



Regular Meeting of Council Agenda

Date: November 18, 2019
Time: 6:30 pm
Location: Council Chambers Level 2, City Hall

Pages

1. Call to Order:

2. National Anthem:

3. Regrets:

4. Proclamations:

4.1 International Day of Persons with Disabilities - December 3, 2019

5. Motion to Approve Council Minutes:

5.1 Regular meeting of Council October 28, 2019

6. Recognitions and Achievements:

7. Presentations:

7.1 Gaby Kalapos, Executive Director of the Clean Air Partnership will present the 2019-2023 Governmental Declaration on Clean Air and Climate Change to Council for endorsement.

8. Declarations of Interest:

9. Delegations:

In order to speak at a Council meeting, individuals must register as a delegation no later than 12:00 noon on the day of the meeting. To register, complete the online application at www.burlington.ca/delegation, email cityclerks@burlington.ca or phone 905-335-7600 ext. 7805.

10. Recommendations from Standing Committees:

10.1 Committee of the Whole meeting of November 4, 2019

- a. HIGH FIVE® Accreditation Verification visit (PR-03-19)
- b. 2019-2023 Inter-Governmental Declaration on Clean Air and Climate Change (CW-46-19)
- c. Cootes to Escarpment EcoPark System Update (CW-05-19)
- d. Burlington Active Aging Plan update (PR-02-19)
- e. 2018-2022 Burlington's Plan Vision to Focus Financial Plan (F-41-19)
- f. 2020 Budget Overview (F-46-19)
- g. Market Competitiveness (HR-03-19)
- h. Confidential legal department litigation update (May 1 to September 30, 2019) (L-22-19)
- i. Confidential parks and recreation department report regarding a vendor agreement update (PR-10-19)
- j. Confidential finance department report regarding contingency – September 30, 2019 (F -43-19)

10.2 Planning and Development meeting of November 5, 2019

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- a. Information report for official plan and rezoning amendments at 2093, 2097 & 2101 Old Lakeshore Road, 2096 & 2100 Lakeshore Road (PB-72-19)
- b. Amendment to Nuisance and Noise By-Law No.19-2003 (PB-79-19)
- c. Speed limit installations (TS-18-19)
- d. Cannabis Production Study– Stage Two Work Plan (PB-68-19)
- e. Recommendation report for a plan of subdivision and zoning by-law amendment for 143 Blue Water Place and 105 Avondale Court (PB-69-19)
- f. 2020 Budget Overview (F-46-19)

10.3 Audit Committee meeting of November 6, 2019

14 - 16

	a.	Status of audit work plan, budget and performance metrics (CA-13-19)	
	b.	Summary of in-progress management action plans (CA-14-19)	
	c.	Financial highlights for the period ended Sept. 30, 2019 (F-45-19)	
10.4		Committee of the Whole Workshop meeting of November 7, 2019	17 - 18
	a.	Joint venture workshop (PR-13-19)	
10.5		Planning and Development Public meeting of November 12, 2019	19 - 21
	a.	Recommendation report for official plan and zoning by-law amendments at 2421-2431 New Street (PB-32-19)	
11.		Motion to Approve Standing Committee Minutes:	
11.1		Committee of the Whole meeting minutes of November 4, 2019	
11.2		Planning and Development meeting minutes of November 5, 2019	
11.3		Audit Committee meeting minutes of November 6, 2019	
11.4		Committee of the Whole Workshop meeting minutes of November 7, 2019	
11.5		Planning and Development Public meeting minutes of November 12, 2019	
12.		Reports of Municipal Officers:	
12.1		Burlington Transit Five-year Business Plan (TR-06-19)	22 - 115
13.		Notices of Motion:	
14.		Motions:	
14.1		Enforcement for Safety on Family Farms	
		Whereas the Town of Halton Hills adopted a Resolution at their October 21, 2019 Council meeting regarding Enforcement for Safety on Family Farms; and	
		Whereas the City of Burlington supports their local agricultural	

community, and want to keep their farm families, employees and animals safe.

Therefore be it resolved that the Council for the City of Burlington endorses and supports the resolution by the Town of Halton Hills; and

Further that this motion be circulated to the Honourable Doug Downey, Minister of the Attorney General, the Honourable Doug Ford, Premier of Ontario, the Honourable Sylvia Jones, Solicitor General, the Honourable Ernie Hardeman, Minister of Agriculture, Food and Rural Affairs, AMO and ROMA, to find a better way forward to ensure stronger enforcement of existing laws or new legislation to ensure the safety of Ontario's farm families, employees and animals.

15. Motion to Receive and File Council Information Packages:

15.1 Council Information Package November 7, 2019

16. Motion to Receive and File Information Items:

16.1 Memo from Councillor Angelo Bentivegna regarding Enforcement for safety on family farms (ADM-14-19) 116 - 116

17. Motion to Consider Confidential Items:

18. Motion to Approve By-Laws:

18.1 56-2019: A by-law to appoint Municipal Law Enforcement Officers for the City of Burlington.

18.2 57-2019: A by-law to amend the Nuisance and Noise By-law 19-2003.

18.3 58-2019: A by-law to amend By-law 86-2007, as amended, being a by-law for the regulation of traffic.

18.4 2020-417: A by-law to amend By-law 2020, as amended; 143 Blue Water Place and 105 Avondale Court.

19. Motion to Confirm Proceedings of the Council Meeting:

20. Statements by Members:

21. Motion to Adjourn:



Committee of the Whole Meeting

Minutes

Date: November 4, 2019

Time: 9:30 am

Location: Council Chambers Level 2, City Hall

Members Present: Lisa Kearns (Chair), Kelvin Galbraith, Rory Nisan, Shawna Stolte, Paul Sharman, Angelo Bentivegna, Mayor Marianne Meed Ward

Staff Present: Tim Commisso, Laura Boyd, Sue Connor, Joan Ford, Chris Glenn, Sheila Jones, David Lazenby, Allan Magi, Nancy Shea-Nicol, Christine Swenor, David Thompson (Audio/Video Specialist), Suzanne Gillies (Clerk)

1. Declarations of Interest:

None.

2. Delegation(s):

- 2.1 Sarah Cameron and Jill Stickney spoke regarding Burlington Active Aging Plan update and S.T.A.R.T a model of engagement for senior volunteers (PR-02-19)
- 2.2 Lawson Hunter spoke regarding 2020 Budget Overview and the importance to address the climate emergency in the budget. (F-46-19)
- 2.3 Dr. Galbraith for the Royal Botanical Gardens spoke regarding the Cootes to Escarpment Eco Park System update (CW-05-19)
- 2.4 Gabriella Kalapos representing Clean Air Partnership spoke regarding 2019-2023 Inter-Governmental Declaration on Clean Air and Climate Change (CW-46-19)
- 2.5 Doug Brown, Burlington for Accessible Sustainable Transit (BFAST) spoke regarding Burlington Transit Five-year Business Plan (TR-06-19)

3. Consent Items:

3.1 HIGH FIVE® Accreditation Verification visit (PR-03-19)

Moved by Mayor Meed Ward

Receive and file report PR-03-19 which provides Council with information on the HIGH FIVE® program and reaccreditation process as related to City of Burlington recreation programming for ages 6-12 years.

CARRIED

4. Regular Items:

4.1 Advisory Committee Review (CL-15-19)

This item was withdrawn prior to the meeting,.

4.2 2019-2023 Inter-Governmental Declaration on Clean Air and Climate Change (CW-46-19)

Moved by Councillor Stolte

Direct the Mayor or designate to sign the Clean Air Council 2019-2023 Inter-Governmental Declaration on Clean Air & Climate Change, as detailed in Appendix A of capital works report CW-46-19, on behalf of the City of Burlington at City Council on November 18, 2019.

CARRIED

4.3 Cootes to Escarpment EcoPark System Update (CW-05-19)

Moved by Councillor Sharman

Receive and file capital works report CW-05-19 regarding an update on the Cootes to Escarpment EcoPark System.

CARRIED

4.4 Burlington Active Aging Plan update (PR-02-19)

Moved by Councillor Galbraith

Receive and file recreation services department report PR-02-19 which provides an update on the Burlington Active Aging Plan and Adult Program Service Expansion.

