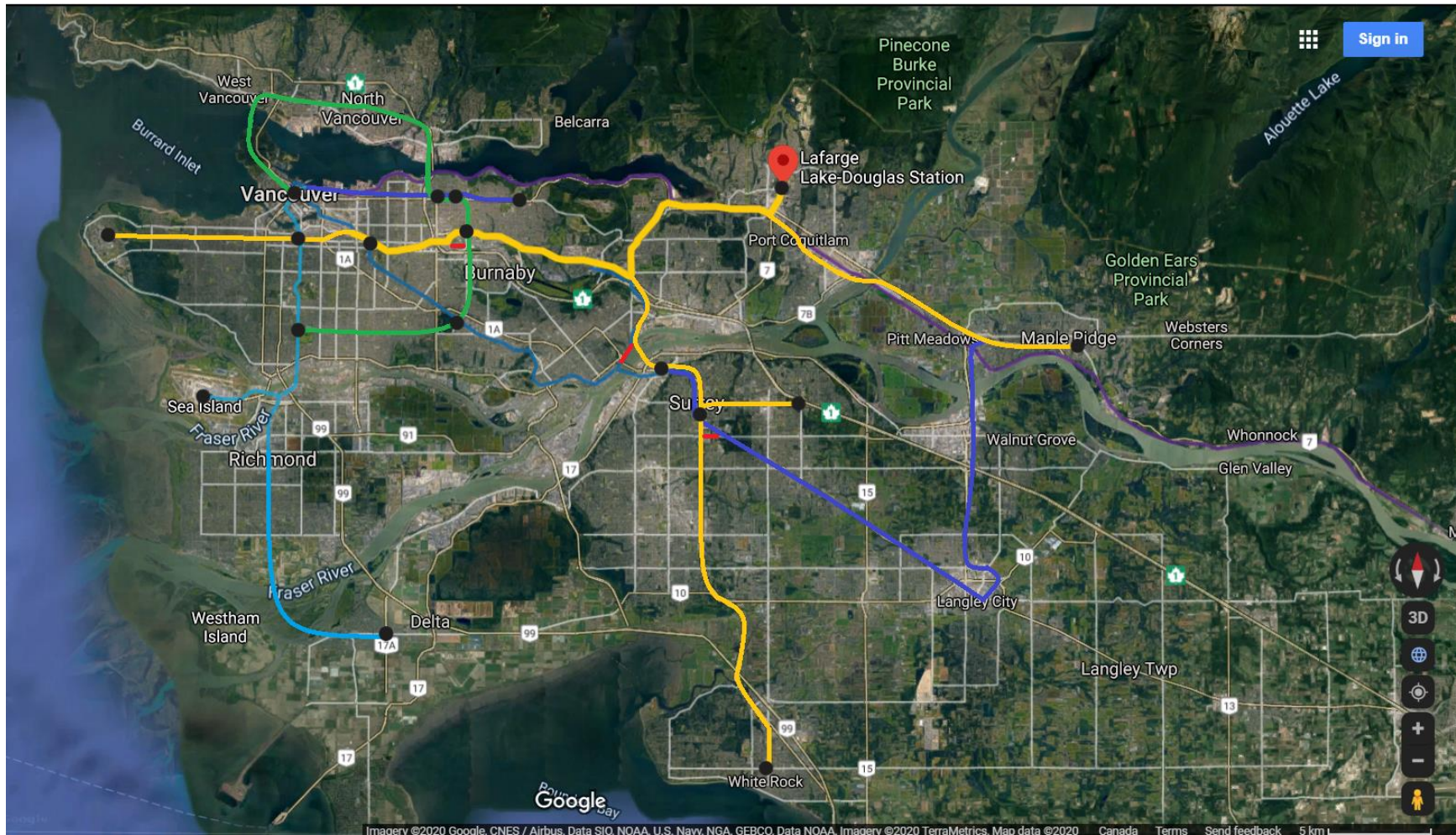


## Lower Mainland Skytrain

Written by Gwyer Webber (1993 – 2024)

September 2024

Skytrain would be built in sections when funding is available and full completion would be beyond 2050.



### **Expo Line**

- The line would extend along Fraser Hwy, Industrial Way, Glover Rd, Langley Bypass, 200<sup>th</sup> St, 86<sup>th</sup> Ave, 202 St, 201 St, over the Fraser River, Golden Ears Way, Maple Meadows Way, and merge with the Millennium Line at Lougheed Hwy.
- The line would extend east from Waterfront Station along the rail right of way and Hastings St to Sperling Ave.

### **Millennium Line**

- The line would extend west from the existing Millennium Line and run underground along the Broadway corridor to UBC.
- The line would extend east from Coquitlam Central Station and run along the CPR, Kingsway Ave, Lougheed Hwy, and 226<sup>th</sup> St to the Haney Place Exchange.
- The Lougheed to Columbia section would return to the Millennium Line and extend over the Fraser River and along King George Hwy and 152<sup>nd</sup> St to the White Rock Transit Centre.
- The existing section east of Columbia Station would become a Maintenance Link for trains to access the OMCs on both lines.
- The line would extend along 104<sup>th</sup> in Surrey to 156<sup>th</sup> St and Hwy 1.

### **North Shore Line**

- The same technology as the Expo and Millennium Lines.
- The line would extend east from Park Royal along Marine Dr, Keith Rd, 13<sup>th</sup> St, Hwy 1, across the Burrard Inlet (5B West Parallel), Hastings St, Willingdon Ave, and 49<sup>th</sup> Ave to the Canada Line.
- A Maintenance Link in the Still Creek area of Burnaby would allow trains to access the Millennium Line.
- The line would extend west from Park Royal under the Burrard Inlet (2A Mid), W Georgia St, and end at Seymour St.

