

APPENDIX A

TO: Joint Regional Transportation Planning Committee

FROM: Geoff Cross, Vice President, Transportation Planning and Policy

DATE: June 6, 2019

SUBJECT: **ITEM 4.0 - Interurban Passenger Rail**

RECOMMENDATION:

That the Joint Regional Transportation Planning Committee release this report immediately, pending its inclusion in the agenda package for the next meeting of the Mayors' Council.

APPROVED, June 12, 2019

PURPOSE:

To provide the Mayors' Council with information on TransLink staff engagement with a group promoting 'South Fraser Passenger Rail'. The group's proposal includes the reintroduction of community passenger rail service on what is commonly referred to as the 'Interurban line' as an alternative to rapid transit investment. This report provides more information and background on this proposal.

BACKGROUND:

The rail corridor commonly known as the Interurban line is approximately 100 km of existing rail between Surrey, Langley, Abbotsford, and Chilliwack. The line is currently owned and operated by Canadian Pacific (CP) Railway and Southern Railway (SRY) for freight use.

A number of ideas regarding this line have been shared with TransLink through the years, including recently by a group promoting South Fraser Community Rail. The alignment and connections have been studied previously as part of other processes. All previous assessments have resulted in other priorities being advanced, due to challenges around projected demand, cost relative to bus alternatives, potential conflicts with freight movement, and limited alignment with regional land use plans.

The BC Ministry of Transportation and Infrastructure (MoTI) evaluated the corridor as a potential commuter rail service candidate in their [Strategic Review of Transit in the Fraser Valley in 2010](#). The review noted issues around high cost per ride and low projected ridership relative to bus alternatives. It did note that an inter-regional railway service between the Fraser Valley and Metro Vancouver may be part of a longer-term future, and opportunities should be retained for future services.

As part of the 2010-2012 Surrey Rapid Transit Study, TransLink assessed the Interurban section between Scott Road and Langley to explore merits of utilizing the Interurban corridor for fast, frequent, and reliable rapid transit service compared to Fraser Highway or King George Blvd. The 2012 Surrey Rapid Transit Alternatives Analysis Assessment of the Interurban Corridor study is attached as Appendix A. The Interurban corridor was not selected, nor recommended for further consideration because the corridor:

- does not directly connect relevant regional destinations (i.e. Surrey Central and Langley City),

- resulted in less attractive travel times between key destinations, and
- would require significant capital investments to meet safety requirements and reliability objectives, with resulting costs similar or higher than those along Fraser Highway or King George, but without commensurate benefits.

If there was a request to revisit previous assessment that this corridor could not effectively meet the objectives for rapid transit, the above and other challenges would need to be reviewed in the current context to provide an updated assessment of the transportation performance of the line. TransLink staff have not completed an updated assessment of this idea.

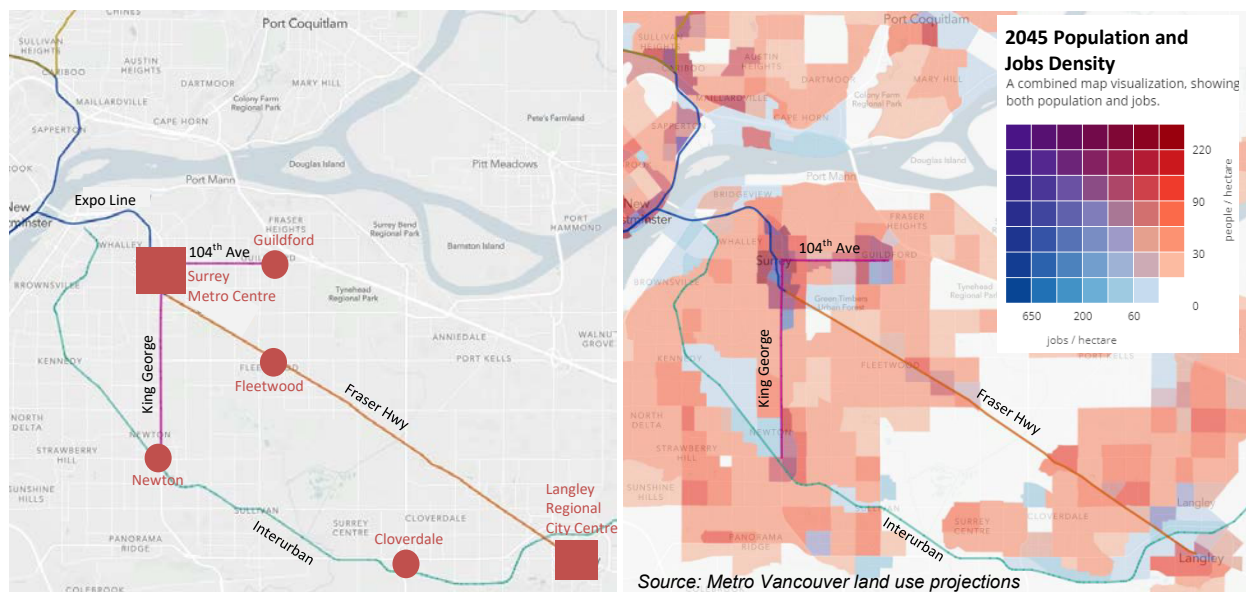
A new element of the Interurban proposal includes the potential use of hydrogen fuel cell trains, as being used in Germany for passenger service. This idea has not been evaluated.