CARRIED

4.5 2018-2022 Burlington's Plan Vision to Focus Financial Plan (F-41-19)

Moved by Councillor Sharman

Receive and file finance department report F-41-19 regarding the 2018-2020 Vision to Focus financial plan.

CARRIED

4.6 Municipal Accommodation Tax (MAT) (CM-23-19)

Moved by Councillor Nisan

Table report CM-23-19 regarding establishment of a Municipal Accommodation Tax in Burlington and report back to Committee in early 2020 to provide recommendations related to implementation and the associated by-law.

CARRIED

4.7 2020 Budget Overview (F-46-19)

Moved by Councillor Bentivegna

Refer finance department report F-46-19 regarding the 2020 budget overview to the Planning and Development Committee meeting on Tuesday November 4, 2019.

CARRIED

4.8 Market Competitiveness (HR-03-19)

Moved by Councillor Stolte

Adopt the principles outlined in human resources report HR-3-19; and
Direct the Executive Director of Human Resources to realign non-union salaries as outlined in Confidential Appendix A of HR-3-19 and adopt option 2.1 as contained in the report.

CARRIED

4.9 Burlington Transit Five-year Business Plan (TR-06-19)

Moved by Councillor Sharman

Refer transit department report TR-06-19 regarding the five-year business plan for Burlington Transit (2020-2024) to the Council meeting on November 18, 2019 .

CARRIED

5. Confidential Items:

- 5.1 Confidential legal department litigation update (May 1 to September 30, 2019) (L-22-19)

Moved by Councillor Stolte

Direct the Executive Director of Legal Services or her designate to proceed in accordance with the instruction sought in matters 17, 18, 19, 20 and 30, and that the balance of L-22-19 be received and filed.

CARRIED

- 5.2 Confidential parks and recreation department report regarding a vendor agreement update (PR-10-19)

Moved by Councillor Stolte

Receive and file confidential recreation services department report PR-10-19 regarding a vendor agreement update.

CARRIED

- 5.3 Confidential finance department report regarding contingency – September 30, 2019 (F -43-19)

Moved by Councillor Stolte

Receive and file confidential finance department report F-43-19 regarding contingency - September 30, 2019.

CARRIED

- 5.4 Confidential verbal update regarding Evolving the Organization - customer experience (CM-28-19)

6. Procedural Motions:

6.1 Motion to proceed into closed session

Moved by Mayor Meed Ward

Move into closed session in accordance with the following provisions under the Municipal Act,

Sections 239 (e) litigation or potential litigation affecting the municipality or local board, including matters before administrative tribunals, with respect to legal department report L-22-19 regarding litigation updates from May 1 to September 30, 2109; and

Section 239(f) advice that is subject to solicitor-client privilege, including communications necessary for that purpose; and

Section 239 (d) labour relations or employee negotiations regarding human resources department appendix A to report HR-03-19 regarding market competitiveness; and

Section 239 (b) personal matters about identifiable individuals, including municipal or local board employees regarding confidential verbal update from the City Manager on evolving the organization the customer experience CM-28-19

CARRIED

7. Information Items:

Moved by Councillor Galbraith

Receive and file the following 8 items, having been given due consideration by the Committee of the Whole.

CARRIED

7.1 Staff presentation regarding Cootes to Escarpment EcoPark System update (CW-05-19)

7.2 Staff presentation regarding 2018-2022 Burlington's Plan Vision to Focus Financial Plan (F-41-19)

7.3 Correspondence from Brian Dean, Executive Director, Burlington Downtown Business Association regarding Municipal Accommodation Tax (MAT) (CM-23-19)

- 7.4 Staff presentation regarding Municipal Accommodation Tax (MAT) (CM-23-19)
- 7.5 Presentation from Sarah Cameron regarding Burlington Active Aging Plan update (PR-02-19)
- 7.6 Presentation from Gabriella Kalapos, Clean Air Partnership regarding 2019-2023 Inter-Governmental Declaration on Clean Air and Climate Change (CW-46-19)
- 7.7 Presentation from Doug Brown, Burlington for Accessible Sustainable Transit (BFAST) regarding Burlington Transit Five-year Business Plan (TR-06-19)
- 7.8 Presentation by Dennis Karr, Dillon Consulting regarding Burlington Transit Five-year Business Plan (TR-06-19)

8. Staff Remarks:

9. Committee Remarks:

10. Adjournment:

10:16 a.m. (recessed), 1:24 p.m. (reconvened), 4:52 p.m. (recessed), 5:11 p.m. (reconvened), 5:13 p.m. (closed), 6:22 p.m. (public), 6:23 p.m. (recessed), 6:50 p.m. (reconvened), 8:50 p.m. (recessed), 8:58 p.m. (reconvened), 8:59 p.m. (closed), 9:59 p.m. (public)

Councillor Nisan left the meeting at 4:02 p.m. and returned at 4:30 p.m.

Chair adjourned the meeting at 10:01 p.m.



Planning and Development Committee Meeting

Minutes

Date: November 5, 2019

Time: 9:30 am

Location: Council Chambers Level 2, City Hall

Members Present: Paul Sharman (Chair), Rory Nisan, Kelvin Galbraith, Lisa Kearns, Shawna Stolte, Angelo Bentivegna, Mayor Marianne Meed Ward

Staff Present: Tim Commisso, Joan Ford, Jamie Tellier, Allan Magi, Nancy Shea-Nicol, Nick Anastasopoulos, Vito Tolone, Kwab Ako-Adjei, David Thompson (Audio/Video Specialist), Jo-Anne Rudy (Clerk)

1. Declarations of Interest:

None

2. Statutory Public Meetings:

The Planning and Development Committee, in accordance with Section 34 of the Planning Act, as amended, held Public Meeting No. 18-19 on November 5, 2019 to receive the proposed official plan and zoning by-law amendments for 2093, 2097 & 2101 Old Lakeshore Road, 2096 & 2100 Lakeshore Road. Having considered the oral and written comments received from staff and delegations, the Planning and Development Committee received PB-72-19 for consideration.

- 2.1 Information report for official plan and rezoning amendments at 2093, 2097 & 2101 Old Lakeshore Road, 2096 & 2100 Lakeshore Road (PB-72-19)

Moved by Councillor Nisan

Receive and file department of city building report PB-72-19 regarding official plan and rezoning amendments for 2093, 2097, 2101 Old Lakeshore Road and 2096, 2100 Lakeshore Road.

CARRIED

- a. Staff presentation regarding information report for official plan and rezoning amendments at 2093, 2097 & 2101 Old Lakeshore Road, 2096 & 2100 Lakeshore Road (PB-72-19)
- b. Gary Scobie expressed concern with the application for official plan and rezoning amendments at 2093, 2097 & 2101 Old Lakeshore Road, 2096 & 2100 Lakeshore Road as it relates to the downtown being an urban growth centre. (PB-72-19)
- c. Mark Reid, Cyndi Rottenberg- Walker, Urban Strategies, provided information on the application for official plan and rezoning amendments at 2093, 2097 & 2101 Old Lakeshore Road, 2096 & 2100 Lakeshore Road. (PB-72-19)
- d. Gary Stewart expressed concern with the application for official plan and rezoning amendments at 2093, 2097 & 2101 Old Lakeshore Road, 2096 & 2100 Lakeshore Road as it relates to traffic, noise and height. (PB-72-19)
- e. David Barker expressed concern with the application for official plan and rezoning amendments at 2093, 2097 & 2101 Old Lakeshore Road, 2096 & 2100 Lakeshore Road as it relates to parking, density and traffic. (PB-72-19)
- f. Deborah Ruse spoke to the application for official plan and rezoning amendments at 2093, 2097 & 2101 Old Lakeshore Road, 2096 & 2100 Lakeshore Road. (PB-72-19)
- g. Alex Koster expressed support of the application for official plan and rezoning amendments at 2093, 2097 & 2101 Old Lakeshore Road, 2096 & 2100 Lakeshore Road and requested the definition of affordability. (PB-72-19)
- h. Delegation material from Mark Reid and Cyndi Rottenberg-Walker, Urban Strategies, regarding the application for official plan and rezoning amendments at 2093, 2097 & 2101 Old Lakeshore Road, 2096 & 2100 Lakeshore Road. (PB-72-19)
- i. Delegation material from Gary Stewart regarding the application for official plan and rezoning amendments at 2093, 2097 & 2101 Old Lakeshore Road, 2096 & 2100 Lakeshore Road. (PB-72-19)

