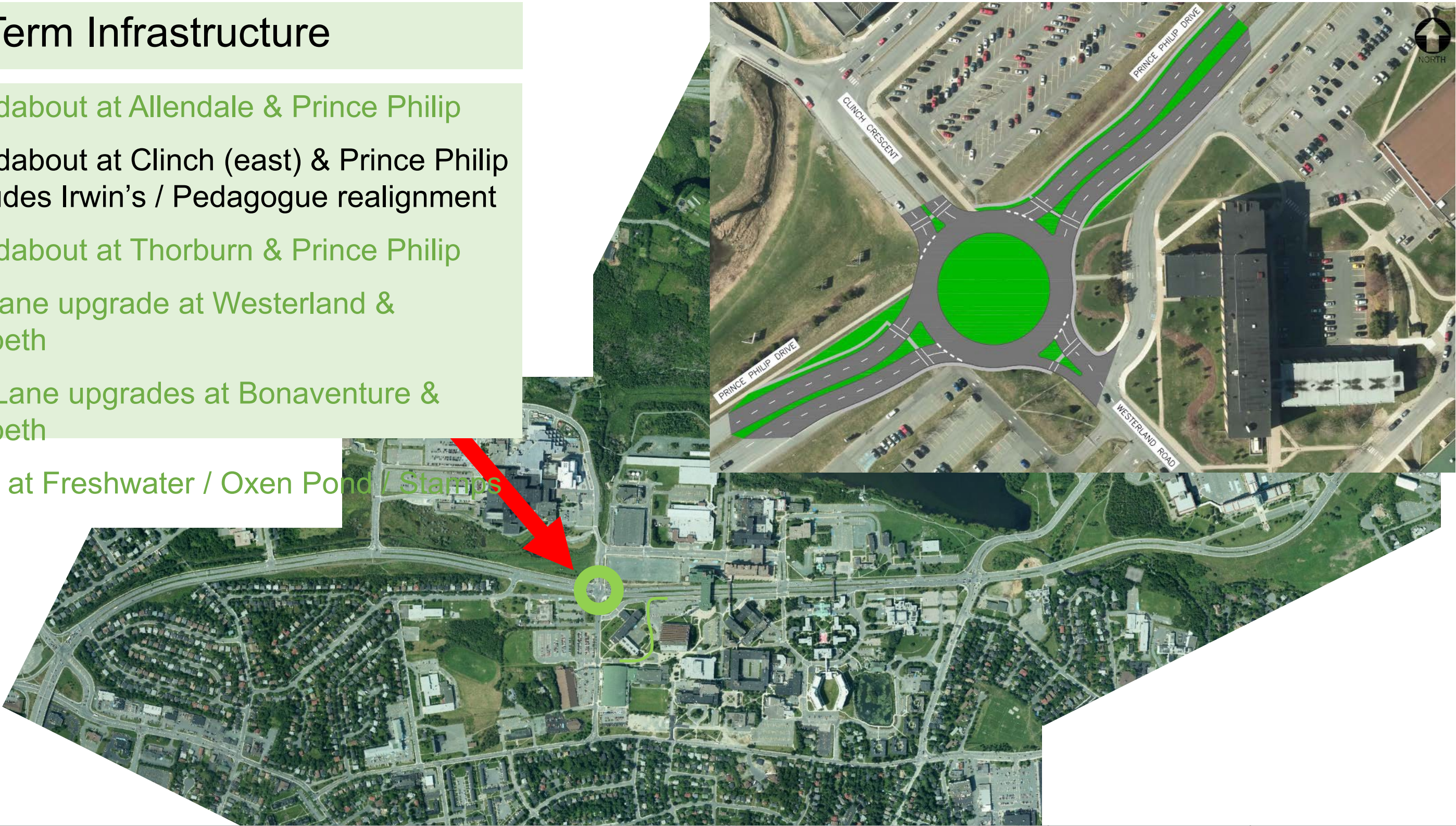
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- d) Turn lane upgrade at Westerland & Elizabeth
- e) Turn Lane upgrades at Bonaventure & Elizabeth
- f) Study at Freshwater / Oxen Pond / Stamps



Priority	Improvement Item (short term projects)	Cost Estimate	Cost Ref	Funding
2	Roundabout Prince Philip Drive and Allendale Road Prince Philip Improvements	\$1.6M \$300K	A.1 ½B.6	75% Province 25% City

Short Term Infrastructure

- a) Roundabout at Allendale & Prince Philip
- b) Roundabout at Clinch (east) & Prince Philip - includes Irwin's / Pedagogue realignment
- c) Roundabout at Thorburn & Prince Philip
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Priority	Improvement Item	Cost Estimate	Cost Ref	Funding
7	Roundabout Prince Philip Drive and Clinch Crescent (East)/Westerland Road	\$1.2M	A.2	75% Province 25% City
	Prince Philip Improvements	\$400K	½(B.4+B.5)	

