

E&N TRAIL

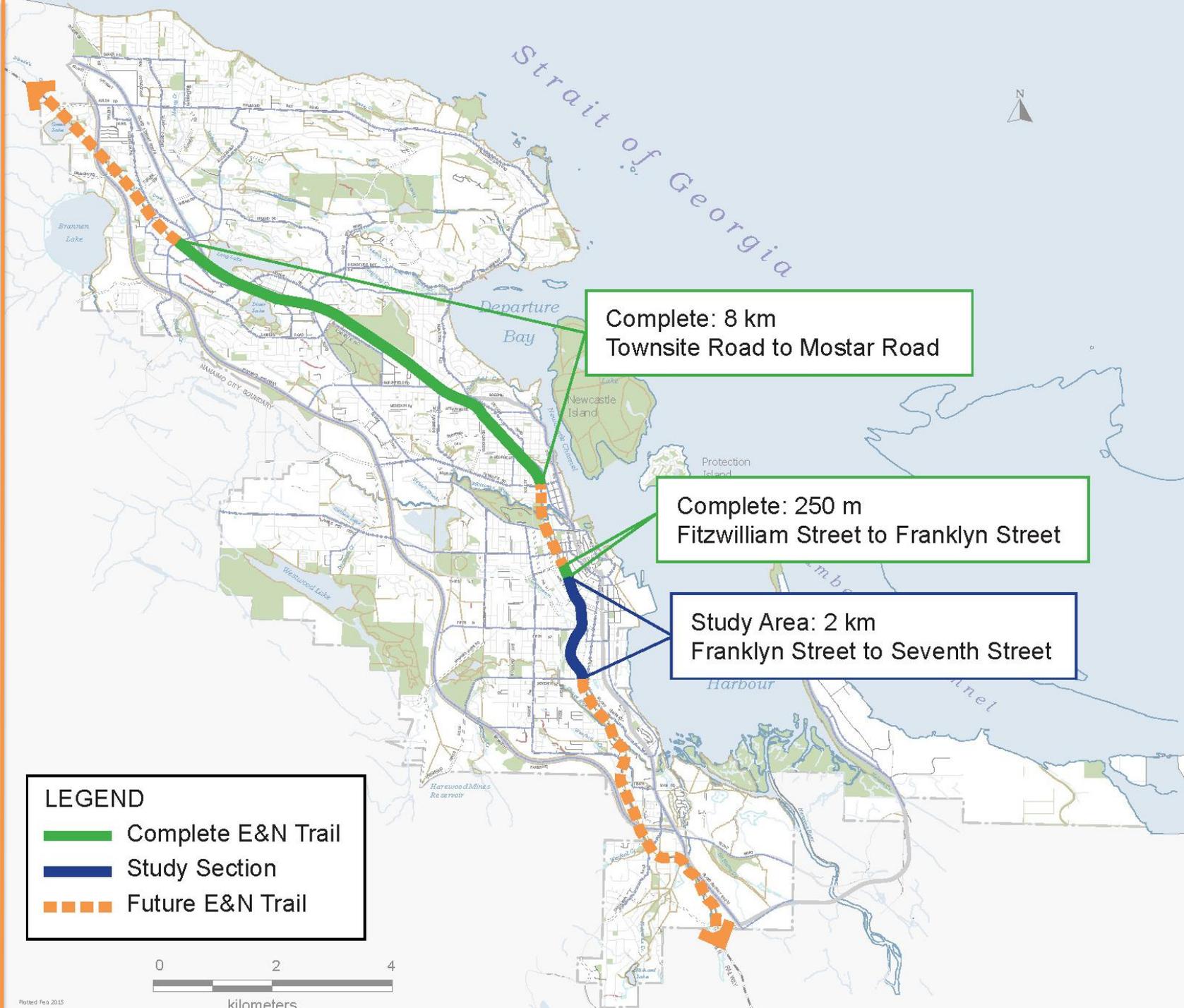
Downtown South Alignment & Costing Study

Council Update

May 11, 2015



Context



Supporting Plans

-  Parks, Recreation & Culture Master Plan (2004)
-  Regional District of Nanaimo Regional Parks & Trails Plan (2005)
-  PRC Trail Implementation Plan (2007)
-  plan**Nanaimo** Official Community Plan (2008)
-  South End Neighbourhood Plan (2010)
-  Harewood Neighbourhood Plan (2013)
-  Transportation Master Plan (2014)



Community Support – Nanaimo Region Rail Trail



- Founded:
Fall 2013
- Founding
Partners:
 - ICF
 - DNBIA
 - Tourism Nanaimo
 - Greater Nanaimo
Cycling Coalition
 - Regional District
of Nanaimo
 - City of Nanaimo