- j. Correspondence from We Love Burlington regarding the application for official plan and rezoning amendments at 2093, 2097 & 2101 Old Lakeshore Road, 2096 & 2100 Lakeshore Road. (PB-72-19)
- k. Additional comments submitted to Planning staff regarding the application for official plan and rezoning amendments at 2093, 2097 & 2101 Old Lakeshore Road, 2096 & 2100 Lakeshore Road. (PB-72-19)

3. Delegation(s):

- 3.1 Albert Faccenda and Lloyd Rapini, Coral Gable Homes, expressed concerns with home building issues as it relates to floor to area ratios and the zoning by-law not allowing semi-detached homes in low density areas of the City. (PD-10-19)
- 3.2 Varun Gupta expressed concern with home building issues as it relates to the zoning by-law not allowing semi-detached homes in low density areas of the City. (PD-10-19)
- 3.3 Lori Haines expressed concern with the plan of subdivision and zoning by-law amendment for 143 Blue Water Place and 105 Avondale Court as it relates to servicing, fencing, harm to trees and replacement of retaining wall. (PB-69-19)
- 3.4 Michael O'Sullivan spoke to the plan of subdivision and zoning by-law amendment for 143 Blue Water Place and 105 Avondale Court as it relates to the window-to-the-lake and loss of value for the abutting property owners. (PB-69-19)
- 3.5 Ben King expressed concern with the plan of subdivision and zoning by-law amendment for 143 Blue Water Place and 105 Avondale Court as it relates to a sidewalk coming in from Lakeshore. (PB-69-19)
- 3.6 Larry Hambly expressed concern with the plan of subdivision and zoning by-law amendment for 143 Blue Water Place and 105 Avondale Court as it relates to the window-to-the-lake, sidewalks and streetlights. (PB-69-19)
- 3.7 Mary Alice St. James, A.C.T., spoke to the recommendation report for a plan of subdivision and zoning by-law amendment for 143 Blue Water Place and 105 Avondale Court and thanked staff and residents for their work. (PB-69-19)
- 3.8 Val Cambre expressed concern with the plan of subdivision and zoning by-law amendment for 143 Blue Water Place and 105 Avondale Court as it relates to the window-to-the-lake and sidewalks. (PB-69-19)

- 3.9 Matt Johnston, Urban Solutions, provided additional information on the plan of subdivision and zoning by-law amendment for 143 Blue Water Place and 105 Avondale Court and thanked staff and residents for the collaborative approach on this file. (PB-69-19)
- 3.10 Selva Chelliah advised that he was available to answer any questions on the plan of subdivision and zoning by-law amendment for 143 Blue Water Place and 105 Avondale Court. (PB-69-19)

4. Consent Items:

- 4.1 Amendment to Nuisance and Noise By-Law No.19-2003 (PB-79-19)

Moved by Mayor Meed Ward

Approve the amendment of Nuisance and Noise By-law 19-2003 by adding that air horns are not to be used in the City of Burlington at any time, as outlined in Appendix A to department of city building report PB-79-19.

CARRIED

5. Regular Items:

- 5.1 Speed limit installations (TS-18-19)

Moved by Councillor Galbraith

Approve the amendment to Traffic By-Law 86-2007, as amended, and noted in Appendix A to transportation services department report TS-18-19.

CARRIED

- 5.2 Cannabis Production Study– Stage Two Work Plan (PB-68-19)

Moved by Councillor Galbraith

Direct the Executive Director of Community Planning, Regulation and Mobility to proceed with the “Stage Two” Work Plan of the Cannabis Production Study, as outlined in department of community planning report PB-68-19.

CARRIED

5.3 Recommendation report for a plan of subdivision and zoning by-law amendment for 143 Blue Water Place and 105 Avondale Court (PB-69-19)

Moved by Councillor Stolte

Approve the zoning by-law amendment application submitted by Bloomfield Developments to rezone the property at 143 Blue Water Place & 105 Avondale Court from “R1.2” to “R1.2-502” and “O2” to permit eight detached dwellings fronting a public road on the basis that it conforms to the Provincial Policy Statement, the Places to Grow Act and the Regional Official Plan; and

Adopt Zoning By-law 2020.417, attached as Appendix B to department of city building report PB-69-19, rezoning the lands at 143 Blue Water Place & 105 Avondale Court from “R1.2” to “R1.2-502” and “O2”; and

Deem that Zoning By-law 2020.417 conforms to the Official Plan of the City of Burlington; and

Approve the application submitted by Bloomfield Developments Inc. to draft approve a residential plan of subdivision consisting of eight lots, four blocks, and a public road at 143 Blue Water Place and 105 Avondale Court, as shown in Appendix A of department of city building report PB-69-19, subject to the conditions contained in Appendix C of that report; and

Direct the Executive Director of Capital Works to include for consideration the development of the Blue Water Window-to-the-Lake as part of the 2021 Capital Budget and Forecast; **and**

Direct the Executive Director of Community Planning, Regulation and Mobility to remove the requirement for sidewalks in the conditions of subdivision approval for 143 Blue Water Place and 105 Avondale Court; and

Direct the Executive Director of Environment, Infrastructure and Community Services to report back on potential cost of expanding Block 2 beyond 5% parkland dedication.

CARRIED

Moved by Mayor Meed Ward

Direct the Executive Director of Community Planning, Regulation and Mobility to remove the requirement for sidewalks in the conditions of

subdivision approval for 143 Blue Water Place and 105 Avondale Court.

CARRIED

Moved by Mayor Meed Ward

Direct the Executive Director of Environment, Infrastructure and Community Services to report back on potential cost of expanding Block 2 beyond 5% parkland dedication.

CARRIED

5.4 2020 Budget Overview (F-46-19)

Moved by Councillor Nisan

Receive and file the proposed 2020 budget book; and

Direct staff to present the recommendations in Appendix A to finance department report F-46-19 to the Committee of the Whole – Budget meetings of December 10 and 12, 2019 for review and approval, taking into consideration committee amendments.

CARRIED

6. Confidential Items:

None

7. Procedural Motions:

Moved by Councillor Bentivegna

Suspend the rules of procedure to allow 2 non-registered delegations to speak regarding department of community planning report PB-69-19 and item PD-10-19, in accordance with procedure by-law 64-2016 s. 37.

CARRIED

8. Information Items:

Moved by Councillor Nisan

Receive and file the following 7 items, having been given due consideration by the Planning and Development Committee.

- 8.1 Correspondence from Albert Faccenda and Lloyd Rapini, Coral Gable Homes, regarding home building issues in low density areas of the City. (PD-10-19)
- 8.2 Staff presentation regarding recommendation report for a plan of subdivision and zoning by-law amendment for 143 Blue Water Place and 105 Avondale Court (PB-69-19)
- 8.3 Delegation material from Lori Haines regarding the plan of subdivision and zoning by-law amendment for 143 Blue Water Place and 105 Avondale Court. (PB-69-19)
- 8.4 Delegation material from Larry Hambly regarding the plan of subdivision and zoning by-law amendment for 143 Blue Water Place and 105 Avondale Court. (PB-69-19)
- 8.5 Delegation material from Mary Alice St. James, A.C.T., regarding the plan of subdivision and zoning by-law amendment for 143 Blue Water Place and 105 Avondale Court. (PB-69-19)
- 8.6 Delegation material from Val Cambre regarding the plan of subdivision and zoning by-law amendment for 143 Blue Water Place and 105 Avondale Court. (PB-69-19)
- 8.7 Delegation material from Matt Johnston, Urban Solutions, regarding the plan of subdivision and zoning by-law amendment for 143 Blue Water Place and 105 Avondale Court. (PB-69-19)

9. Staff Remarks:

10. Committee Remarks:

11. Adjournment:

11:12 a.m. (recessed), 11:20 a.m. (reconvened), 12:27 p.m. (recessed), 1:35 p.m. (reconvened), 3:37 p.m. (recessed), 3:45 p.m. (reconvened), 4:35 p.m. (recessed), 6:30 p.m. (reconvened), 8:15 p.m. (recessed)

Councillor Galbraith and Mayor Meed Ward arrived at 11:25 a.m.