Short Term Infrastructure

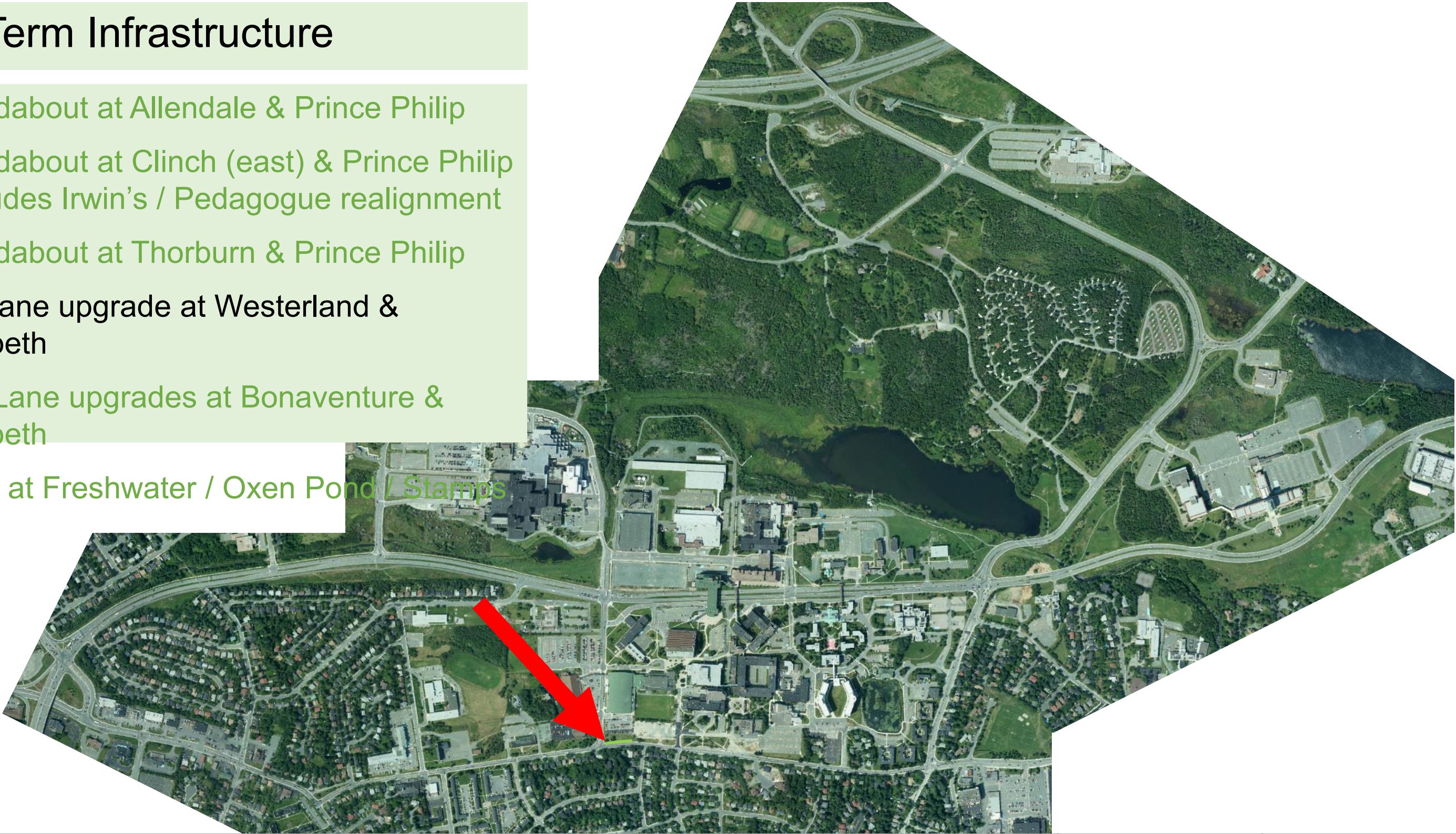
- a) Roundabout at Allendale & Prince Philip
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- f) Study at Freshwater / Oxen Pond / Stamps



Priority	Improvement Item (short term projects)	Cost Estimate	Cost Ref	Funding
11	Roundabout Prince Philip Drive/Columbus Drive and Thorburn Road	\$1.8M	A.3	75% Province 25% City

Short Term Infrastructure

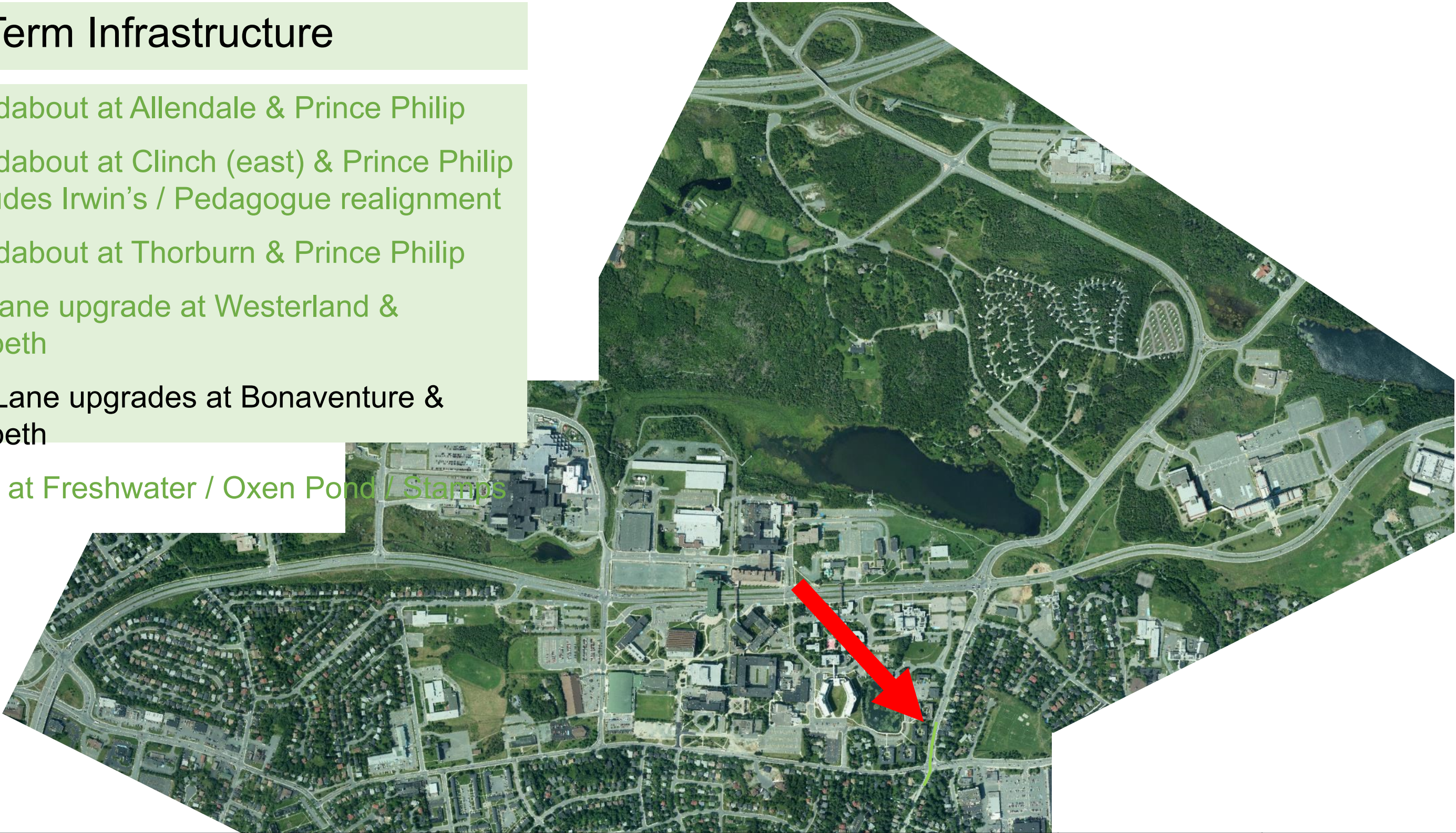
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- c) Roundabout at Thorburn & Prince Philip
- d) Turn lane upgrade at Westerland & Elizabeth
- e) Turn Lane upgrades at Bonaventure & Elizabeth
- f) Study at Freshwater / Oxen Pond / Stamps