The concept of using existing rail corridors and infrastructure in the rapidly-growing Lower Mainland is one that TransLink will be exploring through the update to the long-range strategy, Transport 2050. Transport 2050 will examine the long-term demand for improved inter-regional connections between the Metro Vancouver region and the Fraser Valley and examine what corridors could viably serve that demand. TransLink staff have met with proponents of the idea twice in lengthy meetings to hear the proposal and have shared with the group that management will be recommending that the Interurban concept be considered through the Transport 2050 process.

DISCUSSION:

Land uses connected by Interurban are not as transit-supportive as those along FH, KGB, 104th:

The Interurban does not directly connect to the largest regional centre in the South of Fraser – Surrey Metro Centre – which is expected to be the focus of future population and employment growth. While it does connect to other regional centres, including Newton, Cloverdale, and Langley Regional City Centre, the Interurban alignment is indirect and through lower density and diverse areas. Both directness and density are critical factors in the performance of a successful rapid transit corridor. The corridor alignments and projected population and employment densities are presented in the figure below:



Source: Metro Vancouver land use projections

The 2012 Assessment study concluded that land use along the Interurban corridor is lower density, including significant amounts of agricultural lands, resulting in lower potential ridership catchment near stations. Cloverdale is projected to be the one of the slowest growing urban centres in the South of Fraser. Estimates of potential ridership on the Interurban corridor were one-third that of a Fraser Hwy connecting Langley Centre to Surrey Metro Centre, due to the Fraser Highway route having a higher population and employment density and a more direct routing.

Interurban estimated travel times are not competitive with rapid transit along Fraser Highway or King George Blvd