Councillor Kearns arrived to the afternoon session at 2:30 p.m.

Chair adjourned the meeting at 9:15 p.m.



Audit Committee Meeting

Minutes

Date: November 6, 2019

Time: 3:30 pm

Location: Council Chambers Level 2, City Hall

Members Present: Paul Sharman (Chair), Angelo Bentivegna, Lisa Kearns (Vice Chair), Mayor Marianne Meed Ward, Phillip Chisulo, Aaron Mendaglio, Mathew Moore, Etienne Durafour

Staff Present: Tim Commisso, Joan Ford, Sheila Jones, Sandy O'Reilly, Nancy Shea-Nicol, David Thompson (Audio/Video Specialist), Georgie Gartside (Clerk)

1. Declarations of Interest:

None.

2. Delegation(s):

None.

3. Consent Items:

3.1 Status of audit work plan, budget and performance metrics (CA-13-19)

Moved by: Mayor Meed Ward

Receive and file city auditor's office report CA-13-19 providing the status of the 2019 audit work plan (Appendix A), performance metrics (Appendix B), and budget as of October 11, 2019.

CARRIED

3.2 Financial highlights for the period ended Sept. 30, 2019 (F-45-19)

Moved by: Mayor Meed Ward

Receive and file report F-45-19 providing financial highlights for the period ended September 30, 2019.

CARRIED

4. Regular Items:

4.1 Summary of in-progress management action plans (CA-14-19)

Moved by: Mathew Moore

Receive and file city auditor's office report CA-14-19 providing a summary of the management action plans in progress to address high- and medium- risk issues as detailed in Appendix A.

CARRIED

5. Confidential Items:

5.1 Verbal legal department update regarding fraudulent vendor payment (L-22-19)

6. Procedural Motions:

6.1 Proceed into closed session

Moved by: Councillor Bentivegna

Move into closed session in accordance with the following provisions under the Municipal Act,

- section 239 (2)(a) the security of the property of the municipality or local board; and
- section 239(2)(e) litigation or potential litigation, including matters before administrative tribunals, affecting the municipality or local board; and
- section 239(2)(f) advice that is subject to solicitor-client privilege, including communications necessary for that purpose, all with respect to a verbal confidential legal department update on fraudulent vendor payment.

CARRIED

7. Information Items:

None.

8. Staff Remarks:

9. Committee Remarks:

10. Adjournment:

3:42 p.m. (closed), 4:01 p.m. (public)

Chair adjourned the meeting at 4:11 p.m.



Committee of the Whole - Workshop Meeting

Minutes

Date: November 7, 2019
Time: 9:30 am
Location: Council Chambers Level 2, City Hall

Members Present: Shawna Stolte (Chair), Angelo Bentivegna, Kelvin Galbraith, Lisa Kearns, Rory Nisan, Paul Sharman, Mayor Marianne Meed Ward

Staff Present: Tim Commisso, Mary Battaglia, Joan Ford, Chris Glenn, David Lazenby, Allan Magi, Nancy Shea-Nicol, Kwab Ako-Adjei, David Thompson (Audio/Video Specialist), Georgie Gartside (Clerk)

Others Present: Denise Beard, Doug Pladsen, Jim Seferiades

1. Declarations of Interest:

None.

2. Delegation(s):

None.

3. Regular Items:

3.1 Fire Master Plan workshop

3.2 Joint venture workshop (PR-13-19)

Moved by: Councillor Kearns

Receive and file parks & recreation department report PR-13-19 providing background on the city's joint venture policy and joint venture organizations.

CARRIED

4. Procedural Motions:

None.

5. Information Items:

Moved by: Mayor Meed Ward

Receive and file the following three items, having been given due consideration by the Committee of the Whole Workshop.

CARRIED

5.1 Presentation by Steve Thurlow, Dillion Consulting regarding Fire Master Plan

5.2 Staff presentation regarding Joint Ventures (PR-13-19)

5.3 Joint venture organizations - detailed chart (PR-13-19)

6. Staff Remarks:

7. Committee Remarks:

8. Adjournment:

11:13 a.m. (recessed), 11:20 a.m. (reconvened), 12:03 p.m. (recessed), reconvened at 1:04 p.m. in Room 247, 2:06 p.m. (recessed), 2:15 p.m. (reconvened)

Councillor Rory Nisan attended the meeting until 2:30 p.m.

Chair adjourned the meeting at 3:16 p.m.



Planning and Development Committee - Public

Minutes

Date: November 12, 2019
Time: 1:00 pm
Location: Council Chambers Level 2, City Hall

Members Present: Paul Sharman (Chair), Rory Nisan, Kelvin Galbraith, Lisa Kearns, Shawna Stolte, Angelo Bentivegna, Mayor Marianne Meed Ward

Staff Present: Tim Commisso, Heather MacDonald, Jamie Tellier, David Thompson (Audio/Video Specialist), Jo-Anne Rudy (Clerk)

1. Declarations of Interest:

None

2. Statutory Public Meetings:

None

3. Delegation(s):

3.1 Dino and Janice Mozzon expressed concern regarding the official plan and zoning by-law amendments at 2421-2431 New Street as it relates to incompatibility with existing neighbourhood character and overintensification. (PB-32-19)

4. Consent Items:

None

5. Regular Items:

5.1 Recommendation report for official plan and zoning by-law amendments at 2421-2431 New Street (PB-32-19)

Moved by Mayor Meed Ward

Modified approval of the applications for official plan and zoning by-law amendments made by TRG (New-Guelph) Inc. (c/o Weston Consulting), 2100 Old Lakeshore Road, Burlington ON L7R 1A3, to permit the development of two (2) joined 11-storey buildings on the site consisting of a retirement home building and a residential apartment building; and

Approve Official Plan Amendment No. 117 to the City of Burlington Official Plan, as contained in Appendix B to department of city building report PB-32-19, to re-designate the lands located at 2421-2431 New Street from “Neighbourhood Commercial” to “Residential High Density” and to modify the “Residential High Density” policies to include site specific policy for the subject lands; and

Deem that Section 17(21) of The Planning Act has been met; and

Instruct the City Clerk to prepare the necessary by-law adopting Official Plan Amendment No. 117 as contained in Appendix B to department of city building report PB-32-19 to be presented for approval at the same time as the associated by-law to amend Zoning By-law 2020, as amended, for the development proposal; and

Approve, in principle, the zoning regulations provided in Appendix C to department of city building report PB-32-19, to rezone the lands at 2421-2431 New Street from Neighbourhood Commercial “NC” to a site specific Residential High Density “RH4-503” with a Holding “H” prefix, subject to Residential Development Agreement conditions as provided in Appendix D to department of city building report PB-32-19 and the provision of Community Benefits; and

Direct the Executive Director of Community Planning, Regulation and Mobility to hold discussions with the applicant to secure community benefits in accordance with Section 37 of the Planning Act and Part VI, Section 2.3 of the City’s Official Plan, as they relate to the requested increase in height and density on the subject property, and to return to Council with a report outlining the recommended community benefits and the implementing Zoning By-law Amendment.

CARRIED

6. Confidential Items:

None

7. Procedural Motions:

None

8. Information Items:

Moved by Councillor Bentivegna

Receive and file the following 2 items, having been given due consideration by the Planning and Development Committee.

CARRIED

8.1 Staff presentation regarding recommendation report for official plan and zoning by-law amendments at 2421-2431 New Street (PB-32-19)

8.2 Correspondence from John Lee regarding recommendation report for official plan and zoning by-law amendments at 2421-2431 New Street (PB-32-19)

9. Staff Remarks:

10. Committee Remarks:

11. Adjournment:

Chair adjourned the meeting at 7:35 p.m.



SUBJECT: Burlington Transit Five-year Business Plan

TO: Committee of the Whole

FROM: Transit Department

Report Number: TR-06-19

Wards Affected: All

File Numbers: 770-09

Date to Committee: November 4, 2019

Date to Council: November 18, 2019

Recommendation:

Approve the proposed Five-Year Business Plan for Burlington Transit (2020 - 2024), as outlined in Appendix A of transit department report TR-06-19.