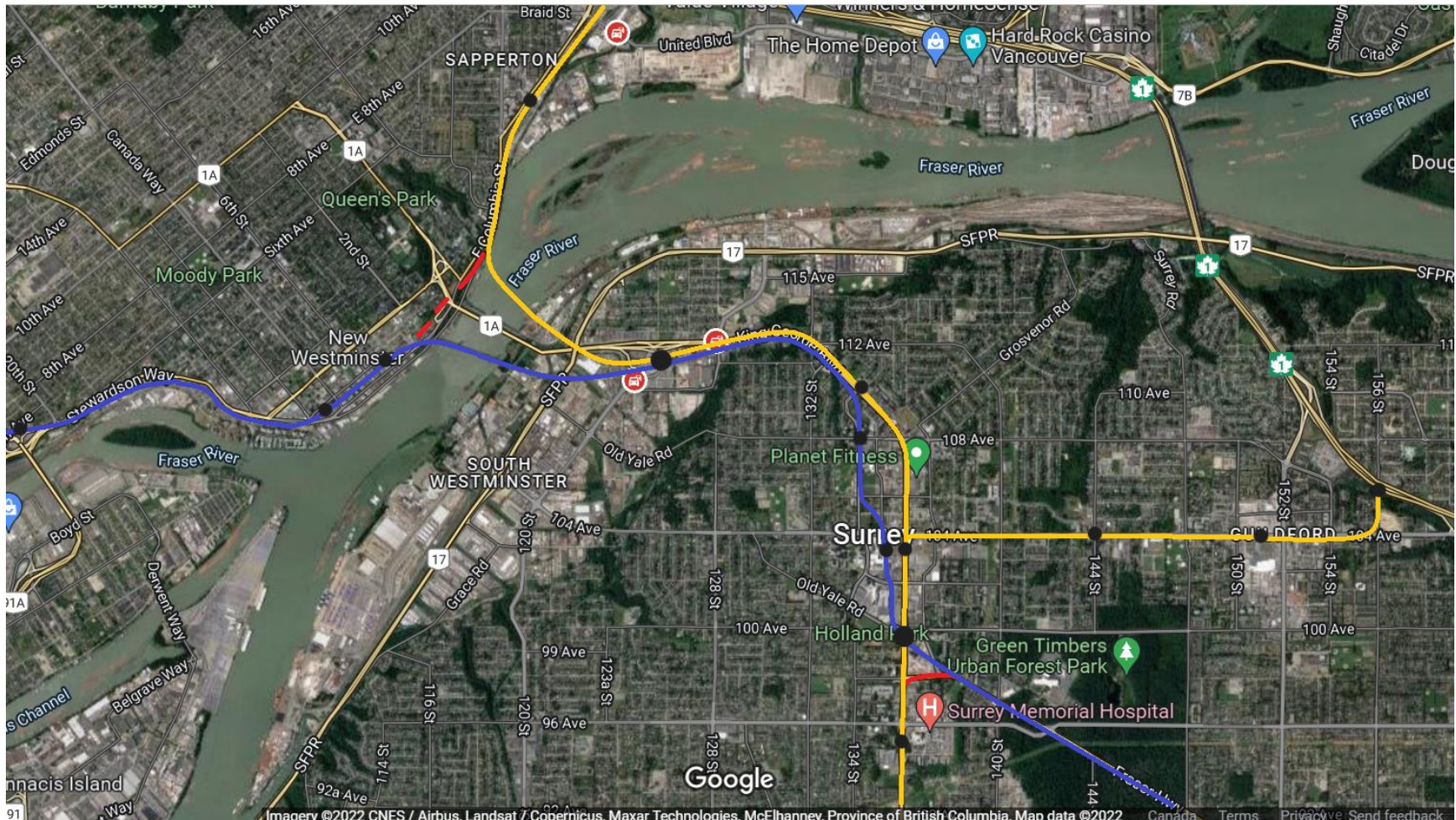
### **Canada Line**

- The single-track section on No. 3 Rd would be upgraded to double track.
- The line would extend along No. 3 Rd, under the Fraser River, and along Ladner Trunk Rd to the Ladner Exchange.