Priority	Improvement Item (short term projects)	Cost Estimate	Cost Ref	Funding
12	Turn Lane Upgrades at Westerland Road & Elizabeth Avenue	\$150K	A.5	50% Province 50% City

Short Term Infrastructure

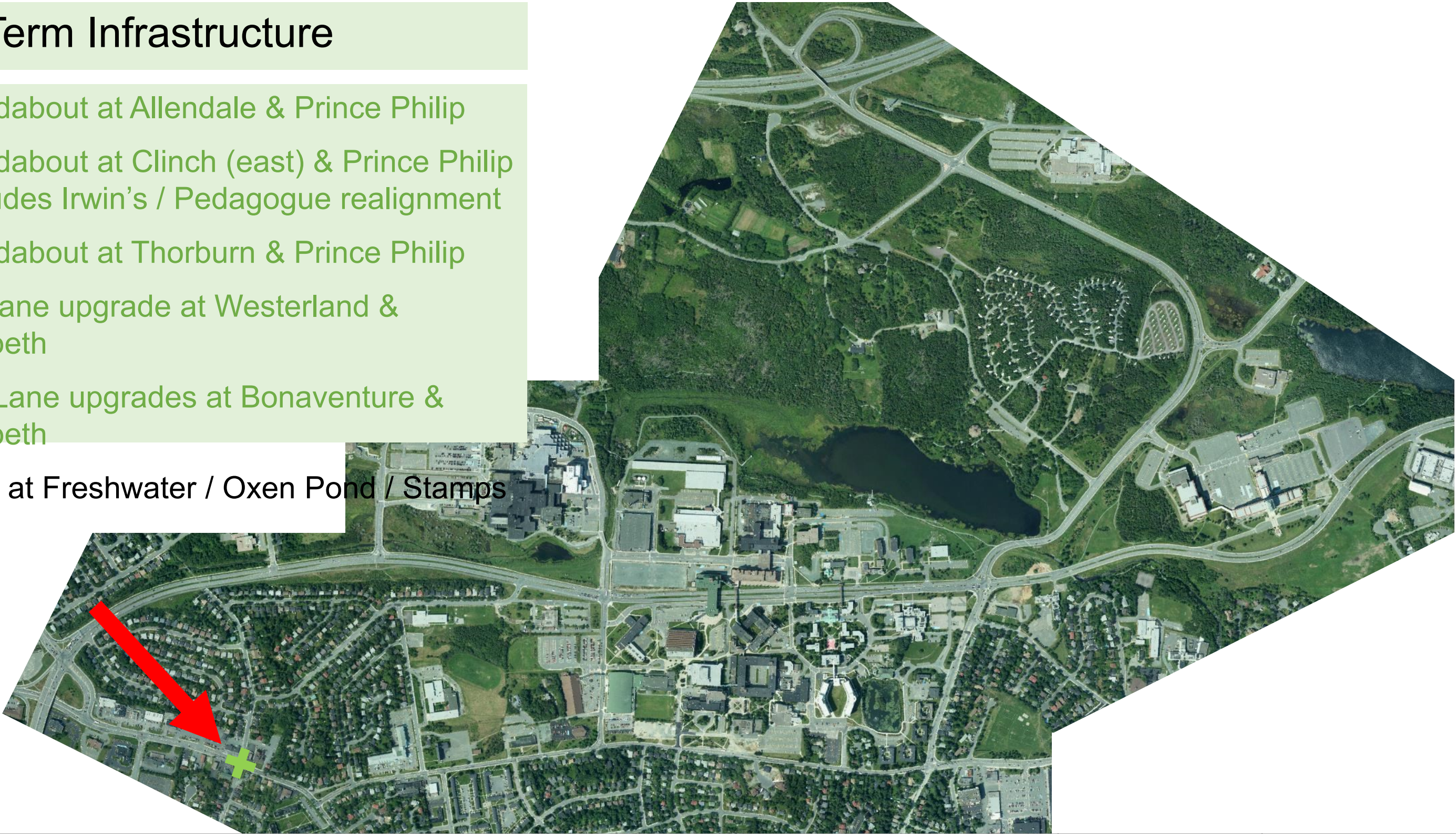
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- c) Roundabout at Thorburn & Prince Philip
- d) Turn lane upgrade at Westerland & Elizabeth
- e) Turn Lane upgrades at Bonaventure & Elizabeth
- f) Study at Freshwater / Oxen Pond / Stamps



Priority	Improvement Item (short term projects)	Cost Estimate	Cost Ref	Funding
6	Turn Lane Upgrades at Elizabeth Avenue and Bonaventure/Allendale	\$200K	A.4	75% Province 25% City

Short Term Infrastructure

- a) Roundabout at Allendale & Prince Philip
- b) Roundabout at Clinch (east) & Prince Philip - includes Irwin's / Pedagogue realignment
- c) Roundabout at Thorburn & Prince Philip
- d) Turn lane upgrade at Westerland & Elizabeth
- e) Turn Lane upgrades at Bonaventure & Elizabeth
- f) Study at Freshwater / Oxen Pond / Stamps



Priority	Improvement Item (short term projects)	Cost Estimate	Cost Ref	Funding
6	Oxen Pond Road and Freshwater Road Study (Infrastructure recommendations to follow study)	To be completed by staff		100% City