Purpose:

This report proposes a Transit growth strategy for the next five-year period (2020 - 2024), including assets, infrastructure, and an organizational structure. These strategies are accompanied by a phasing plan and a forecast of budget impacts for the five-year period.

The Five-Year Business Plan's primary purpose is to ensure individual projects and plans are effectively contributing to the organization's vision/strategic direction and that key activities are prioritized and staged to fit within the City's financial plan. It provides a roadmap for the next five years for Burlington Transit's operations and it helps ensure that Burlington Transit runs an effective, efficient and quality service at a peak performance level. This Five-Year Business Plan also helps hold staff accountable to deliver the various initiatives outlined in the Plan.

A City that Moves

- Increased Transportation Flows and Connectivity

Background and Discussion:

The Five-Year Business Plan (2020 – 2024) will guide the implementation of transit service improvements over the next five years, noting that future changes in services are still subject to change and subsequent approval through the annual budget approval process.

Burlington Transit hired Dillion Consulting to conduct a peer and policy review, develop vision and mission statements, outline strategic directions, and develop a growth strategy for the next five years.

Strategy/process

Appendix A includes the proposed Five-Year Business Plan report. Internal consultation (Transit and City staff) has helped guide the development of the growth strategies within this plan.

Climate Impact

On April 23, 2019 Council unanimously passed a motion to declare a Climate Emergency.

Public transit plays a critical role in local climate mitigation by providing residents with the opportunity to utilize public transit as a way to decrease greenhouse gas emissions (GHG) from automobiles for single use trips. The Burlington Transit Five-Year Business Plan defines strategies to build transit in order to provide an alternative to private automobiles that is convenient, safe, and shared to minimize car usage and aid in the reduction of GHG on a daily basis.

Options considered

Not Applicable.

Financial Matters:

The proposed Five-Year Business Plan includes a phasing plan and a forecast of budget impacts for each proposed growth strategy.

Total Financial Impact

In order to complete this five-year business plan, Burlington Transit hired Dillon Consulting Limited at a contract cost of \$157,985.30.

A financial plan will be completed at a later date in coordination with the Finance Department.

Other Resource Impacts

As part of the Five-Year Business Plan, there are direct and indirect resource impacts that include staffing, fleet, facilities, and service hours. The impacts to each of these resources is outlined in the proposed five-year business plan.

Connections:

This five-year business plan will provide insight as to the growth of Burlington Transit over the next five years which will impact mobility hubs, transit service planning, and the Integrated Mobility Plan.

Vision to Focus: Focus Area 2 Improving Integrated City Mobility. The Five-Year Business Plan has been identified as a key action to achieve the top priority goal of increasing transit utilization and service levels. This will contribute to increased ridership and an increased transit modal split.

Public Engagement Matters:

City staff and Burlington Transit staff (including operators) were engaged in the development of these growth strategies, as well as the vision and mission statements. Council is being engaged in the proposed growth strategy through this report.

Conclusion:

Burlington Transit is proposing to implement the Five-Year Business Plan starting January 1, 2020. Additionally, all costs associated with the strategies outlined in 2020 to be added to the 2020 capital and operating budgets. The remaining four years of this plan (2021 – 2024) would be included in the forecast years of the capital budget. Components of the Five-Year Business Plan will be updated annually based on performance monitoring and our subject to the annual budget process.

Respectfully submitted,

Sue Connor
Director of Transit
905-335-7869 ext.7845

Appendices:

- A. Burlington Transit's Proposed Five-Year Business Plan
- B. Dynamic on-demand transit strategy

Report Approval:

All reports are reviewed and/or approved by Department Director, Director of Finance and Director of Legal. Final approval is by the City Manager.



BURLINGTON TRANSIT

Burlington Transit Business Plan

Dynamic On-Demand Transit Strategy



September 2019 – 19-9087

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1.0

Introduction

Strategic Direction 2 (Mobility Management) in the Burlington Transit Business Plan outlines a number of strategies to position Burlington Transit to deliver multi-modal and integrated sustainable mobility services. One of the key strategies in this Strategic Direction is to assess and pilot a dynamic, on-demand service. It is envisaged that such a service would utilize a mobile app to optimize shared-ride demand-responsive services and to allow customers to easily book, track and pay for their ride.

The purpose of this appendix to the business plan is to:

1. Define dynamic on-demand transit
2. Undertake an industry scan to understand common service features and review case studies that are in place in Canada today
3. Assess the applicability of a dynamic on-demand solution in Burlington
4. Evaluate dynamic on-demand transit models in the Burlington context
5. Identify next steps to piloting a dynamic on-demand transit model in Burlington

2.0

Defining Dynamic On-Demand Transit

2.1

What is Dynamic On-Demand Transit?

Dynamic on-demand transit is a traditional form of mobility that is experiencing a resurgence with the help of technology. Dynamic on-demand transit is sometimes referred to as micro-transit, demand-responsive transit or alternative service delivery. These are all specific types of dynamic on-demand transit, which is a larger umbrella term encompassing several different service models. Dynamic on-demand transit has three components that differentiate it from conventional fixed-route transit:

1. Flexible routing and/or scheduling designed based on customer demand;
2. Newly-emerged “mobility brokers” who use mobile apps to connect supply and demand; and
3. Use of smaller, more flexible vehicles.

In certain cases, there is a fourth component to a dynamic on-demand model:

4. Connecting multiple transportation services to complete a trip (using a mobile app).

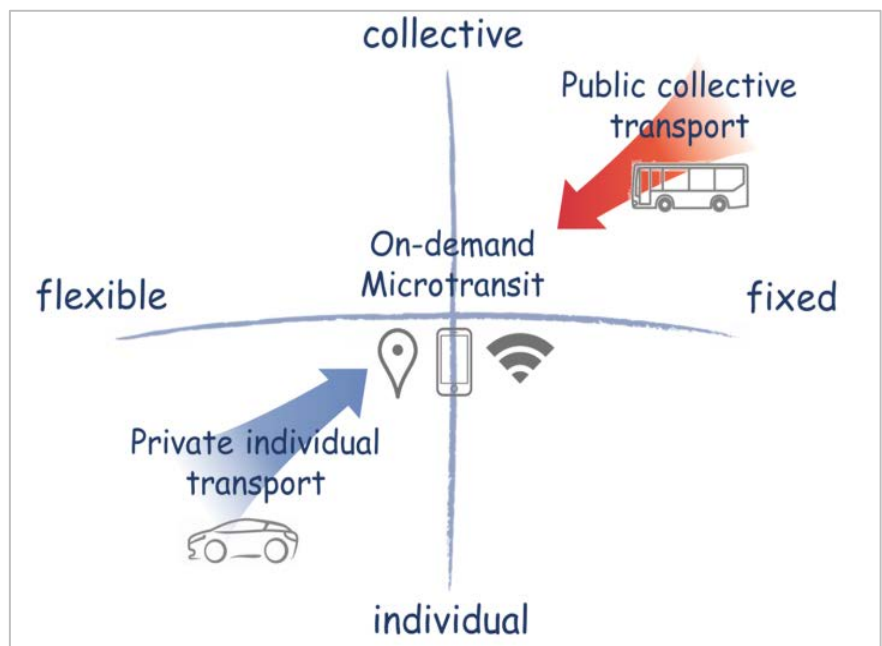
This fourth component connects dynamic on-demand services to fixed transit routes, or in certain cases, can combine multiple sustainable services (e.g., bike-sharing and car-sharing) to one mobility platform.

Dynamic on-demand transit can be differentiated from conventional fixed-route transit in the way that it caters to individual needs.

In a dynamic on-demand transit model, the transit service adapts to its customers, while in conventional fixed-route transit service model, transit customers must adapt to the service offered.

In many cases, this provides greater convenience and customization – moving towards some of the

Figure 1: Attributes of Dynamic On-Demand Transit



Source: <http://www.smart-circle.org/blog/microtransit/>

favourable characteristics of private automobile travel. As illustrated in **Figure 1** above, dynamic on-demand transit (referred to as “on-demand microtransit” in the figure) offers a level of flexibility, convenience, and individualism somewhere between regular fixed-route transit (“public collective transport”) and private individual transport.

3.0

Industry Scan

An industry scan was conducted of various dynamic on-demand transit services in place or planned to be in place across North America (with a focus on Canada). The purpose of this industry scan was to provide a broader understanding of the existing application and to fully understand the variations of dynamic on-demand services in terms of service delivery structure, use of technology, operating structure and customer experience.