## Millennium Line Reconfiguration

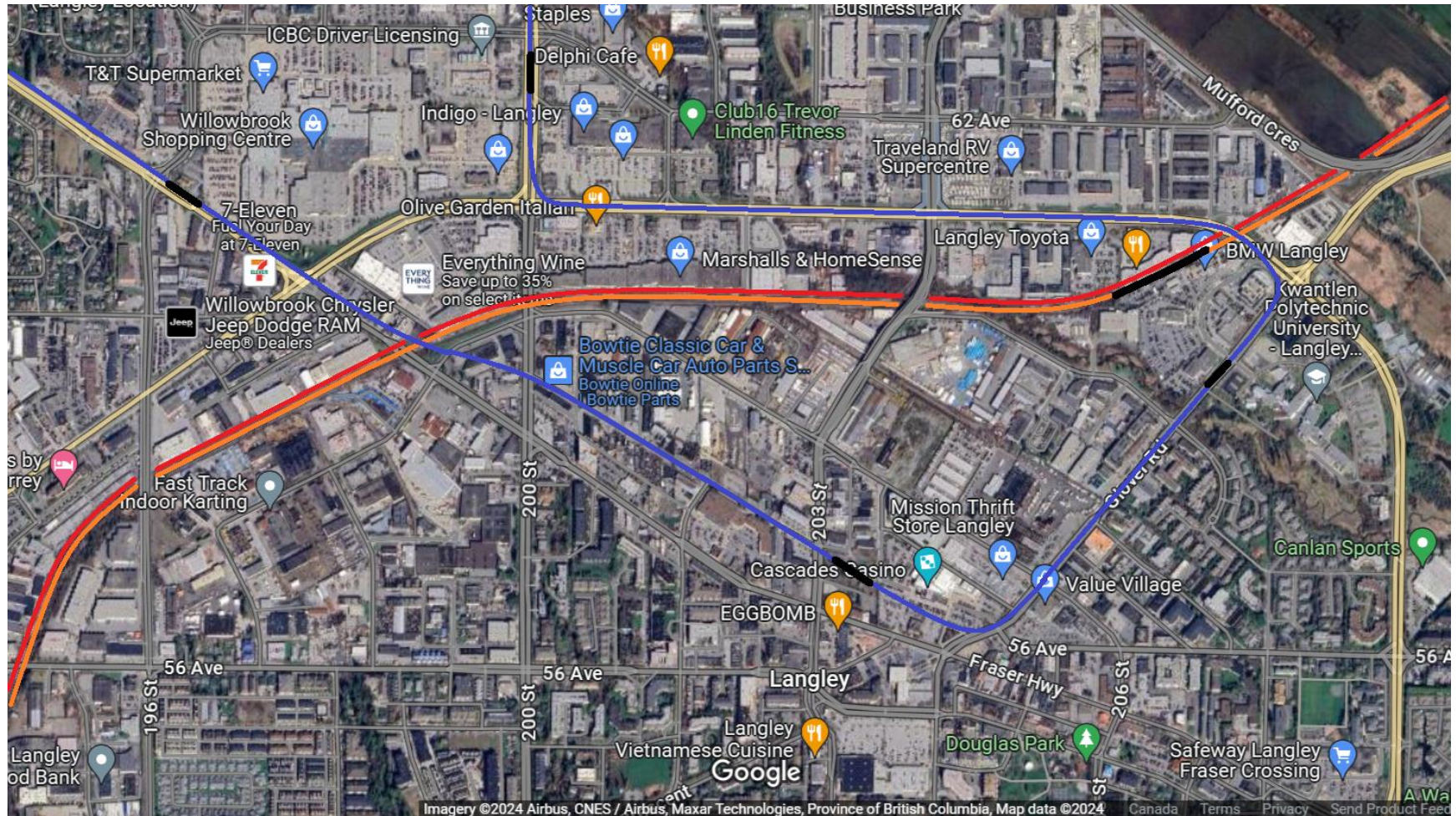
The distance between stations at Surrey Centre is less than between Commercial and Broadway and the Sea Bus and Waterfront. The existing track in New West becomes a Maintenance Link with an additional Maintenance Link at Fraser Hwy (Red line).





## Langley City

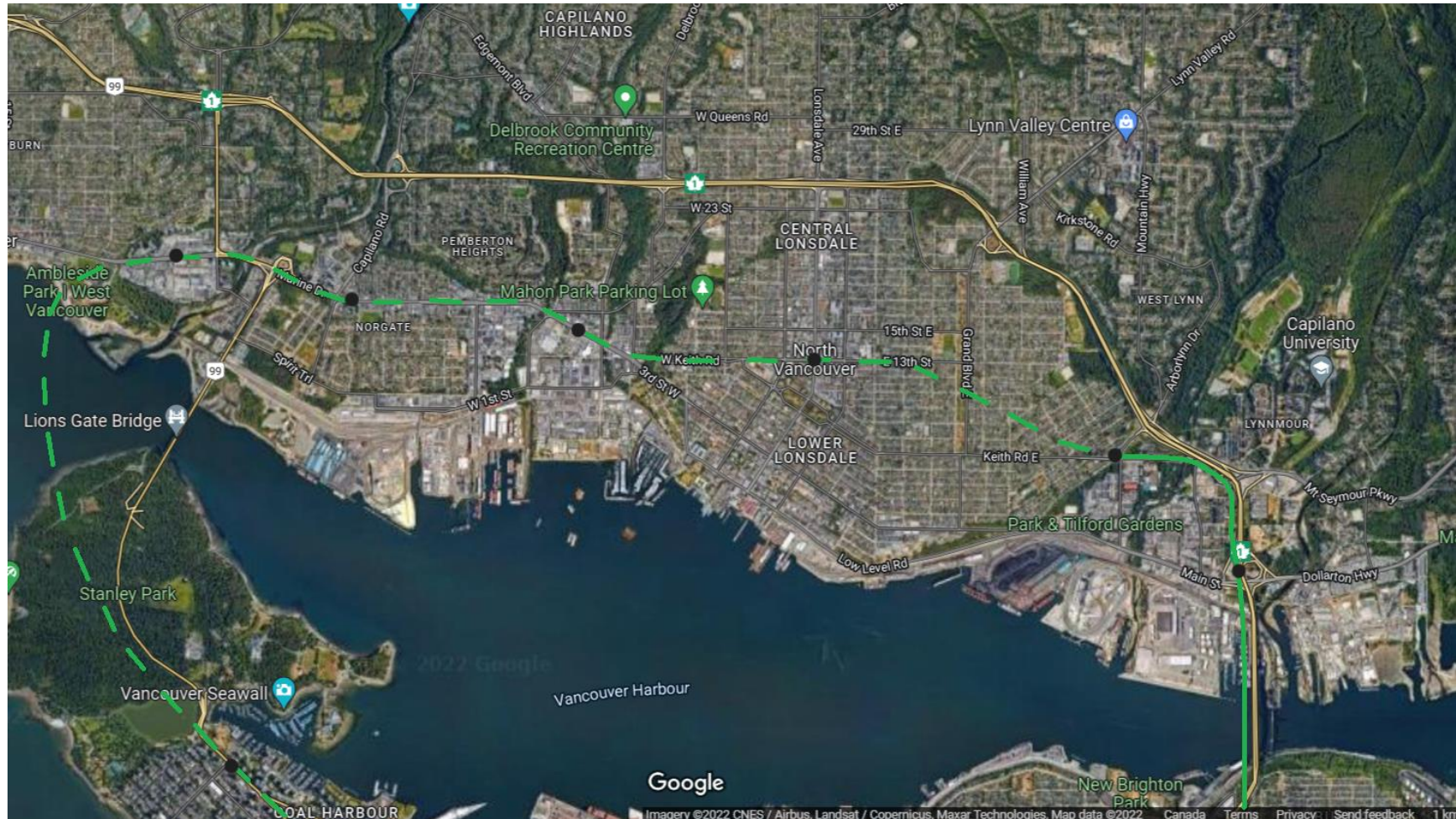
If an Interurban Intercity Rail is built from Chilliwack to the Canada Line, a station at the Langley Bypass would allow an easy connection to the Expo Line.





