

Appendix A: Initial Business Case Alternatives

Options for Rapid Transit to Cambridge

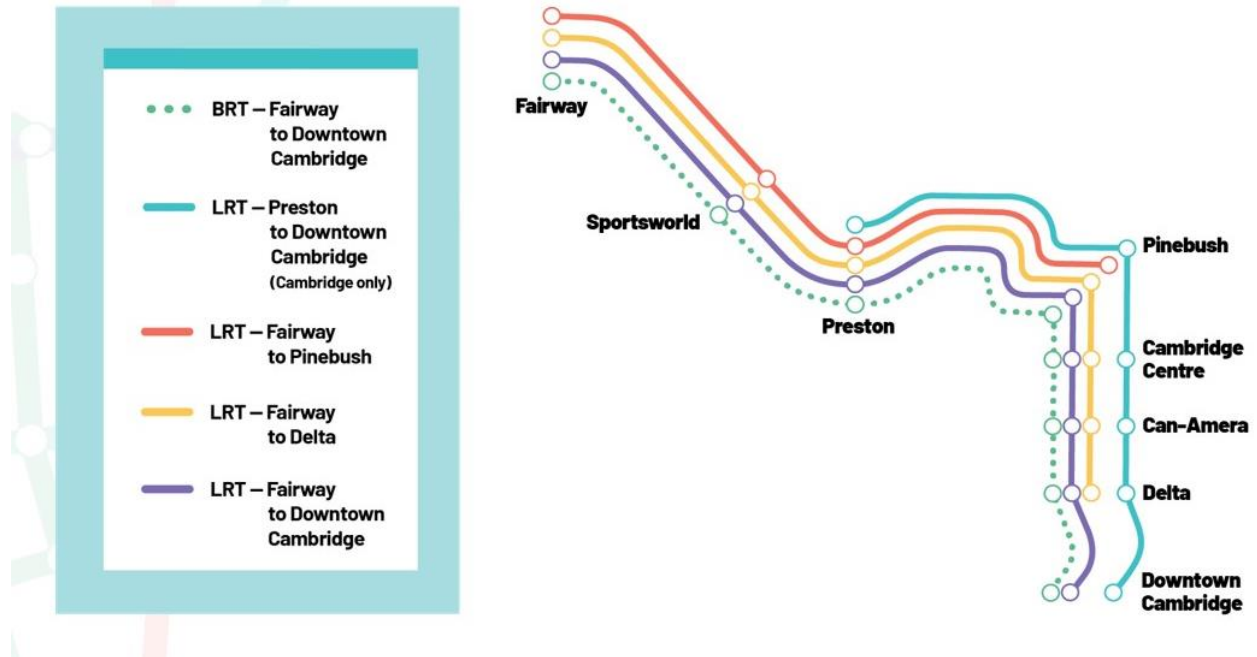


Table 1: Initial Business Case Alternatives

ID	Vehicle	From	To	Length (km)	Peak Freq. (min)	Trip time (min)
L1	LRT	Fairway Station	Downtown Cambridge	17	7	29
L2	LRT	Fairway Station	Pinebush Station	11	7	19
L3	LRT	Fairway Station	Delta Station	14.5	7	25
L4	LRT	Preston Station	Downtown Cambridge	10	7	17
B5	BRT	Fairway Station	Downtown Cambridge	17	5	29

L1 – Full LRT extension to Downtown Cambridge

- LRT extended from Fairway Station to Downtown Cambridge, creating one continuous LRT system and a one-seat ride between Conestoga Station and Downtown Cambridge.

L2 - Partial LRT extension to Pinebush Station

- LRT extended from Fairway Station to Pinebush Station.
- This option would require customers to transfer to a bus to reach Downtown Cambridge.

L3 – Partial LRT extension to Delta Station

- LRT extended from Fairway Station to Delta Station.
- This option would require customers to transfer to a bus to reach Downtown Cambridge.

L4 - New, separate LRT service

- LRT from Preston Station to Downtown Cambridge.
- This option includes express bus service between Preston Station and Fairway Station connecting the two LRT systems.

B5 - Full BRT service

- Bus rapid transit (BRT) from Fairway Station to Downtown Cambridge with dedicated and separated lanes for high-frequency, high-capacity buses.
- Customers would need to transfer at Fairway Station to continue using rapid transit.

Rapid Transit Technology – LRT and BRT

Both the LRT and the BRT alternatives in the IBC include dedicated lanes, very frequent and reliable service, high-capacity vehicles and permanent station infrastructure. Both systems represent a significant investment in transit service and a permanent commitment to the rapid transit corridor and station areas.

LRT uses light rail vehicles (LRVs) which can carry 200 passengers, or 400 passengers when two LRVs are coupled together. BRT operates with extra long, high-capacity buses that can carry 85 passengers.

Operating Assumptions

The IBC assumes a maximum LRT service frequency of seven minutes. Each of the LRT alternatives would operate out of the Region's central control facility in Waterloo, but include an additional, smaller maintenance and storage facility. The separate LRT option from Pinebush Station to Downtown Cambridge includes a new operations, maintenance and storage facility. The BRT option includes a new dedicated maintenance and storage facility.