Transit & TDM

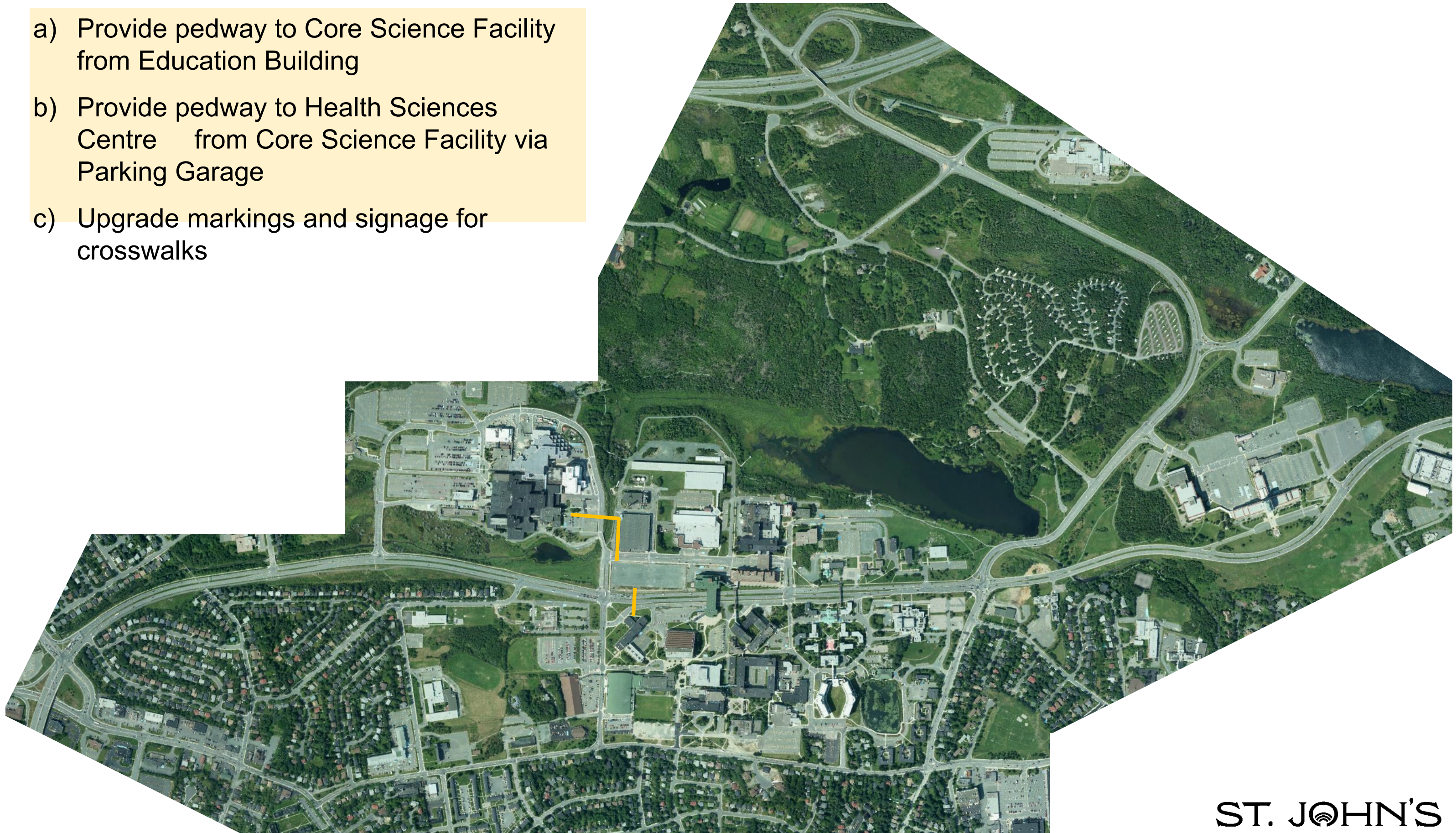
- a) Upgrade to transit terminal
- b) U-pass and eco-pass programs
- c) Transit priority
- d) Enhanced scheduling resources



Priority	Improvement Item (short term projects)	Cost Estimate	Cost Ref	Funding
1	U-Pass	Revenue neutral		User fee
4	MUN Transit Terminal	Dependant on scope and location		33% Federal 33% Province 33% City