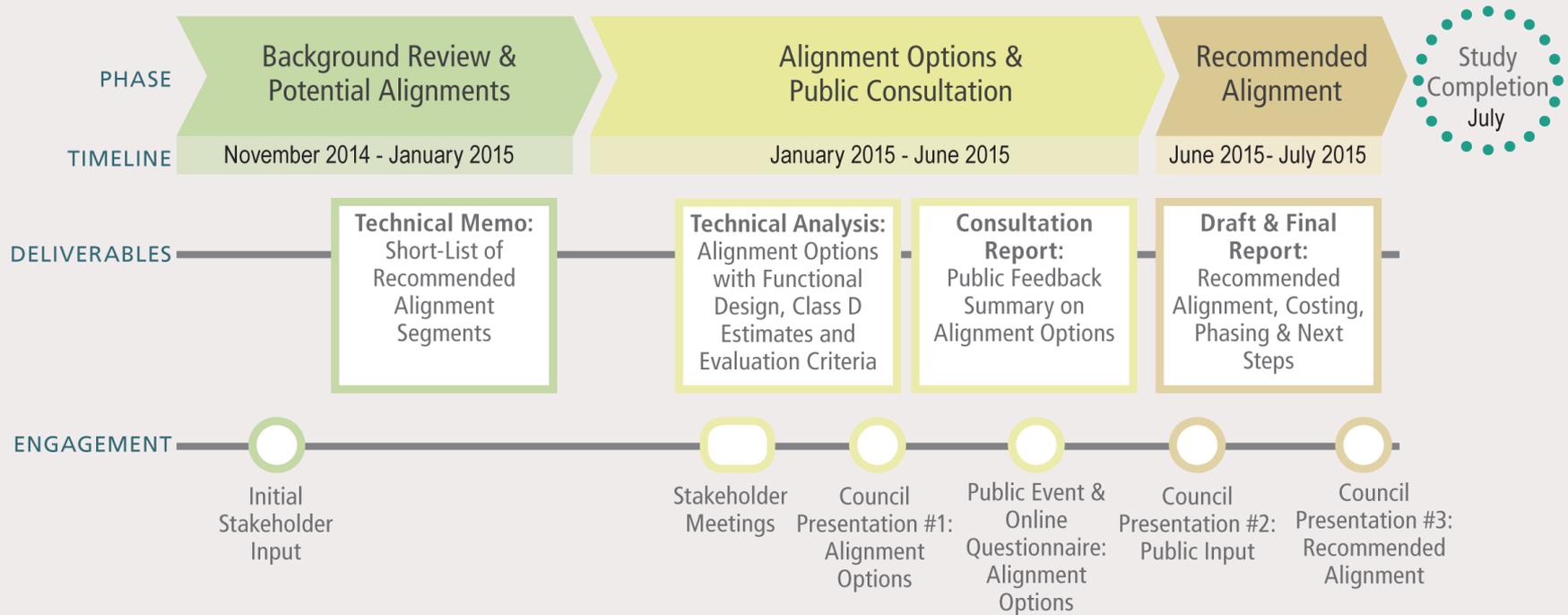
<http://www.nanaimoregionrailtrail.ca/>

Where are we Today?

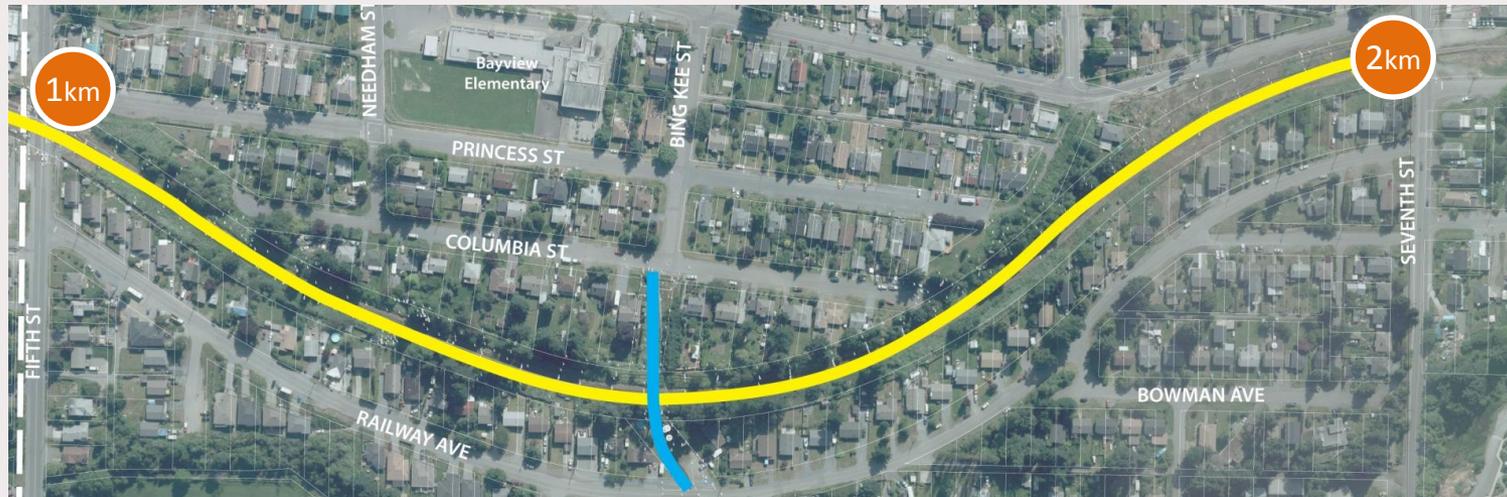
1. Nanaimo Council voted to support development of the E&N Trail south from downtown to Seventh Street (March 20, 2014)
2. Preliminary routing and cost estimating study (underway)
3. Initial funding sources:
 - City of Nanaimo Parks Trails Capital Budget
 - Nanaimo Region Rail Trail fundraising
 - RDN Park Acquisition Fund



Project Process



The Route



Why is this Section a Challenge?



50'
15m

Width of Corridor from
Franklyn to Pine
(typical corridor width is 100')



Challenging Grades
(steep side slopes require grading
and/or retaining)



7

Number of Grade Crossings
(grade crossings substantially
increase cost)

Key Challenges on the Route



Current Legislation

Provincially-Regulated Railways (including the E&N) are guided by BC's Railway Safety Act

BC's Railway Safety Act adopts the regulations, rules and standards of the federal Railway Safety Act

New trail development requires approval by the corridor owner (ICF), rail operator (SRY) and trail owner (CoN)



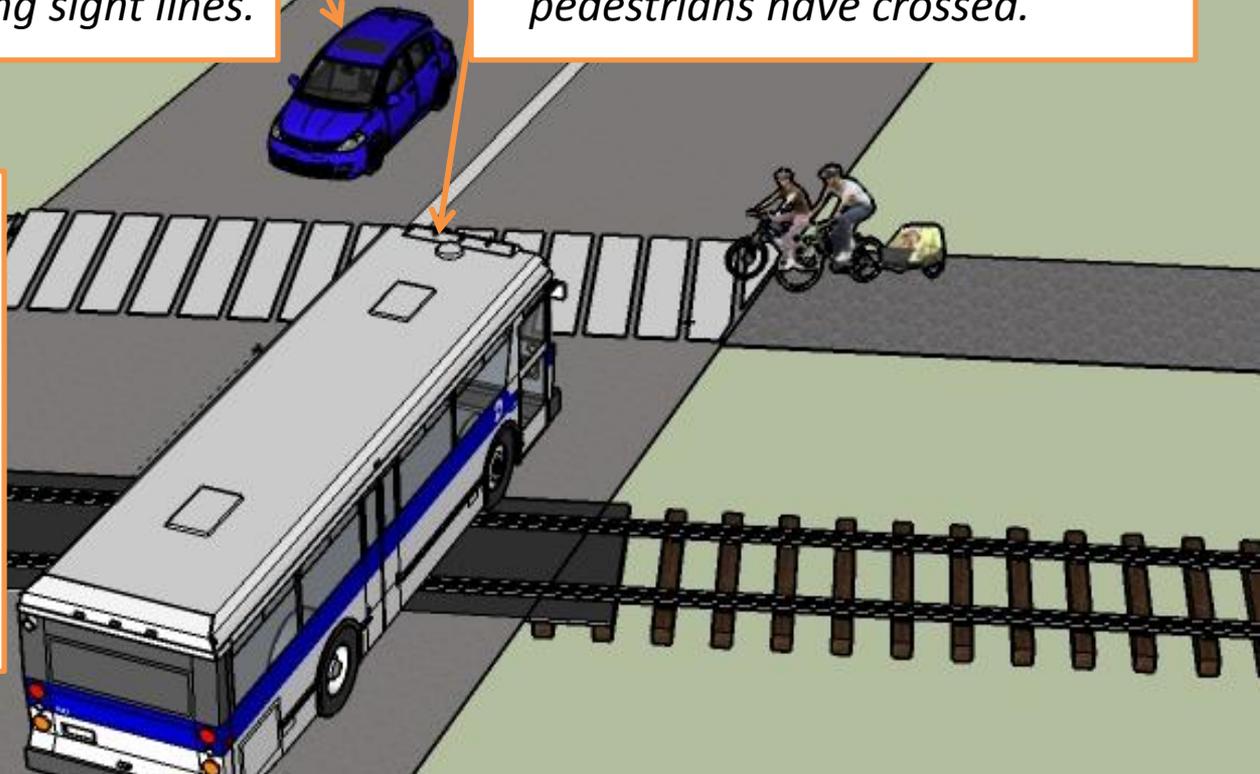
The new Grade Crossing Regulations Replace the 2002 RTD 10 Standards