3.1

Defining Characteristics

For each example included in the industry scan, a brief summary is provided, along with key defining characteristics. These include the following.

3.1.1

Booking and Scheduling Interface

The interface used to book and schedule rides can vary widely between various models. Certain models use call centres and manual scheduling, while other models have mobile apps as a customer interface to optimize trips. Some typical trip booking and scheduling interfaces include:

1. **Mobile App** - Customers use a mobile app to book rides while a back-end processor optimizes trips in real time, balancing customer convenience with ridesharing. The customer interface allows customers to use their mobile phone to book their ride, track their ride and pay for their ride in real-time. The driver uses a mobile phone or tablet in their vehicle to receive trip instructions. The driver only sees one trip at time, as the mobile app continuously optimizes in real-time to add trip requests. A call centre option is typically provided for customers that do not have access to a smart phone, however, customers are typically still required to register an account for the dynamic on-demand service.
2. **Manual Scheduling** - Customers call a call centre to book a ride. Trips are scheduled manually or by using a specialized transit scheduling software package. This approach typically requires more advanced notice to book a ride, with less ability to optimize rides in real-time. As manual scheduling is booked and dispatched in advance, it is not possible to greatly alter operations in real-time. This means that manual operations are less able to respond to changing demands and must be scheduled with greater contingency in order to accommodate daily variation. Trips that cannot be booked far in advance can generally not be accommodated, even if they are similar to other pre-booked trips. As such, manual scheduling is generally less efficient and the scheduling less optimized than real-time options.

3.1.1.1

Service Delivery Model

Dynamic on-demand transit service can be structured in a number of different ways, depending on the goals of the municipality and the market in which the service operates in. Some typical service delivery models include:

1. **Origin-to-Hub (First-Mile/Last-Mile)** - Dynamic on-demand transit provides mobility to customers in lower demand areas to/from the nearest fixed-route transit stop. In this way, this service model provides first-mile/last-mile connectivity to the rest of the transit network, with the majority of a passenger's overall journey undertaken on fixed-route transit. Where possible, the connecting stop is typically a major hub/terminal, transfer point or stop that allows customers to complete their trips from a safe and accessible transfer point, connecting to multiple routes. The model is typically implemented in low density areas where fixed-route transit is uneconomical, is not offered, or to supplement an existing low-frequency fixed-route service.
2. **Origin-to-Destination** - Dynamic on-demand transit vehicles provide a one-seat ride to connect any origin with any destination in the service area. This means that transfers are not required to a fixed-route service. This model is typically implemented in larger low-density geographic areas where there is no fixed-route service. This model can be combined with an Origin-to-Hub model, where Origin-to-Destination is used for internal trips within an on-demand zone and Origin-to-Hub is used to connect customers outside of the on-demand zone.
3. **Origin-to-Hub-to-Destination** - This model is an extension of the Origin-to-Hub model, where the customer has the ability to plan, book and pay for their entire trip from origin to destination using the same software. In this scenario, a mobile app or a customer service agent would identify the entire trip, which could involve a dynamic on-demand service connecting to a fixed-route bus, then ending with a second dynamic on-demand service (to connect to the destination). This model requires real-time data of the entire transit network connected to a mobile app, and the ability to optimize the full trip and communication steps to complete the trip for the customer. To date, there are very few mobile app mobility providers that have this capability.
4. **Flex-Route** - This is a simple form of dynamic on-demand transit which is typically implemented in low-demand areas and allows transit agencies to provide additional coverage using a limited resource. Flex routes operate on a fixed-route and fixed schedule for certain portions of the route. At the request of a passenger, the driver has the ability to 'flex' off the route to pre-designated areas to pick up or drop off a passenger. The benefit of flex routes is that it allows the resource to provide coverage to a larger area that may have limited demand without the need to invest in additional service.
5. **Ridesharing Partnership** - This involves entering into an agreement with a transportation network company or taxi company to better integrate these services with fixed-route transit. This partnership typically involves marketing of the service or the municipality providing a fare discount to the ridesharing service if transferring to/from the fixed-route transit service. This service does not always replace the first-mile/last-mile of a transit service, but can be used to supplement the transit service for customers that want a better level of service and are willing to pay a higher fare premium. There are also examples where it can be used to operate the entire transit service in a municipality.

3.1.1.2

Operating Model

The operations of dynamic on-demand transit services can also vary. The variation comes from who operates the service, and if the operator is guaranteed compensation during the allocated service hours or whether the operator only gets compensated based on trips delivered. Some typical operating models include:

1. **Dedicated Vehicles – Municipal** - The municipality supplies the vehicles and drivers to operate the service. Drivers are compensated based on the hours they work, no matter how many customers they provide service to. Typically, specialized transit vehicles or smaller cutaway buses are used to provide the service. The operation of the service can be integrated with specialized transit services or be a stand-alone service.
2. **Dedicated Vehicles – Contracted** - The municipality contracts the supply of vehicles and drivers to a third-party operator. The vehicles and drivers used are dedicated to the service during the hours of service they are scheduled (drivers are not permitted to take on other trip requests that are not municipally operated public transit). Contractors are typically compensated by hour of service or service kilometer (with a minimum number of hours/kilometres guaranteed).
3. **Non-Dedicated Vehicles – Contracted** - The municipality contracts the supply of vehicles and drivers to a third-party operator. The vehicles and drivers used are not dedicated to the service during the hours of service and are permitted to take on other trips outside of the municipal transit function. Examples of these include trans-cab services with local taxi companies or partnerships with transportation network companies. For ridesharing services, citizens with their own automobiles set their own schedules and provide rides to other citizens. They have the opportunity to accept or decline a ride request. Therefore, to ensure availability of vehicles at a high level of service, pricing strategies are typically in place to ensure supply meets demand. Riders pay for the trip and the driver profits from a percent of this revenue. This model is useful if demand for a service in a particular area is too low to warrant a dedicated vehicle and if there is a supply of drivers to guarantee a trip request is delivered.

3.1.1.3

Proximity of Service

Dynamic on-demand transit service can be structured based on the traditional proximity targets of a transit system (requiring customers to walk up to 400m to the closest transit stop), or to provide more convenient service right to the curb of the customer's origin and/or destination. Some typical pick-up/drop-off models include:

1. **Bus Stop** - The dynamic on-demand service picks-up and drops-off customers at predesignated transit stops only. It is common to use pre-existing fixed-route stops (e.g. when fixed-route service is replaced by on-demand service during certain periods of the day), or to designated on-demand stops. Stops are placed so that the majority of residents are within a 400m walking distance of a stop.
2. **Corner** - Customers must walk a short distance to a street corner within 100 metres of their origin/destination to get picked-up and dropped-off by a dynamic on-demand service. This type of pick-up/drop-off point is only used by technology-based ride hailing services as stops are

virtual and only visible on the mobile app. This is because the location of a corner stop can change with each trip request, as the stop is selected to minimize the travel time of the vehicle that is destined to pick-up or drop-off the next customer (e.g. the location of a corner stop may be the north-east corner of an intersection for an inbound vehicle coming from the south, or the south-west corner for an inbound vehicle coming from the north). Customers are asked to walk a short-distance to optimize the service.

3. **Curb** - Customers are picked up/dropped off directly at the curb of their origin and/or destination. This model is typically used in more rural or low-density areas with limited ridership, where consolidating pick-up and drop-off points at a common stop would not significantly increase the efficiency of the service. For origin-to-hub service models, the curb is only used for one end of the journey.