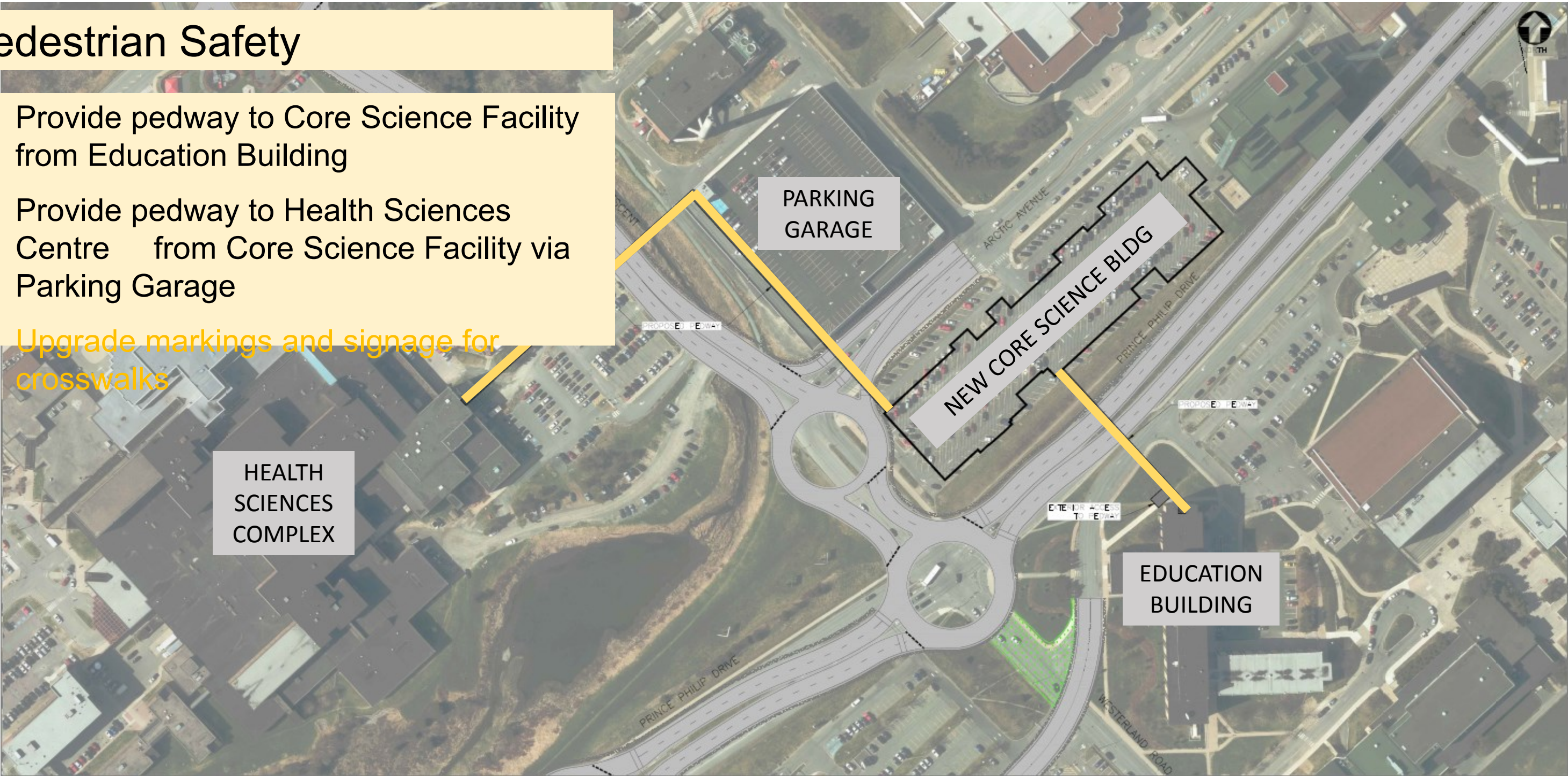
Pedestrian Safety

- a) Provide pedway to Core Science Facility from Education Building
- b) Provide pedway to Health Sciences Centre from Core Science Facility via Parking Garage
- c) Upgrade markings and signage for crosswalks



Pedestrian Safety

- a) Provide pedway to Core Science Facility from Education Building
- b) Provide pedway to Health Sciences Centre from Core Science Facility via Parking Garage
- c) Upgrade markings and signage for crosswalks



Priority	Improvement Item (short term projects)	Cost Estimate	Cost Ref	Funding
3	Pedway Education Building to Core Science Facility	\$4.5M	Pedway Costs	100% Province
9	Pedway Core Science Facility to Parking Garage	\$3M	Pedway Costs	100% Province
	Pedway Parking Garage to Health Sciences Complex (excludes service redundancy)	\$3M		

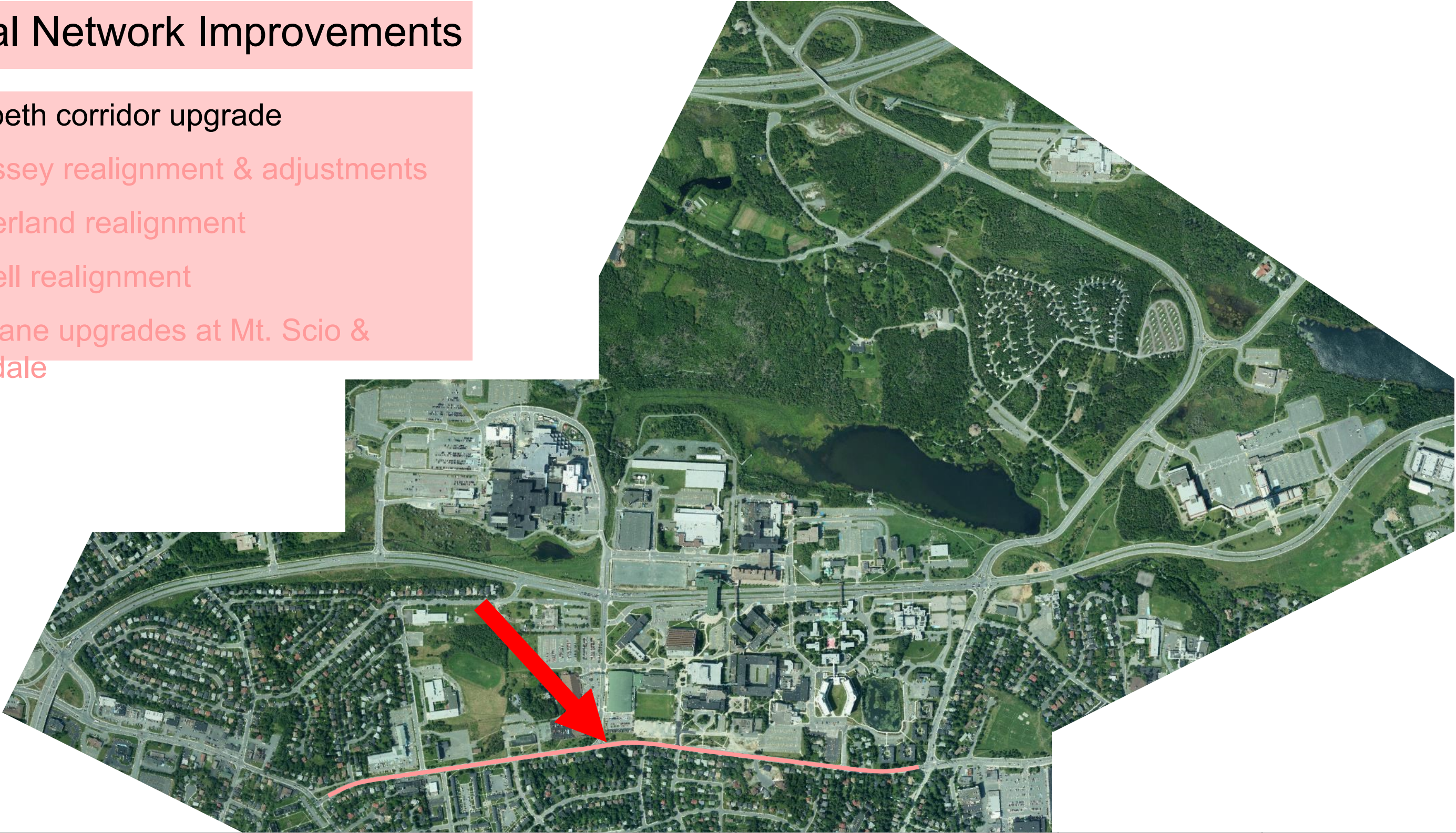
General Network Improvements

- a) Elizabeth corridor upgrade
- b) Morrissey realignment & adjustments
- c) Westerland realignment
- d) Russell realignment
- e) Turn lane upgrades at Mt. Scio & Allendale