Two Key Challenges with Grade Crossings

1 Sight Line Distances: Grade crossings must provide adequate sight lines for vehicles approaching a rail crossing. *By introducing a crosswalk, the blue car must now stop further away from the rail crossing, impacting sight lines.*

2 Elimination of Blockages: Vehicles cannot block rail tracks. *If a bus begins crossing, but must stop for people in the crosswalk, it is stranded until the pedestrians have crossed.*

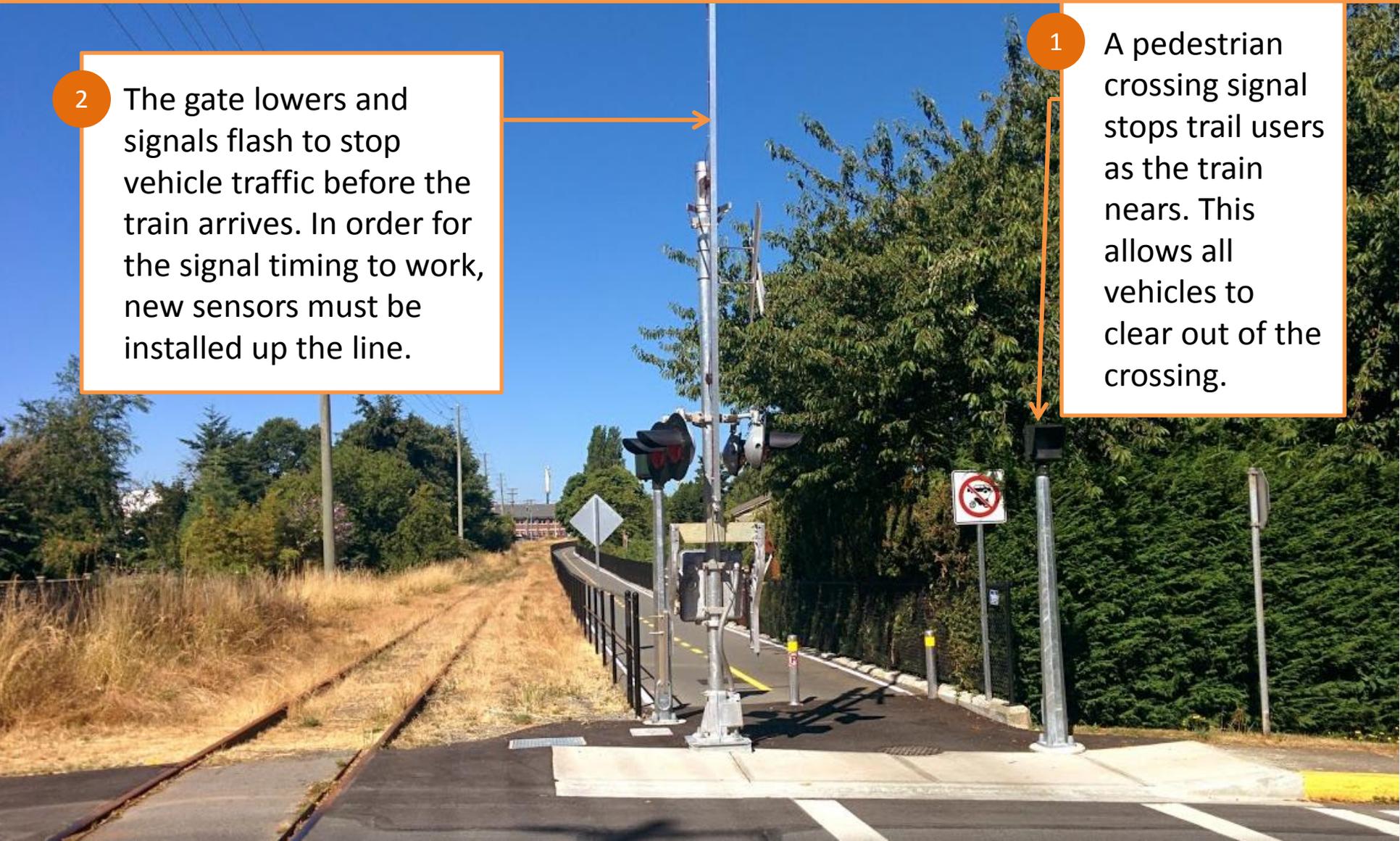
In rural areas, grade crossings can be managed by moving the crosswalk at least 30 m away from the tracks. In urban areas buildings, streets and other infrastructure limit these opportunities.



What Happens at a Gated Grade Crossing?

2 The gate lowers and signals flash to stop vehicle traffic before the train arrives. In order for the signal timing to work, new sensors must be installed up the line.

1 A pedestrian crossing signal stops trail users as the train nears. This allows all vehicles to clear out of the crossing.



Why Consider Alternative Routes?