## North Shore

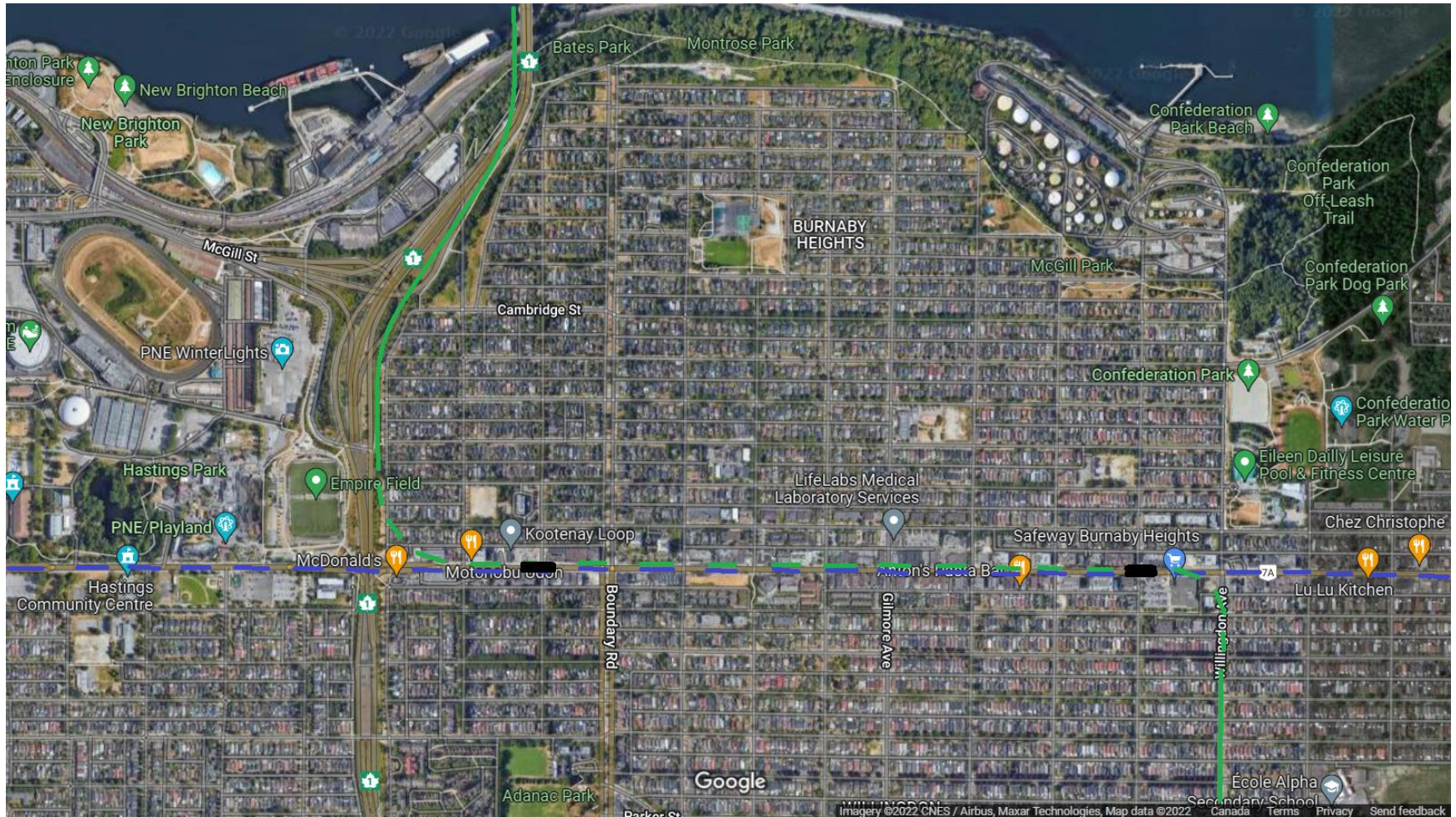
The Burrard Inlet crossings are per the Burrard Inlet Study 2A Mid tunnel crossing and the 5B West Parallel bridge crossing. The line shown is underground west of Mountain Hwy.