General Network Improvements

- a) Elizabeth corridor upgrade
- b) Morrissey realignment & adjustments
- c) Westerland realignment
- d) Russell realignment
- e) Turn lane upgrades at Mt. Scio & Allendale



Priority	Improvement Item (short term projects)	Cost Estimate	Cost Ref	Funding
10	Elizabeth Avenue Corridor Upgrades	\$1.6M	B.1 + B.2	50% Province 50% City

General Network Improvements

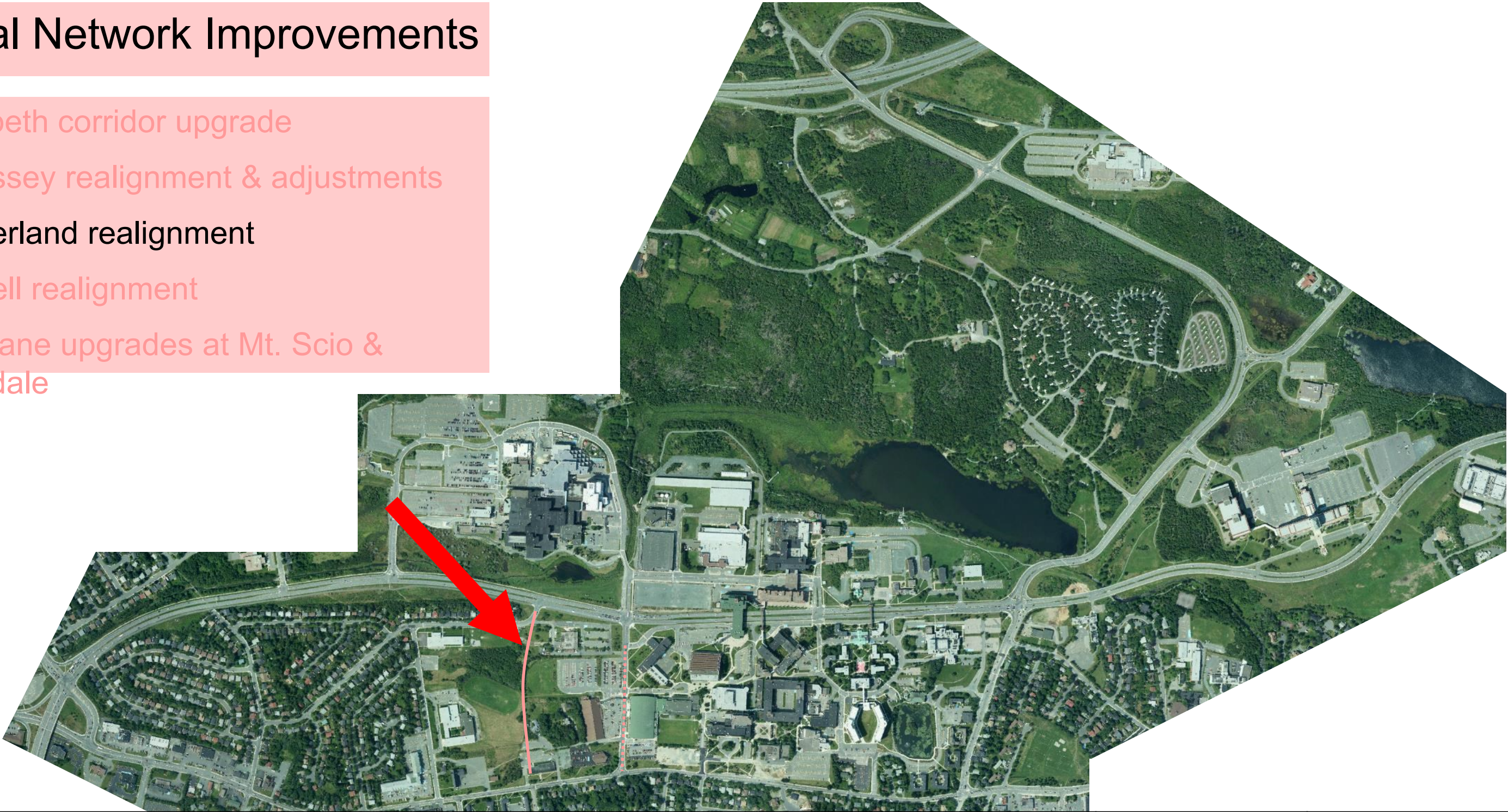
- a) Elizabeth corridor upgrade
- b) Morrissey realignment & adjustments
- c) Westerland realignment
- d) Russell realignment
- e) Turn lane upgrades at Mt. Scio & Allendale



Priority	Improvement Item	Cost Estimate	Cost Ref	Funding
8	Prince Philip and Livyer's Loop	<u>Parkway</u>		<u>Parkway</u>
	Roundabout	\$1.1M	B.G	75% Province
	Prince Philip Improvements	\$550K	½(B.5+B.6)	25% City
	Closure of Morrissey Road at Prince Philip and realignment	<u>Internal MUN</u>		<u>Internal MUN</u>
	Multi-purpose Underpass	\$250K	B.8	100% Province
		Unknown		