Alternatives Overview

	Route A: On Rail	Route B: On/Off-Rail
Relationship to E&N Corridor	The trail follows the corridor to the extent possible	The trail moves away from corridor to reduce costs related to signalized crossings
Side of E&N	West	East
Crossings Requiring Signals and Gates	4 - 7	2 - 3
Trail Types Used	Multi-use Trail	Multi-use Trail Bicycle Boulevard



The Costs of Crossings

- Upgrading grade crossings is the costliest component of the E&N Trail
- This study considered alternative trail alignments that could potentially reduce costs by eliminating grade crossings.
- However, until detailed design is complete and agreed upon by ICF, SRY and CoN, grade crossing impacts cannot be fully confirmed
- Therefore, costs for both best-case and worst-case scenarios are presented.

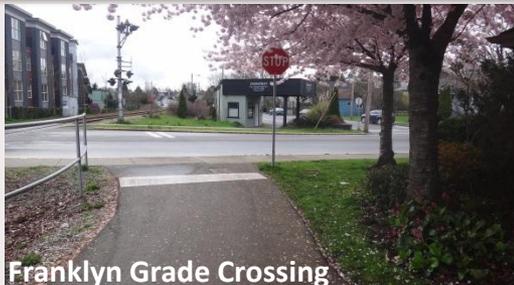
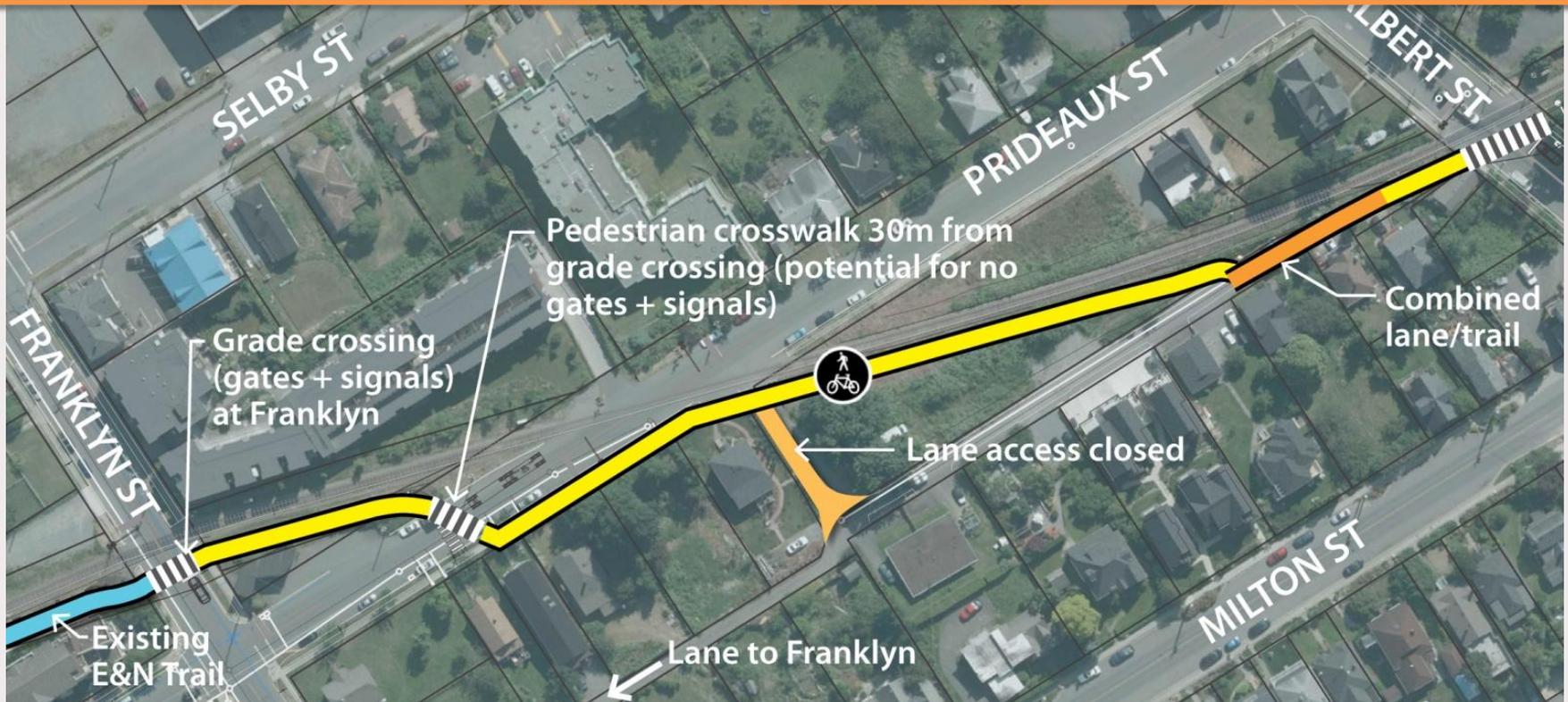