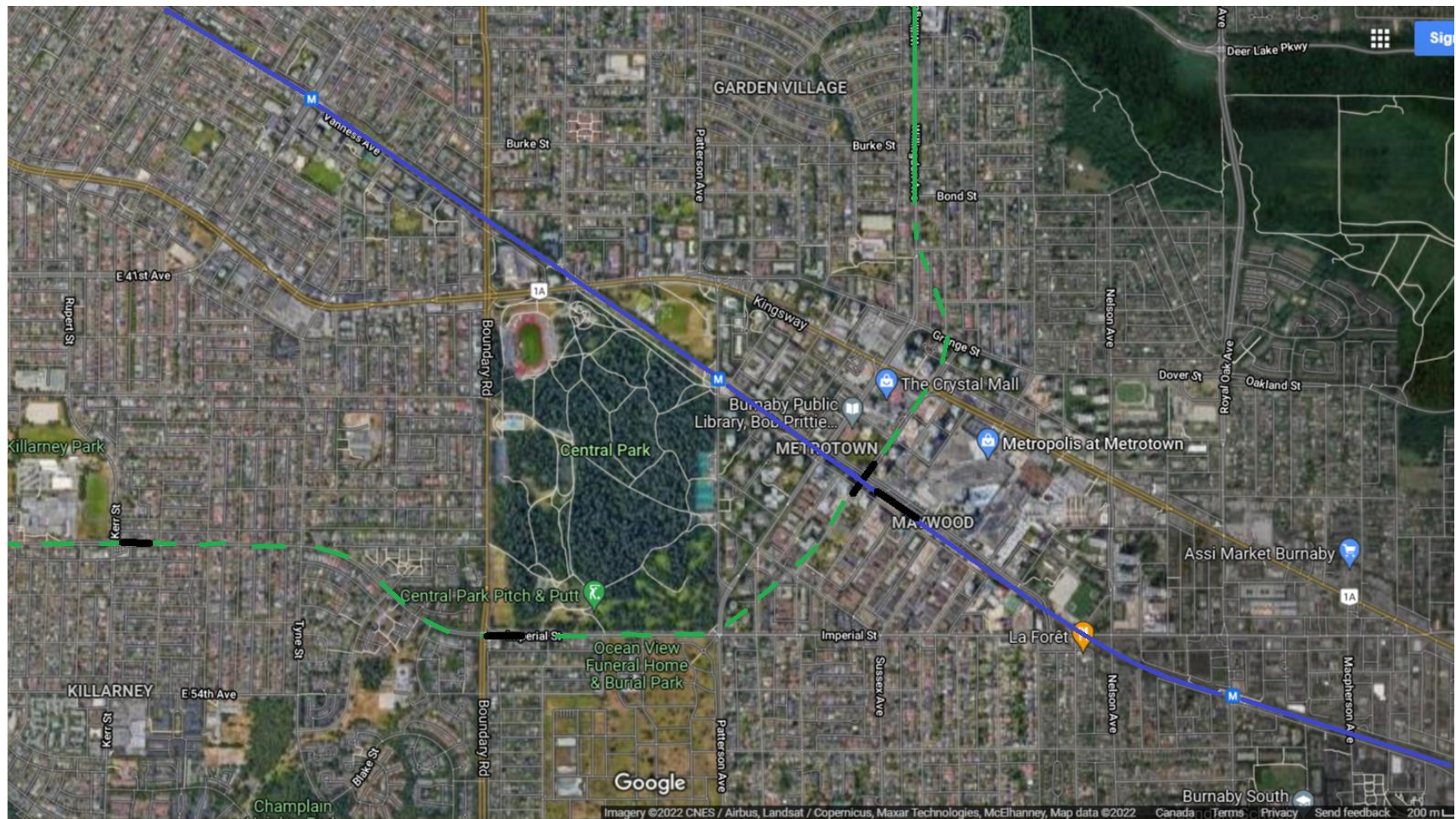
## Burnaby

This follows the Burrard Inlet Study 5b West Parallel bridge alignment. The PNE Playland Gate is 750m from the Kootenay Loop.