General Network Improvements

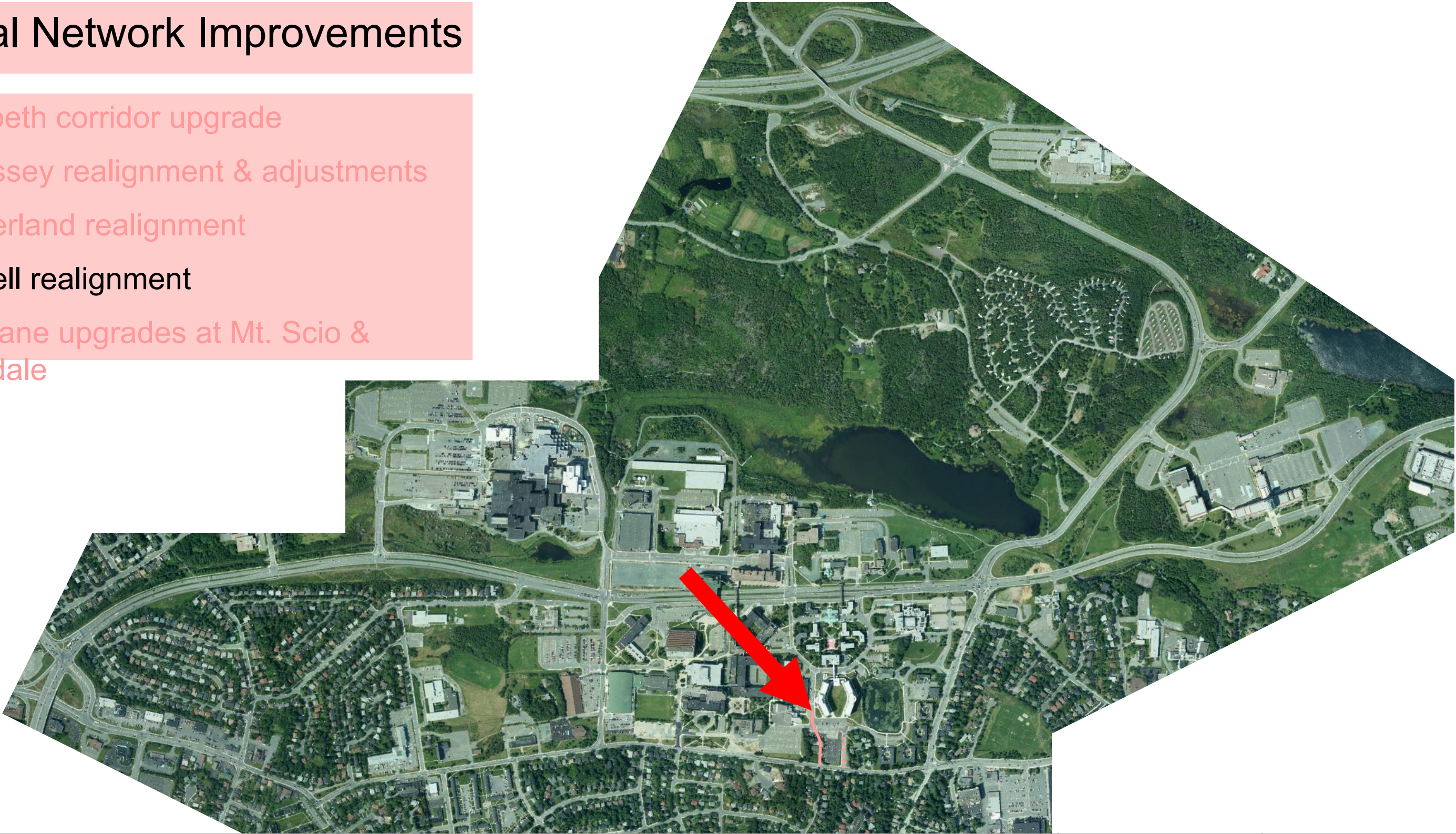
- a) Elizabeth corridor upgrade
- b) Morrissey realignment & adjustments
- c) Westerland realignment
- d) Russell realignment
- e) Turn lane upgrades at Mt. Scio & Allendale



Priority	Improvement Item (short term projects)	Cost Estimate	Cost Ref	Funding
5	Westerland Road Realignment (including Extension of Irwin's Road and Lambe's Lane)	\$1M	B.ii	100% Province
	Roundabout at Prince Philip	\$900K	B.E	75% P / 25% C
	Roundabout at Freshwater	\$600K	B.B	50% P / 50% C
	Prince Philip Improvements	\$400K	½(B.3+B.4)	75% P / 25% C

General Network Improvements

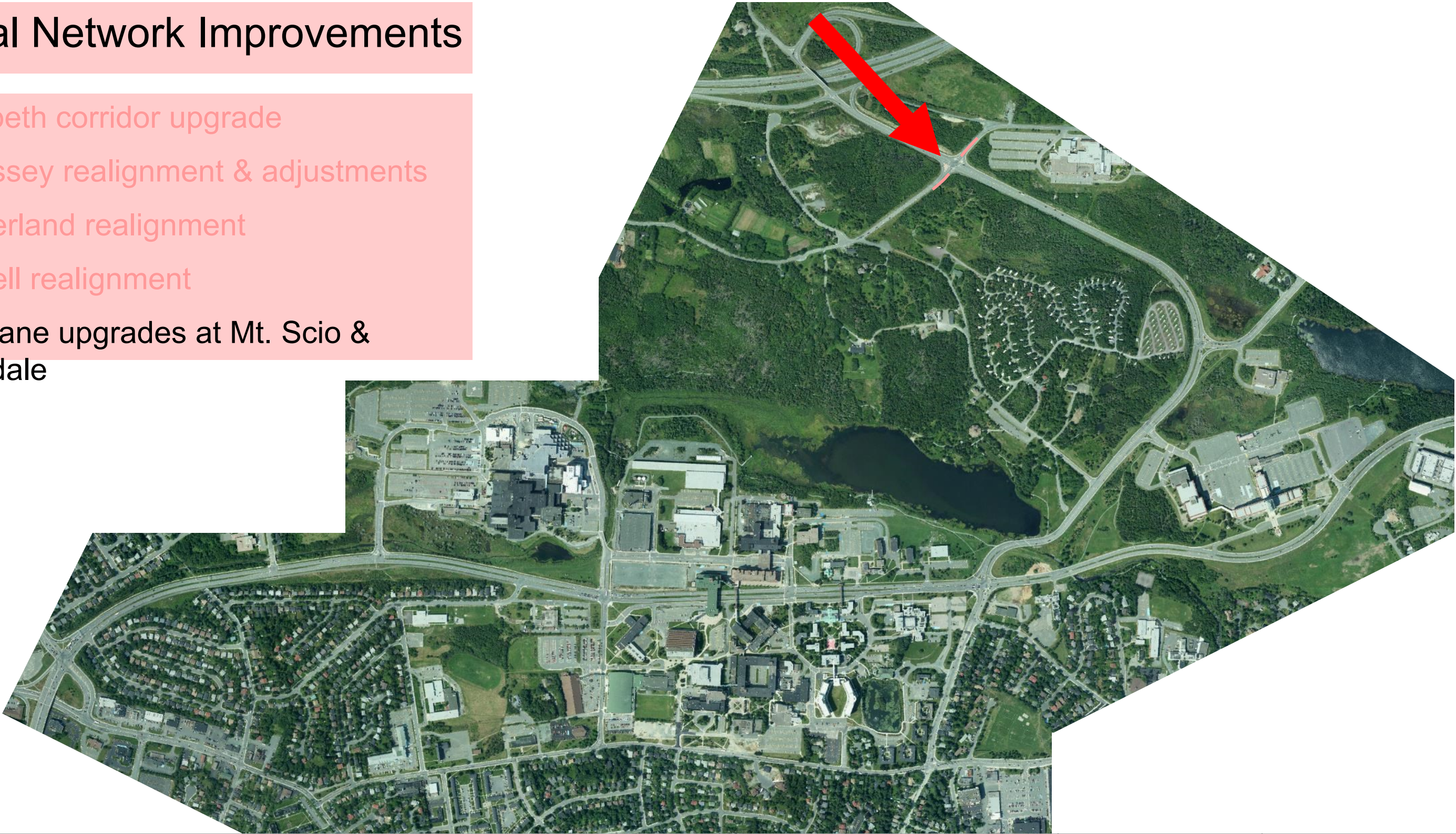
- a) Elizabeth corridor upgrade
- b) Morrissey realignment & adjustments
- c) Westerland realignment
- d) Russell realignment
- e) Turn lane upgrades at Mt. Scio & Allendale