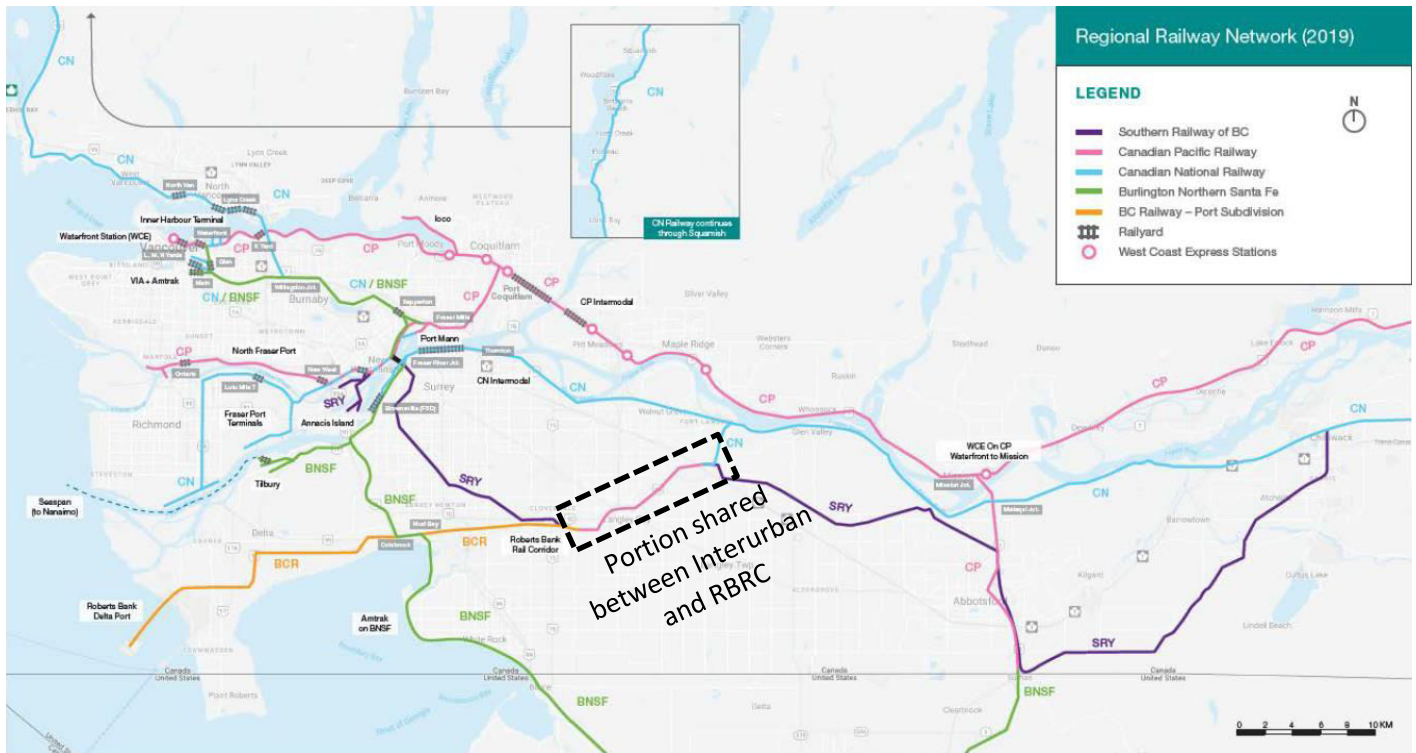
Competitive travel times are important to transit investments, as they are a main factor in successfully attracting ridership. This is particularly important when connecting larger concentrations of people and jobs – such as the Surrey Metro Core and Langley Regional City Centre. When reviewed in the 2012 study, the Interurban was assessed in three segments for comparison with other potential rapid transit connections between urban centres. A summary of estimated travel times, presented below, suggests long travel times between centres along the Interurban corridor due to the less direct route. It was estimated that rapid transit on more direct alignments could achieve in the order of 50% travel time savings depending on segments and technology. Travel time estimates for Langley to Surrey Central from the 2012 studies are presented in the table below:

	Interurban + Expo Line			Rapid Transit Options along Fraser Hwy	
	Distance (Km)	Travel Time (min)		Distance (Km)	Travel Time (min)
Interurban - Langley to Scott Road	27	53	Langley to Surrey Central - BRT or LRT	16	30
Expo Line - Scott Rd to Surrey Ctr. (Includes transfer time)	4	10	Langley to Surrey Central - SkyTrain	16	<25
	31	63			

Freight volumes are expected to increase along the Interurban corridor

Port of Vancouver is the largest port in Canada and is one of the drivers of a successful economy in the lower mainland. One of the corridors that has experienced growth in freight movements and is expected to grow is the Roberts Bank Rail Corridor (RBRC) that connects Delta Port with the CN heavy rail network and allows the movement of bulk materials and containers between the Vancouver Gateway and the rest of Canada.

The RBRC utilizes a portion of the Interurban between Cloverdale, through Langley City, and to Hwy 1 near Fort Langley as presented in the figure below:



In the 2012 study, it was estimated that freight service on the RBRC would increase from 9 trains per day in each direction (18 total), ranging in length from 1,830 to 2,900 metres each, to up 28-38 trains per day by 2021, with some train lengths up to 3,660 metres. A 2016 Roberts Bank Trade Area Study confirmed this increased volume is occurring, with 12 trains per day noted. The 2012 Interurban study noted that operating passenger rail on the same tracks as freight would require physical and time separation for both regulatory and safety reasons.

Also, for consideration, there is a proposal to increase the Roberts Bank Delta Port, creating a new a new marine terminal that will create 108 hectares of new industrial land and 1,500 on-terminal jobs. The project is undergoing federal environmental approvals and if successful is expected to be fully operational by the late 2020s (next decade), further increasing utilization of rail for freight.

Interurban requires substantial infrastructure investments comparable to building rapid transit along urban arterials

To meet Transport Canada requirements for rail passenger safety, passenger rail vehicles must either be separated from freight train traffic through scheduling, or physically, by constructing separate tracks.