Evaluation Criteria

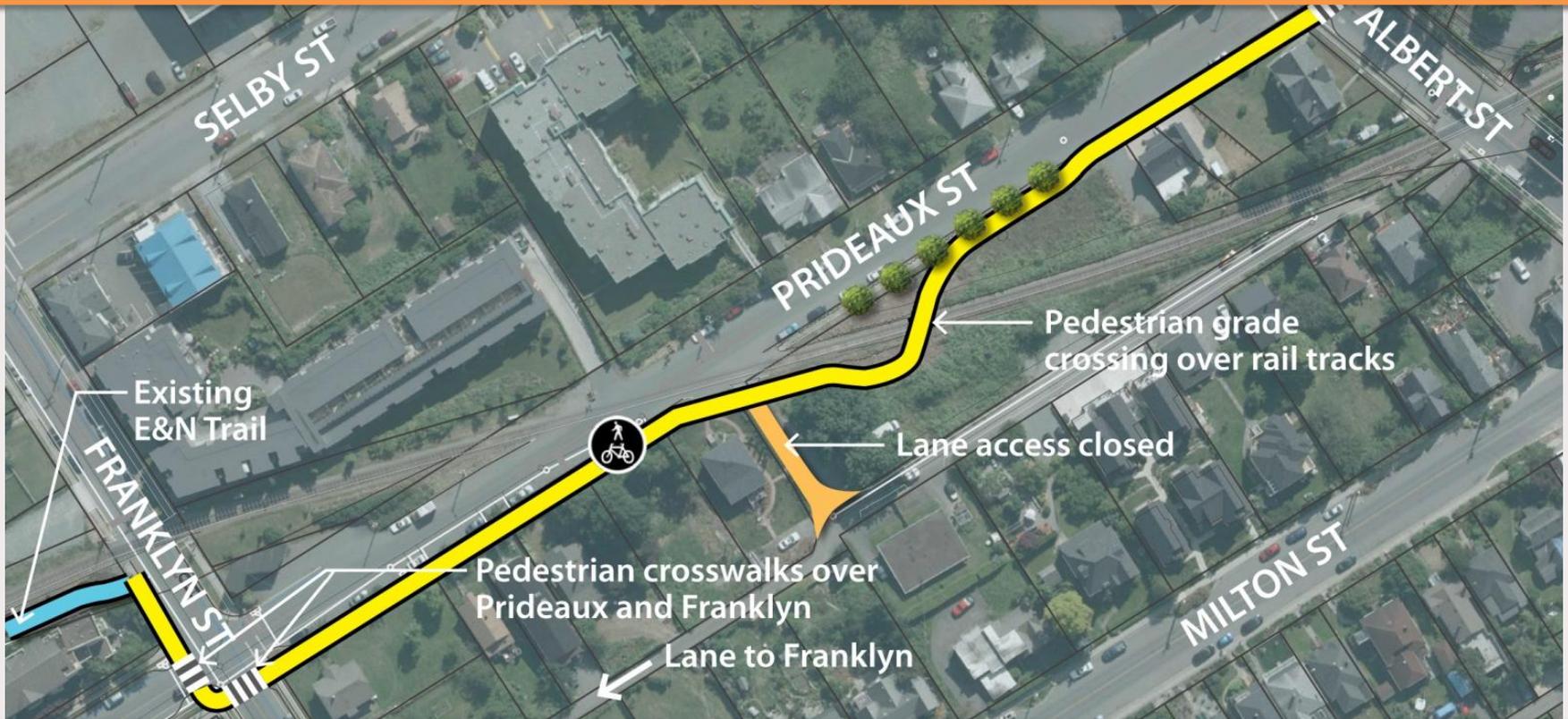
Considers more than just costs...



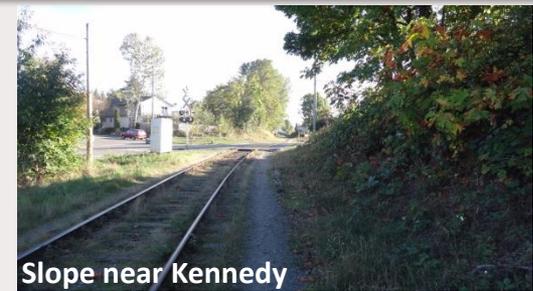
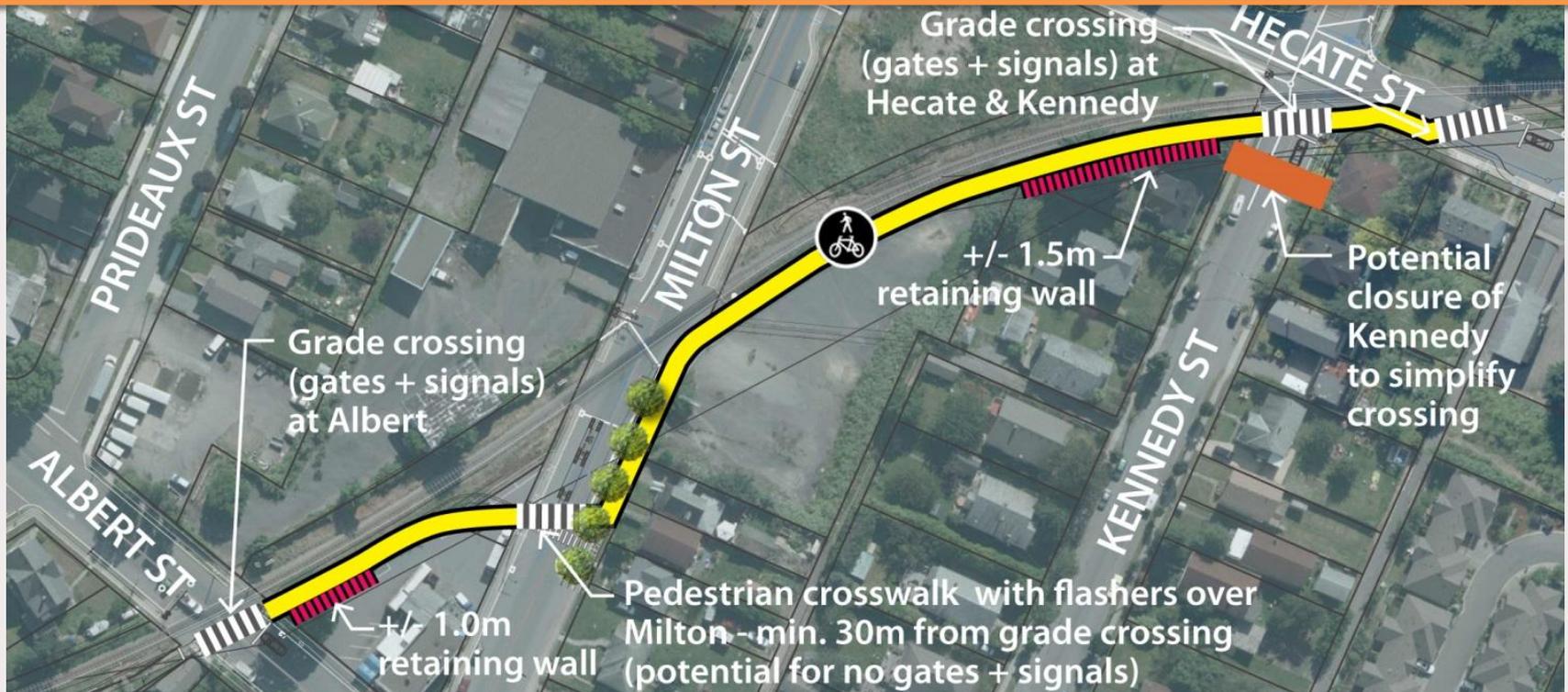
Section 1: Franklyn to Albert (Option A: On-Rail)



Section 1: Franklyn to Albert (Option B: On/Off-Rail)