Priority	Improvement Item (short term projects)	Cost Estimate	Cost Ref	Funding
10	Russel Road Realignment	Not estimated		50% Province 50% City

General Network Improvements

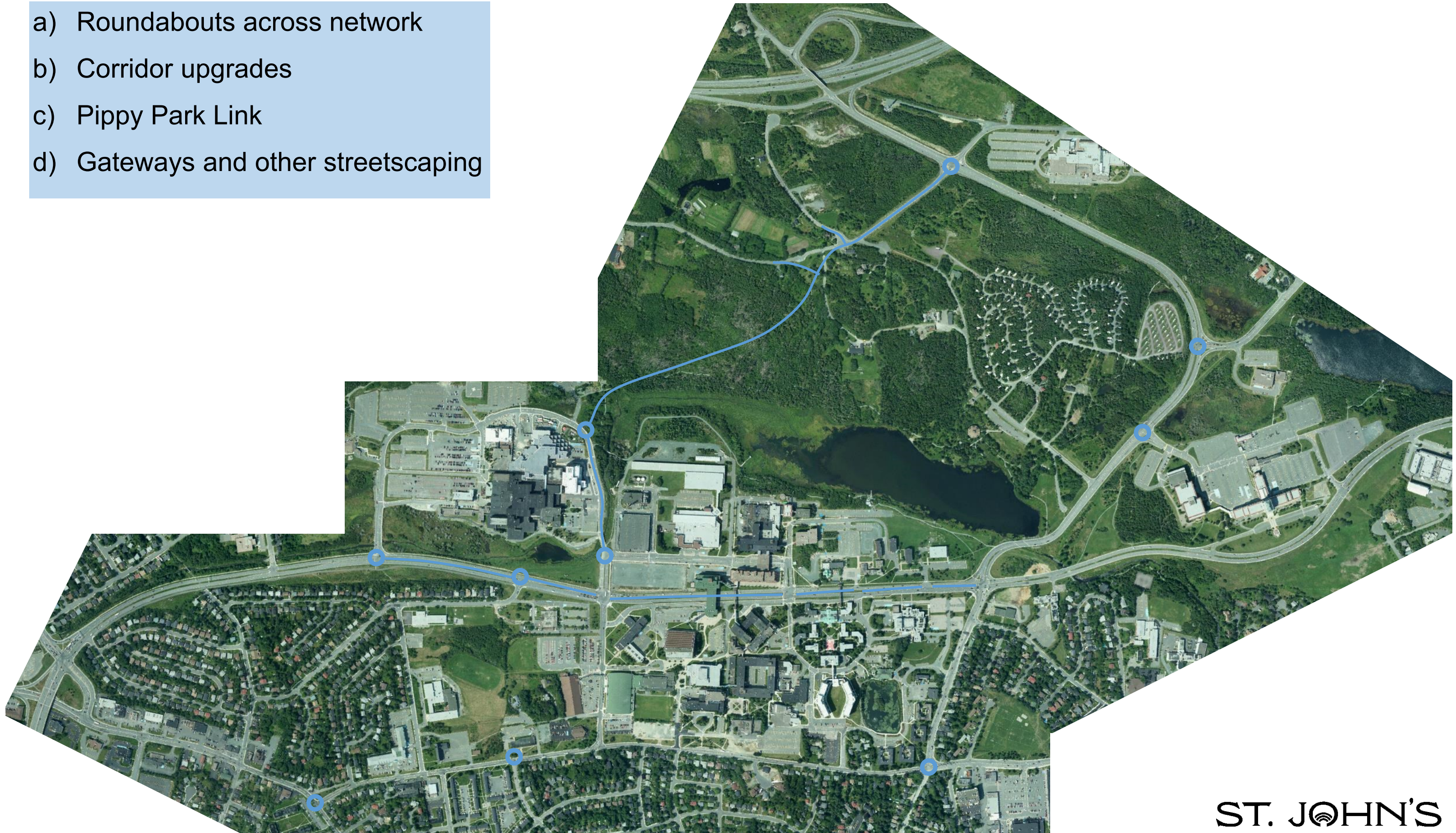
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- c) Westerland realignment
- d) Russell realignment
- e) Turn lane upgrades at Mt. Scio & Allendale



Priority	Improvement Item (short term projects)	Cost Estimate	Cost Ref	Funding
6	Turn Lane Upgrades at Mt. Scio Road & Allendale Road	\$55K	City of St. John's Internal	75% Province 25% City

Long Term Infrastructure

- a) Roundabouts across network
- b) Corridor upgrades
- c) Pippy Park Link
- d) Gateways and other streetscaping



Long Term Infrastructure:

- No need identified for these projects within the 2025 horizon of this study.
- May become necessary at some point in the more distant future.
- Should be considered as any other work is conducted in the study area to ensure that feasibility or efficiency of completion is not adversely impacted by other works.