3.1.1.4

Trip Booking

Dynamic on-demand service models can also differ in the degree of spontaneity in which customers can book trips. Models that focus on ridership growth generally offer more convenience, while those that focus on maximizing vehicle occupancy in low demand areas/periods require more pre-planning when booking rides. Some typical trip booking models include:

1. **On-Demand** - No pre-planning is required to book a trip. Customers can book a trip on-demand (within ten minutes of when they want to be picked up). This model typically works with a mobile app, when there is a higher supply of vehicles to accommodate the trip request. When there is low ridership servicing a large service area, the ability to share rides in this model is limited.
2. **Scheduled On-Demand** - Customers can book trips on-demand, but must select from a pre-defined list of arrival times or departure times (similar to a headway used for a fixed-route service). While the route is still dynamic, creating a schedule for pick-up or drop-off times can help group rides when customers originate or are destined to the same location or transfer point. This type of model is typical when a dynamic on-demand service is provided to connect to a transfer point which operates on a fixed headway (e.g. every half hour).
3. **Scheduled** - Customers can pre-book rides in advance (typically between two hours and one week of their requested trip). This model is typically used in lower demand areas/periods or in large geographic areas where the supply of vehicles is limited and providing more notice helps to promote an increase in average vehicle occupancy. Customers can also use this model to book important trips, such as medical appointments. This model is typically used when there is no mobile app in place to book rides, as more notice is required to share rides when completed manually or using a traditional scheduling software package.
4. **Subscription** - Customers have the ability to book repeat trips for travel that they make on a consistent basis (e.g. trips to work). In a dynamic on-demand service, the exact time of the pick-up may vary slightly each day depending on other trips that are booked around the trip.

3.1.1.5

Accessibility

While each model must comply with the Accessibility for Ontarians with Disabilities Act (AODA), the approach each dynamic on-demand transit model takes to provide accessible trips can vary. Two typical approaches to accessibility are:

1. **Integrated** - The integrated model involves co-mingling conventional dynamic on-demand customers with registered specialized transit customers (using the same booking/scheduling platform and being transported in the same vehicle). The only difference between the two customer groups is that a registered specialized transit customer may require a full origin-to-destination trip whereas a conventional customer may only be permitted an origin-to-hub trip (picked up at a stop instead of the curb). In this model, a registered specialized transit customer booking a trip would follow the same process as a customer that does not have a disability (whether booking through a mobile app or a call centre). The requirements of the person with a disability would be included in the customer's profile and identify trip characteristics such as the type of trip (e.g. origin-to-destination), whether the person is travelling with an attendant, whether an accessible vehicle is required, etc. A vehicle would be dispatched that meets the customer's requirements. The software or scheduler that optimizes trips would continue to do so, including optimizing trips with conventional transit customers.
2. **Separated** - Some dynamic on-demand services use non-accessible vehicles (e.g. sedans or minivans) to provide service. This is typical of certain models (e.g. partnerships with ridesharing organizations) or when there are no accessible vehicles available in the existing fleet. To book an accessible ride, a registered specialized transit customer must call into the customer call centre to request a ride. The transportation coordinator would then find an available accessible vehicle to provide the ride. In most cases, accessible vehicles are not used in the dynamic on-demand transit service, and may be a different vehicle operator (e.g. contract with a taxi company to use an accessible taxi vehicle). Typically, more advanced notice is required to book an accessible ride, depending on the availability of accessible fleet. This model can be more cost effective if the cost of operating a non-accessible fleet is higher than an accessible vehicle. The challenge with this model is that the customer with a disability may not have the same experience using the dynamic on-demand service as a conventional passenger (e.g. may require more notice to book a ride or may not be able to use a mobile app).

3.1.1.6

Costing Model

Different dynamic on-demand transit service and software providers offer different costing models. This may depend upon the types of services that they offer and their business structure. Different costing models are better suited to different types of services, depending on hours of service and anticipated levels of ridership.

1. **Per Hour** - This is the most typical costing model for when the service is dedicated and operated by municipal operators. The model provides more cost control as it is set by the agency's decision of how many service hours to provide. It incentivises the fastest routing, rather than

the shortest routing. This model becomes more cost effective as ridership increases (as the cost is fixed no matter how many people use the service).

2. **Per Kilometer** - This model is similar to the per hour option and is typically used for contracted services (dedicated or non-dedicated models). A pre-defined cost is charged for each revenue service kilometer planned and provided. This model is less predictable than per hour because the number of kilometres will change depending upon service usage and therefore routing. It incentivises the shortest routing, rather than the fastest routing. This model becomes more cost effective as vehicle occupancy (ride sharing) increases.
3. **Per Trip** - This model is typically used for non-dedicated contracted services. A pre-defined cost per trip is established with the service provider. The model is effective when there is low ridership, as there is no fee charged to the municipality when no trip is delivered. As ridership grows, this model can increase operating costs, particularly when there are no financial incentives to encourage ridesharing.

3.2 Dynamic On-Demand Service Case Studies

The following provides a description of a number of dynamic on-demand transit services already in place or scheduled to be implemented in the near future. The purpose of these case studies is to provide some examples that may be applicable in Burlington Transit's context.

3.2.1 Arlington, Texas – Arlington On-Demand

Characteristic	Description	Characteristic	Description
Service Delivery	Origin-to-Destination	Transit Agency	City of Arlington
Booking / Scheduling	On-Demand	Municipality	Arlington, Texas
Operating	Dedicated Vehicles Contracted	Land Use Context	Suburban
Trip Booking	Mobile App	Technology Provider	Via
Accessibility	Integrated	Service Provider	Private
Proximity of Service	Corner (virtual stops)	Status	Operating
Costing	Per kilometre (app) Per hour (operator)	Fare Payment	Mobile App

Description

Ten years ago, Arlington was the largest municipality in the United States with no public transportation system. In 2013, fixed-route bus service was added by Dallas Area Rapid Transit, however, it was replaced by Arlington On-Demand (operated by Via) in 2017. The goal of this change was to provide a better level of service to grow ridership.



The City of Arlington has a population of 500,000, and the on-demand service provides coverage in select areas of the City. There are no fixed-route services outside of a connecting inter-regional light-rail service (which the on-demand service connects to). Customers pay a flat \$3.00 fare per person per trip within the service zone (select areas of the city) from 6:00 a.m. to 9:00 p.m. Monday through Friday, and from 9:00 a.m. to 9:00 p.m. on Saturday. The shared service uses 6-passenger wheelchair accessible vehicles, integrating it with the City's specialized transit service, Handitran.

The entire service provides 500 to 750 daily boardings (which roughly translates to 4 boardings per revenue vehicle hour).

Additional Information

<https://platform.ridewithvia.com/>

3.2.2 Belleville Transit – Bus On-Demand

Characteristic	Description	Characteristic	Description
Service Delivery	Origin-to-Destination	Transit Agency	Belleville Transit
Booking / Scheduling	On-Demand, Scheduled, Subscription	Municipality	Belleville, Ontario
Operating	Dedicated Vehicles	Land Use Context	Urban/Suburban
Trip Booking	Mobile App	Technology Provider	Pantonium
Accessibility	Separated	Service Provider	Municipal
Proximity of Service	Bus stop	Status	Operating
Costing	Per Hour	Fare Payment	Cash, passes, tickets (On Vehicle)

Description

In September 2018, Belleville Transit replaced its evening fixed-route service with an on-demand pilot (scheduled to run to the end of 2019). The on-demand pilot uses a ride hailing platform called Pantonium to provide demand-responsive real-time origin-to-destination services. Unlike most on-demand service, the Belleville model uses existing 40-foot buses, as these vehicles were available during the evening period and could be used for the pilot without incurring any capital expense. Once the pilot is concluded, a more detailed assessment will be completed about procuring smaller vehicles to operate the service.



Customers must download and register on the mobile app to use the service. When booking a trip, the customer selects their closest bus stops in relation to their origin and destination. The app then creates journeys based on passenger demand. The goal of this pilot project was to allow public transit to reliably cover large, low-density areas more efficiently.

Since the start of the pilot, ridership has increased by 300% (250 passengers/day) and vehicle mileage has decreased by 30%. To date, the service carries approximately 250 daily rides. Due to this early success, the pilot was made a permanent service in January 2019. Pantonium is compensated for use of the mobile app via a flat fee per vehicle and per year.

A child car seat is not required, since the service uses standard city buses. Bus drivers/operators are hired by Belleville Transit and are required to wear a uniform, provide checks (police, vulnerable sector check, driver's abstract), and receive training. Maintenance of the buses is done internally. While Belleville buses are fully accessible, registered specialized transit customers would continue to use the specialized transit service for curb-to-curb service.