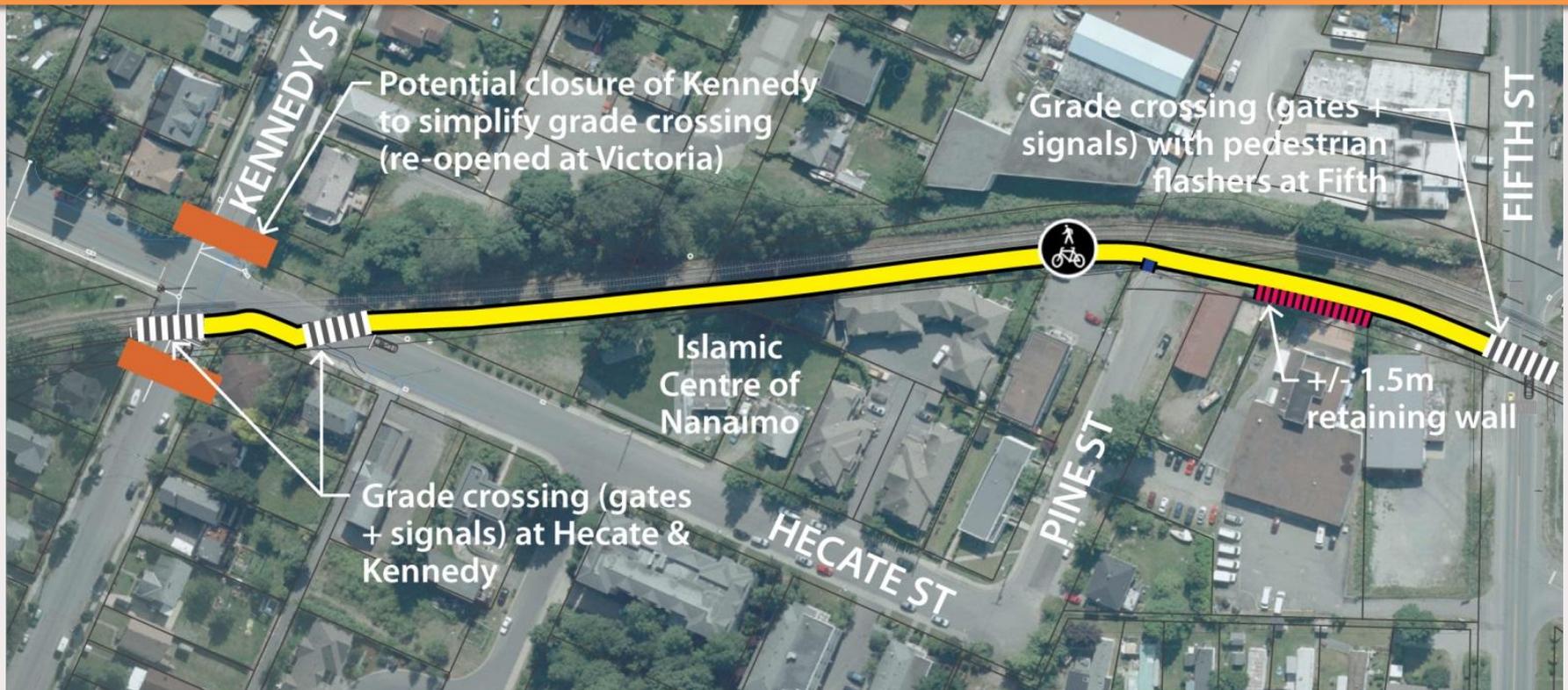
Section 2: Albert to Hecate/Kennedy (Option A: On-Rail)



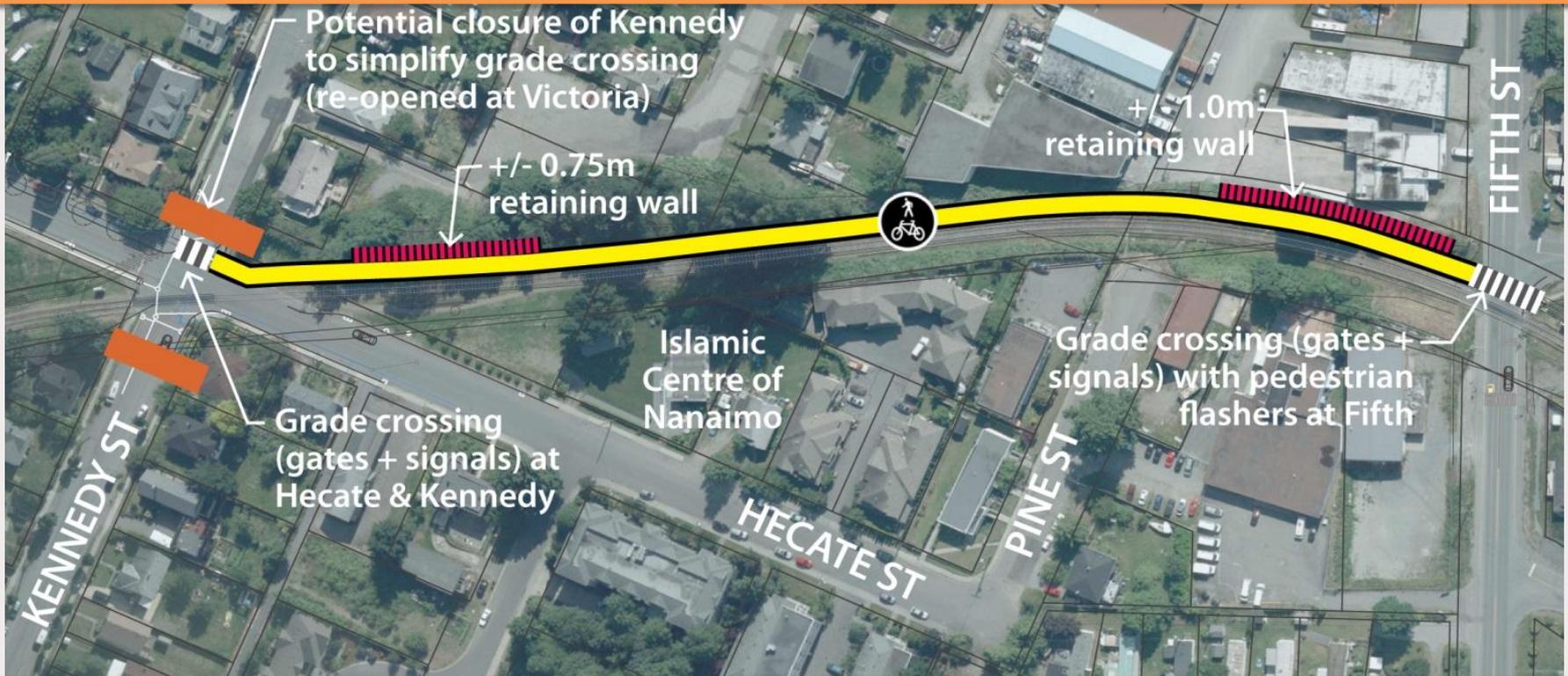
Section 2: Albert to Hecate/Kennedy (Option B: On/Off-Rail)