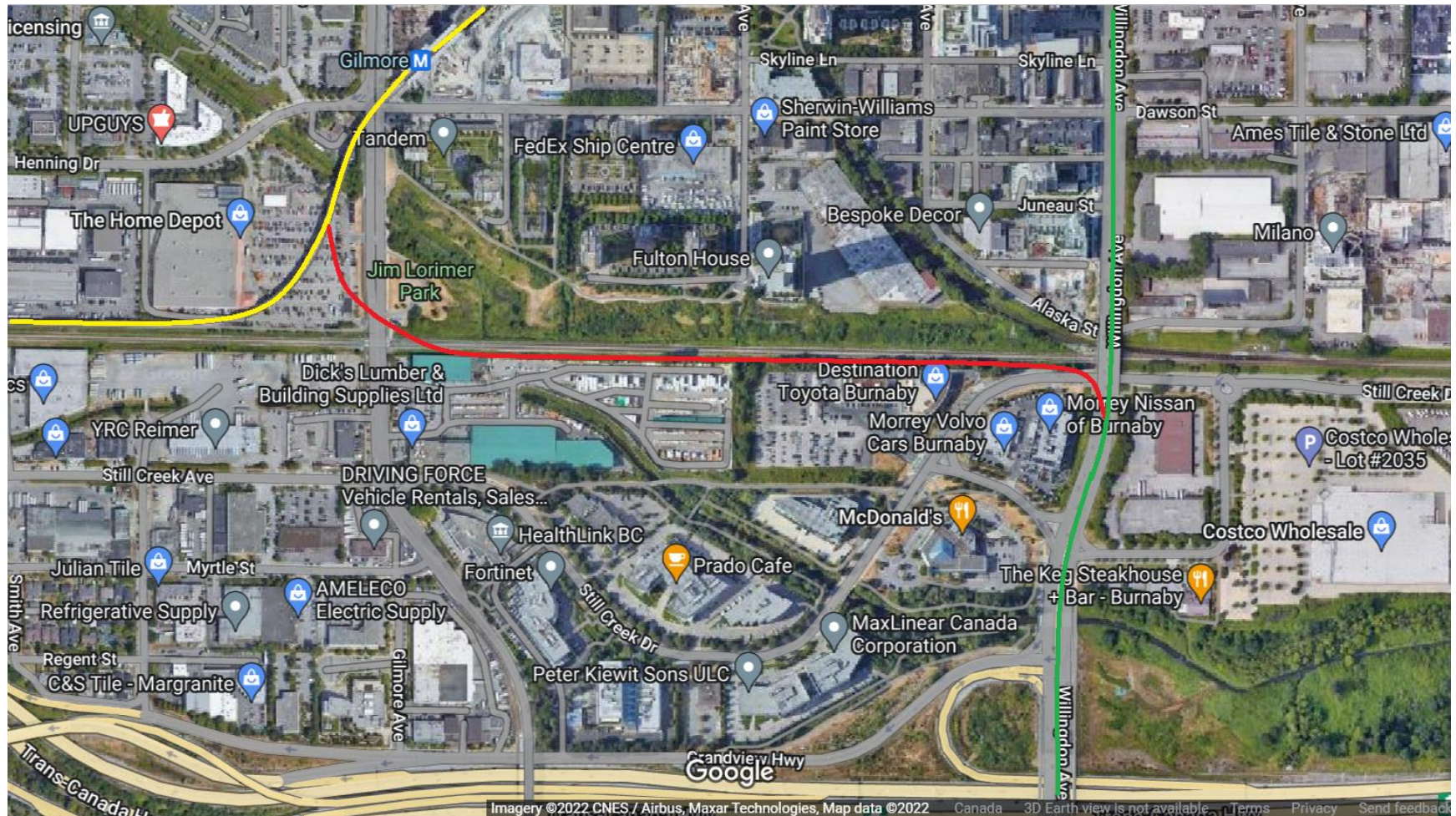
## Metrotown





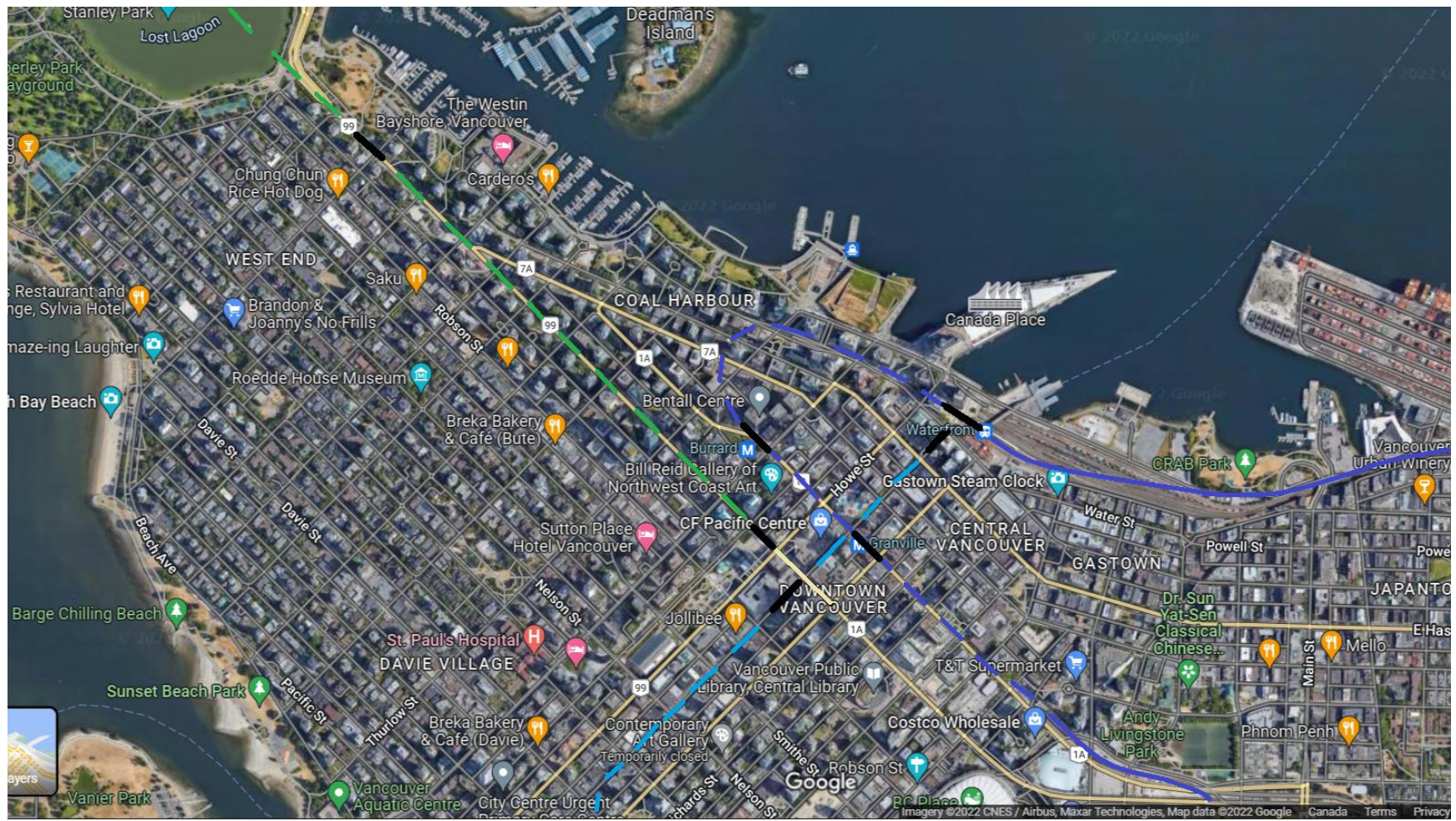
## Maintenance Link

A 1.0 km single track at Still Creek Area in Burnaby would link the North Shore Line to the Millennium Line for maintenance.