Due to freight traffic throughout the day on the Roberts Bank Rail Corridor, separate rail track would be needed to remove operational conflicts between passenger and freight, to ensure fast, frequent and reliable rapid transit service. While freight operations are less frequent on the SRY Fraser Valley Subdivision, there would still be a need for separate track to ensure reliable and frequent rapid transit service.

The 2012 study identified the following issues associated with construction of new track for passenger operations:

- **Environmental Risks** A long section of the corridor travels along the Agricultural Land Reserve and the floodplains of the Serpentine River. Adding track would create risks to biodiversity, water resources, and farmlands.
- **Constructability Challenges** The corridor has numerous challenges related to constructing new track. These include the constrained existing right-of-way, power lines, industrial lead tracks in Langley, grade crossings, narrow bridges, and poor soil conditions. Maintaining existing freight service would likely result in more complex and slower construction. To separate passenger from freight operations (providing reliability and enhancing safety), one grade separation would be required, and this would be in a section of the corridor constrained by existing and planned arterial bridges.
- **Cost** Constructing additional track and stations, acquiring right of way to add the tracks along the existing Interurban corridor, and overcoming related construction challenges would be costly.

In summary, these findings indicate that operation of passenger rail on this corridor is unlikely to be any easier to implement than on arterial corridors, because providing safe, frequent and reliable service would require construction of separate tracks along the corridor. Given that the construction would likely have similar order-of-magnitude costs to arterial passenger solutions (the range was slightly lower to slightly higher, depending on design), and the lower density land use and ridership potential of the corridor, the benefits of implementing rapid transit on the Interurban corridor were considered insufficient to warrant further consideration as a rapid transit alternative.

TransLink is committed to delivering the Mayors' Vision, including rapid transit south of the Fraser

The current regional priority for transit investment South of the Fraser, as set out in the Mayors' Vision, is connecting Surrey Metro Centre with other regionally designated centres via 27 km of rapid transit on Fraser Highway, King George Boulevard, and 104th Avenue. These regional priorities are designed to deliver high frequency, high speed and capacity, all-day rapid transit connections between designated town centres within our service region.

Previous assessments have determined that the Interurban line, as a single-track corridor that does not connect to Surrey Metro Centre, does not advance regional objectives as well as other options and as a result, other regional priorities have been advanced. TransLink remains committed to deliver the Mayors' Vision. The South Fraser Community Rail Interurban proposal is not an alternative or comparable option to rapid transit along Fraser Highway based on the objectives set out in the Vision. The historical alignment of the Interurban corridor within Surrey and Langley does not facilitate, quick, direct connections and as a single-track corridor the capacity is too limited for high frequencies. Further analysis would be required to understand the performance of the proposal in the current context of a new regional rail connection.

Passenger service along the Interurban corridor using hydrogen trains to connect Surrey with Abbotsford and Chilliwack is one of many ideas that will be included as part of Transport 2050

Transport 2050, the Regional Transportation Strategy update, has been initiated and represents an opportunity to review all bold and creative ideas for transportation in the region, including this one. The first phase of public and stakeholder consultation is now underway, intended to receive big ideas from the region. To ensure we're reaching a range of perspectives, TransLink will be promoting opportunities to get involved through the Lower Mainland, including outside the Metro Vancouver areas. This will include targeted outreach in Abbotsford, Mission, Chilliwack, and Squamish, recognizing the travel patterns outside TransLink's established service area.

South Fraser Community Rail will be considered through the Transport 2050 process. TransLink staff have met with proponents of the proposal and committed to considering it through the process together with other ideas identified through public consultation and technical evaluation. We agree with the group's position that the Fraser Valley municipalities and Metro Vancouver, especially the South of Fraser, will be increasingly integrated in the longer term. Staff will be exploring what that demand could look like and the transportation options are to service it. The Interurban proposal, or elements of it, may have merit in serving and shaping that demand and supporting land uses and will be compared to other approaches.

NEXT STEPS

Mayors' Council and other stakeholders will be updated during the different phases of Transport 2050

A review of this and other ideas will be included in the evaluation phase of Transport 2050. TransLink staff will likely provide a more comprehensive review of the South Fraser Community Rail proposal at a future Mayors' Council meeting as part of the Transport 2050 process.

Attachment: *Surrey Rapid Transit Alternatives Analysis: Assessment Of The Interurban Corridor*, TransLink / MoTI, January, 2012