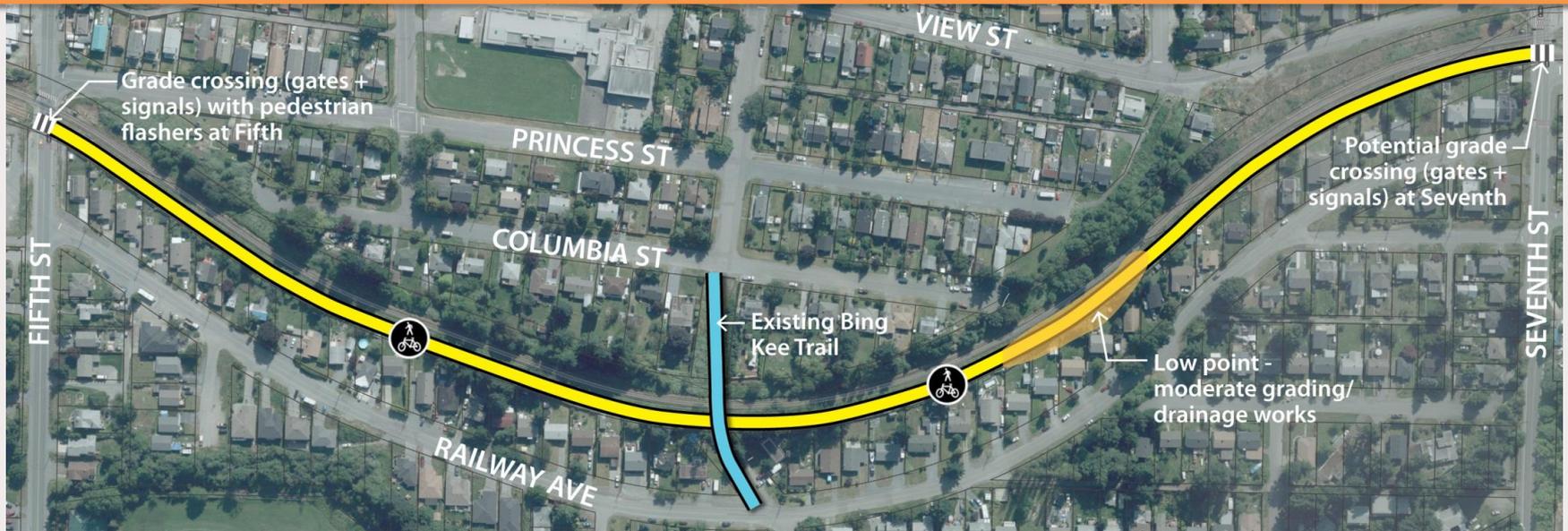
Section 3: Hecate/Kennedy to Fifth (Option A: On-rail)



Section 3: Hecate/Kennedy to Fifth (Option B: On/Off-Rail)



Section 4: Fifth to Seventh (Option A: On-Rail)



Section 4: Fifth to Seventh (Option B: On-Off Rail)



Preliminary Cost Summary

	Route A: On-Rail	Route B: On/Off-Rail
Grade Crossings potentially requiring Signals + Gates	4 - 7	2 - 3
Estimated Cost – Low End* <small>* Costs are preliminary estimates provided for planning and budgeting purposes. Detailed design is required to confirm trail routing and verify costs.</small>	\$7.7 M (4 grade crossings)	\$5.0 M (2 grade crossings, bicycle blvd on Columbia from Fifth to Seventh)
Estimated Cost – High End* <small>* Costs are preliminary estimates provided for planning and budgeting purposes. Detailed design is required to confirm trail routing and verify costs.</small>	\$10.8 M (7 grade crossings)	\$6.6 M (3 grade crossings, multi-use trail on rail corridor from Fifth to Seventh)
% Costs Directly Related to Grade Crossings – Low End	50%	45%
% Costs Directly Related to Grade Crossings – High End	65%	45%

Phasing Framework

Phasing will allow projects to be completed over time



 **Note:** Grade crossings between sections may need to be completed with the adjacent trail section that is completed first.

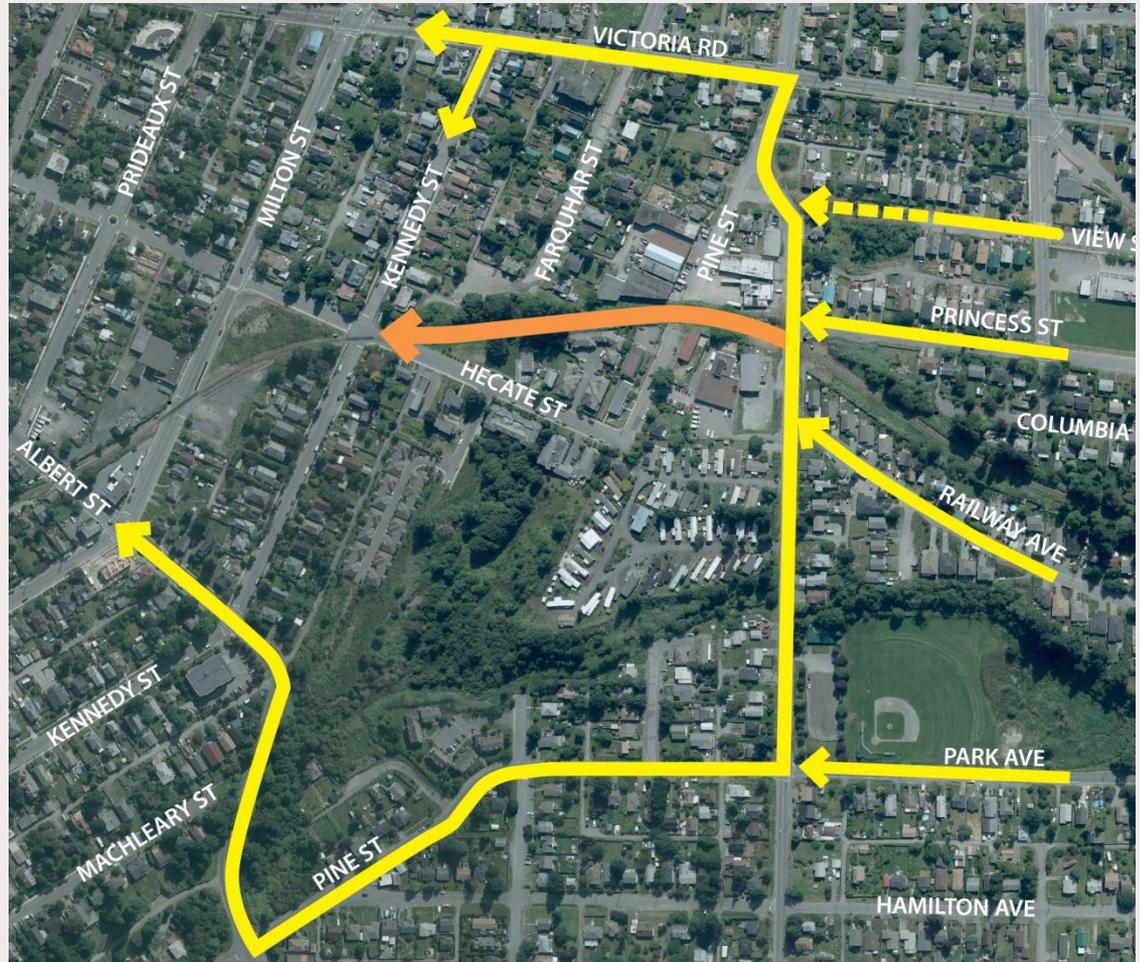
Section 3 – A Good Start?