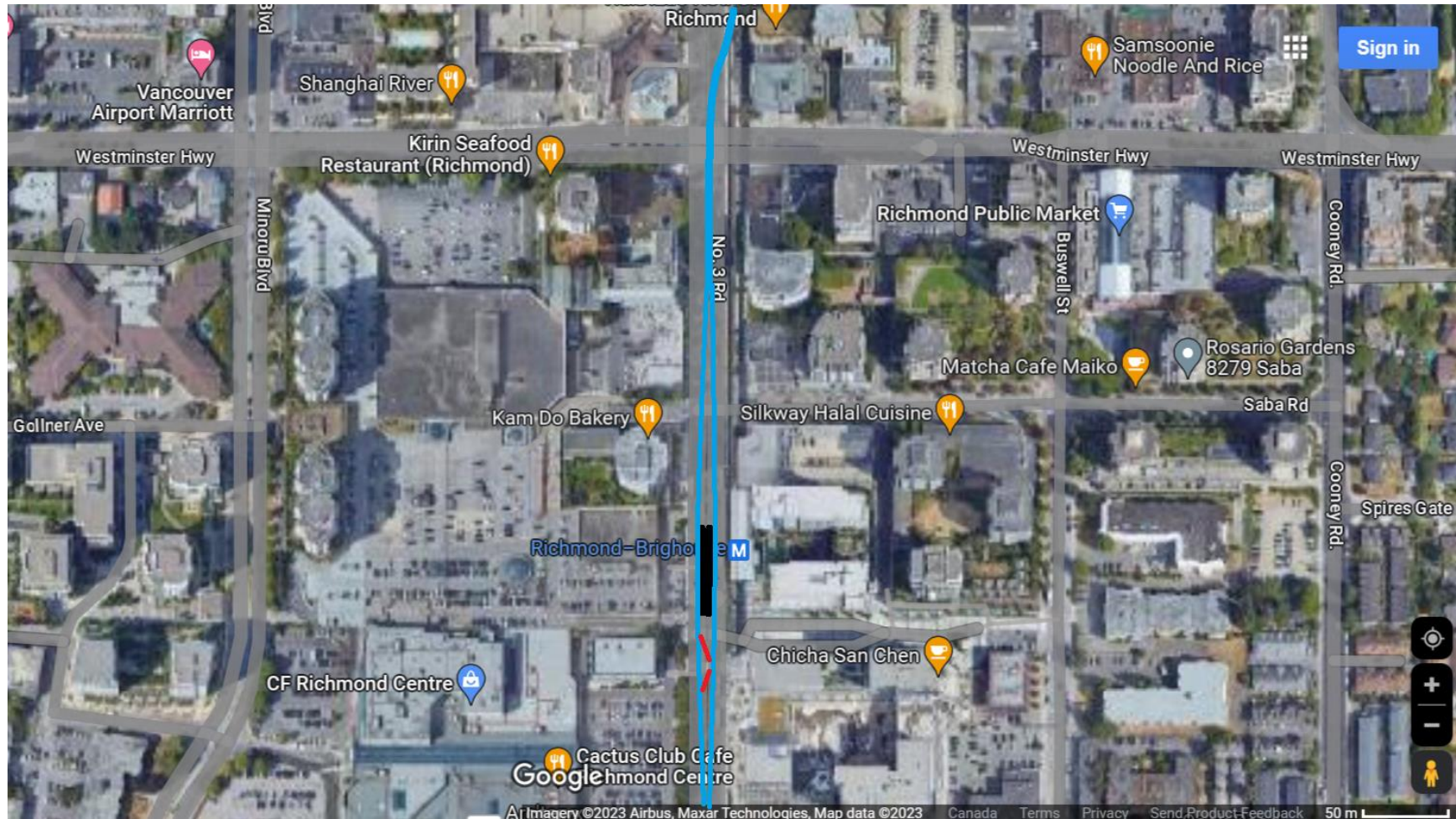
## Downtown Vancouver





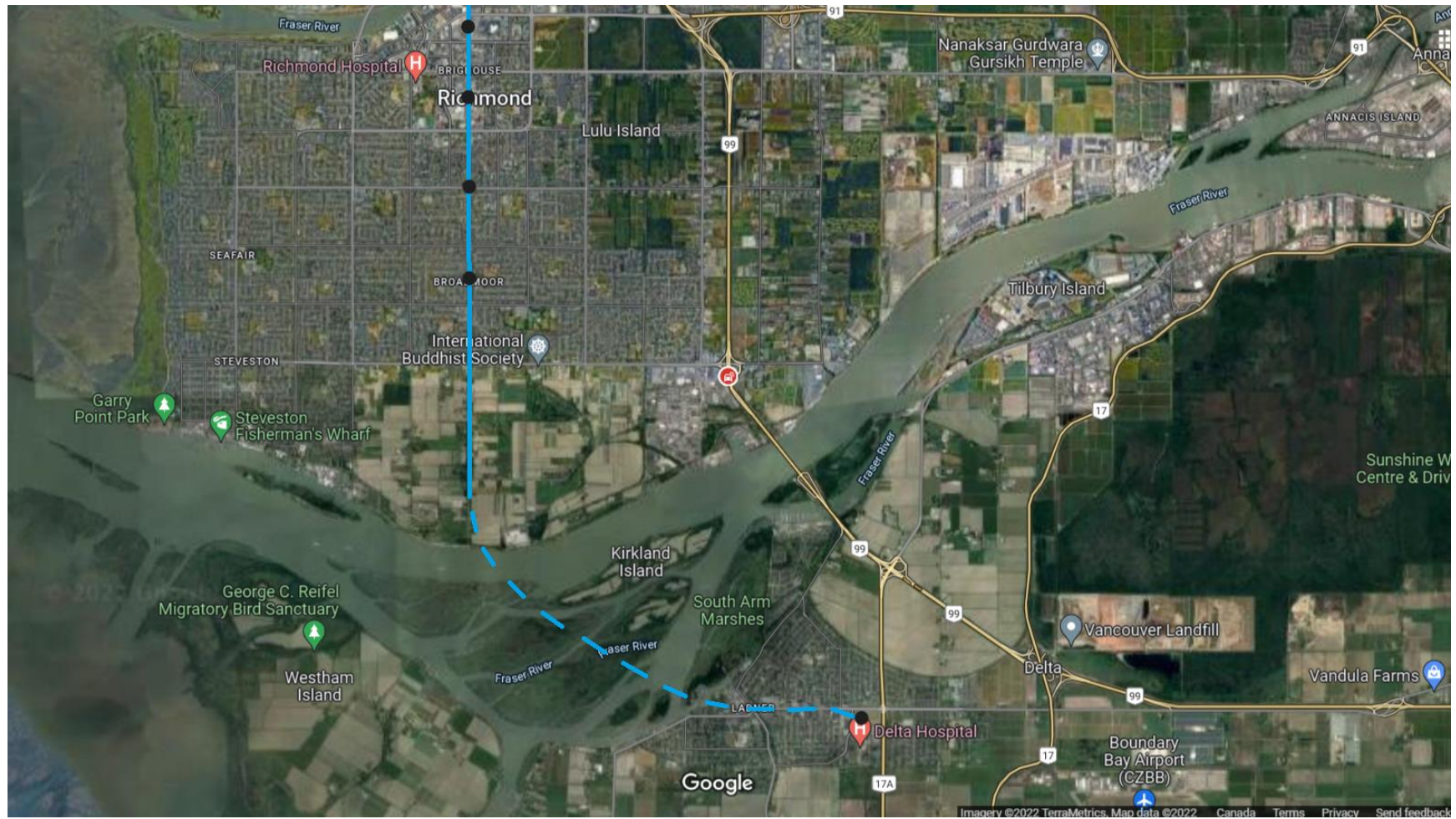
## Richmond-Brighthouse

The line along No. 3 Rd is upgraded to double tracked and a new Richmond-Brighthouse Station built with wide centre platform.





## Richmond Delta





## Canada Line Capacity

The line would be upgraded to double track at the Richmond-Brighouse end with a new centre platform station.  
All of the 40m platforms would be upgraded to 50m.

Pattern (Airport)	Train Capacity	Waterfront Frequency	Waterfront Trains/hr	Waterfront pphpd	Airport pphpd	Airport Frequency	Richmond pphpd	Richmond Track
1 out of 2 trains	342	3 min	20	6,840	3,420	6 min	3,420	Single
1 out of 2 trains	342 A/500 R-B	3 min	20	8,420	3,420	6 min	5,000	Single
1 out of 2 trains	342	2.5 min	24	8,208	4,104	5 min	4,104	Double
1 out of 2 trains	342 A/500 R-B	2.5 min	24	10,104	4,104	5 min	6,000	Double
1 out of 2 trains	342	2 min	30	10,260	5,130	4 min	5,130	Double
1 out of 2 trains	342A /500 R-B	2 min	30	12,630	5,130	4 min	7,500	Double
1 out of 3 trains	500	2.5 min	24	12,000	4,000	7.5 min	8,000	Double
1 out of 3 trains	342	2 min	30	10,260	3,420	6 min	6,840	Double
1 out of 3 trains	342 A/500 R-B	2 min	30	13,420	3,420	6 min	10,000	Double
1 out of 3 trains	500	2 min	30	15,000	5,000	6 min	10,000	Double
1 out of 4 trains	342	1.5 min	40	13,680	3,420	6 min	10,260	Double
1 out of 4 trains	342 A/500 R-B	1.5 min	40	18,420	3,420	6 min	15,000	Double
1 out of 4 trains	500	1.5 min	40	20,000	5,000	6 min	15,000	Double

## Expo Line Capacity

The line from New West to Lougheed would be taken off the Expo Line.

Expo Line (5 car 650 passengers/train)				
Frequency		Trains/hr		pphpd
120 sec		30		19,500
100 sec		36		23,400