Benefits:

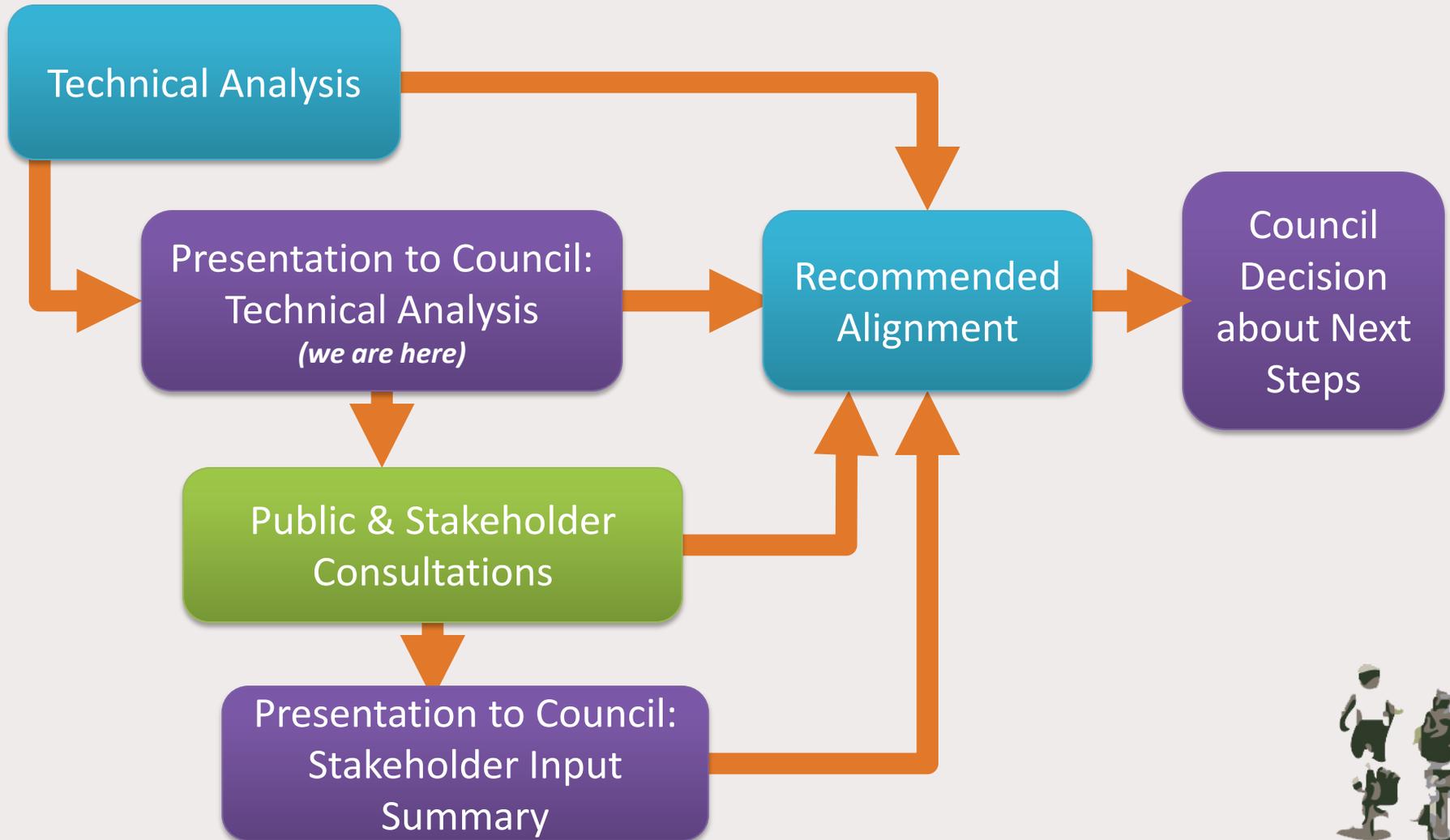
- Provides clear missing linkage in active transportation network
- Few constraints

Challenges:

- Will include at least one grade crossing at Hecate/Kennedy
- Drainage
- Grades/retaining



Proposed Next Steps



Public Consultation: How will we get feedback?



Web Site >>> www.nanaimo.ca/goto/enrailtrail

Proposed Schedule

Event	Description	Anticipated Timing
Public Outreach	Raise awareness and invite participation	May 12 – June 2
Stakeholder Discussions – Nanaimo Region Rail Trail, GNCC, DNBIA, NAs	Collect feedback	May 25 – June 2
Public Event	Collect Feedback	TBA – First Week of June
Online Questionnaire	Collect Feedback	May 27 – June 10
Council Meeting #2	Public input summary	June 2015
Council Meeting #3	Recommended option	July 2015



Questions?