90 sec		40		26,000
80 sec		45		29,250
75 sec		48		31,200



## Average Speed

The table below shows the average speed of rail transit systems in Canada.

City	Toronto Streetcar	Toronto LRT	Cancelled Surry LRT	Mississauga LRT	Vancouver Skytrain	Vancouver Skytrain	Montreal REM
Line	Tram 501	Finch West	SNG	Hurontario	Canada Line	Expo Line	Deux-Montagnes to Gare Central
Average Speed	15km/hr	20km/hr	24km/hr	27km/hr	36km/hr	45km/hr	49km/hr
Average Distance Between Stations	275m	650m	1050m	1260m	1250m	1500m	2000m

Note: The average speed is calculated using the distance of the line and the time it takes to travel that distance including the station stops.

## Skytrain Lengths

<b>1:</b> Millennium Line to UBC	7.2km	<b>6:</b> Park Royal to Downtown Vancouver	6.5km
<b>2:</b> Park Royal to Metrotown	20km <b>27 min</b> (LRT 47min)	<b>7:</b> Richmond to Ladner Exchange	12.5km
<b>3:</b> New West to White Rock	25km	<b>8:</b> Waterfront to Willingdon Ave	8.0km
<b>4:</b> Coquitlam to Maple Ridge	17km	<b>9:</b> Metrotown to Canada Line	8.8km
<b>5:</b> Langley to Maple Ridge	21km <b>29 min</b> (LRT 53 min)	<b>10:</b> Surrey Centre to 156 <sup>th</sup> and Hwy 1	4.4km

## Travel Times

- **Park Royal to Phibbs** would be around **13** minutes.
- **Surrey Central to White Rock Transit Centre** would be around **26** minutes.
- **Richmond-Brighouse to Metrotown** would be around **25** minutes.
- **Waterfront to Ladner Exchange** would be around **41** minutes.

## Disclaimer

The author is not a professional planner, consultant, or a member of any group. The options are an idea for Skytrain in Metro Vancouver. The calculations are as accurate as possible based on information available on the internet.