Additional Information

<https://pantonium.com/initial-results-from-belleville-on-demand-transit/>
<https://www.pr.com/press-release/775682>

3.2.3 Grand River Transit – Route 901 Flex Trinity-Freeport

Characteristic	Description	Characteristic	Description
Service Delivery	Flex Route	Transit Agency	Grand River Transit
Booking / Scheduling	Scheduled On-Demand	Municipality	Waterloo Region, Ontario
Operating	Dedicated Vehicles Contracted	Land Use Context	Suburban
Trip Booking	Call-In/Online	Technology Provider	None
Accessibility	Integrated	Service Provider	Private
Proximity of Service	Bus Stop	Status	Operating
Costing	Hourly per Vehicle (operations)	Fare Payment	On Vehicle

Description

Route 901 operates on a fixed schedule with three fixed stops, but also has three 'flex stops' in the middle of the route where customers can request a ride for the same day or the next day by calling dispatch or booking online. The route connects to a light rail transit station, the hospital and a seniors centre, while the flex-stops are locations that have a high number of seniors or at medical facilities (where there is a desire to minimize walking distance). If no passengers request a stop at the flex stops, that part of the route is bypassed.



The service is contracted to a third-party operator, using a dedicated smaller accessible vehicle to operate the service. Trip booking is a scheduled on-demand service, meaning passengers at flex-stops are provided key set pick-up and drop-off times at flex stops that they can select from. The goal of the pilot is to maximize coverage using a limited resource and reduce walking distance, targeted to a vulnerable population.

Service is provided weekdays from 11:15 a.m. to 6:15 p.m. (the target market for the service is discretionary trips and for medical appointments).

Additional Information

<https://www.grt.ca/en/schedules-maps/901-flex-trinity-freeport.aspx>

3.2.4 Grand River Transit – Route 902 Flex Hespeler Village

Characteristic	Description	Characteristic	Description
Service Delivery	Origin-to-Hub Origin-to-Destination	Transit Agency	Grand River Transit
Booking / Scheduling	Scheduled On-Demand	Municipality	Waterloo Region, Ontario
Operating	Non-Dedicated Vehicles Contracted	Land Use Context	Suburban
Trip Booking	Dial-in	Technology Provider	N/A
Accessibility	Separated	Service Provider	Triangle Taxi
Proximity of Service	Curb	Status	Pilot
Costing	Per Trip	Fare Payment	Cash, paper transfer, fare card, ticket, student card

Description

Route 902 Flex was created to improve transit access to/from a seniors residence (Jacob Hespler Lodge). As part of GRT's service review, a number of the local routes were streamlined, which resulted in an increased walking distance for seniors from this lodge to the closest transit stop.



The purpose of the pilot is to provide a cost-effective option to connect residents more directly to the fixed-route transit service or key destinations frequented by seniors in Hespeler Village. The service operates as an origin-to-hub service (902 Flex – taxi to bus) or an origin-to-destination service (902 Flex – taxi-to-destination) based on a fixed schedule that was created in partnership with residents of the facility. Routes are dynamic and vehicle is only dispatched based on a passenger trip request. Since vehicles are not dedicated to the service, there is no fee charge if no trip request is made.

There is a partnership with Golden Triangle Taxi, which delivers a subsidized taxi service using sedans and accessible taxi vehicles to two or three fixed bus stops in downtown Hespeler as well as other key destinations in the area. The 902 Flex runs every day on a schedule, and is available to anyone residing in Waterloo Region. Customers booking trips must be picked up at a 902 Flex Stop. Bookings are accepted Monday to Sunday between 8:30 a.m. and 10:15 p.m. based on a pre-set schedule.

Additional Information

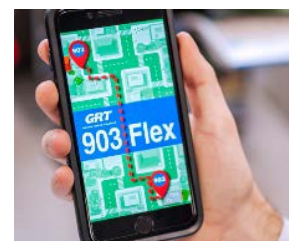
<https://www.grt.ca/en/schedules-maps/902-flex-hespeler-village.aspx>

3.2.5 Grand River Transit – Route 903 Flex Northwest Waterloo

Characteristic	Description	Characteristic	Description
Service Delivery	Origin-to-Destination Origin-to-Hub	Transit Agency	Grand River Transit
Booking / Scheduling	On-Demand	Municipality	Waterloo Region, Ontario
Operating	Non-Dedicated Vehicles Contracted	Land Use Context	Suburban
Trip Booking	Website/Mobile App	Technology Provider	RideCo
Accessibility	Separated	Service Provider	Private (RideCo)
Proximity of Service	Bus stop (virtual)	Status	Pilot
Costing	Hourly per vehicle (mobile app and operations)	Fare Payment	Mobile App, smart card, U-Pass, transfer

Description

Route 903 is an on-demand model being piloted by GRT in Northwest Waterloo. This service was placed in an area where a number of local routes were removed to streamline service onto the arterial network. This resulted in a number of areas that were outside of a 400m walking distance of a fixed-route service. To improve coverage, the on-demand service provides origin-to-destination service within the on-demand zone and to connecting fixed-route stops to allow them to complete their trip anywhere in the GRT network.




The service is provided weekdays between 7:30 a.m. and 10:00 p.m. Customers can book a trip using a mobile app, online or over the phone providing on-demand service. The same mobile app is used to optimize the service. Trips can go between two stops in the service area, including those where riders can transfer to a fixed-route service at no additional cost. Passengers can pay using the mobile app, or their smartcard.

The service is contracted to a third-party operator (RideCo), which uses two to four dedicated sedans to provide service. The service is not currently accessible and is separate from specialized transit service.

Additional Information

<https://www.grt.ca/en/schedules-maps/903-flex-northwest-waterloo.aspx>


3.2.6 Grand River Transit – Route 77 Wilmot Flex Route

Characteristic	Description	Characteristic	Description
Service Delivery	Flex Route	Transit Agency	Grand River Transit
Booking / Scheduling	Scheduled On-Demand	Municipality	Waterloo Region, Ontario
Operating	Dedicated Vehicles – Municipal	Land Use Context	Rural
Trip Booking	Dial-in	Technology Provider	N/A
Accessibility	Separated	Service Provider	Contracted
Proximity of Service	Stop / Flex Stop	Status	Permanent
Costing	Hourly	Fare Payment	Pass, ticket or cash
Description			
<p>GRT operates a flex route service between Wilmot Township and a transit terminal in Kitchener (where passengers connect to other GRT routes to complete their trip). The service was implemented to supply transit in an area that did not have it.</p>  <p>The route operates on a 60-minute round trip travel time to facilitate timed-transfers at the Boardwalk bus terminal. The flex route model was implemented to extend the service area on a low-demand route while maintaining the 60-minute round-trip travel time. The route includes four fixed stops and 13 flex stops that can be made on request. Passengers looking to access one of the flex stops must call the customer service agent between 8:00 a.m. and 5:00 p.m. on the same day of service and request the stop be made. The customer service agent would then inform the customer whether the driver is able to accommodate the request and inform the driver. If no request is made, the bus will not stop or detour to the flex stop. This allows GRT to extend the service area without increasing resources. It is estimated that 80 - 90 passengers use the service daily. All vehicles are accessible.</p>			
Additional Information			
https://www.grt.ca/en/schedules-maps/flexible-transit.aspx			

3.2.7 Milton Transit – GO Connect

Characteristic	Description	Characteristic	Description
Service Delivery	Origin-to-Hub	Transit Agency	Milton Transit
Booking / Scheduling	Scheduled On-Demand	Municipality	Milton, Ontario
Operating	Dedicated Vehicles – Municipal Non-dedicated Vehicles - Contracted	Land Use Context	Suburban
Trip Booking	Mobile App	Technology Provider	RideCo
Accessibility	Integrated into app upon request	Service Provider	Local taxis, Milton Transit
Proximity of Service	Stop Curb (premium fee)	Status	Terminated (pilot project)
Costing	Per trip and Per km	Fare Payment	Mobile App
Description			
<p>Milton's GO Connect service model used dynamic transit to provide enhanced connections to the Milton GO Train Station for GO Train arrivals and departures that did not have a direct local transit connection. The goal of this pilot was to put transit service where there was none and to provide a better level of service. The challenge in Milton was that a number of local transit services were not timed with GO Train arrivals/departures due to the variability of GO Train schedules. As a result, a number of customers would need to wait up to 20 minutes at the station for a connection between services. With Milton's GO Connect service model, customers could use a smartphone app to arrange for a local transit pick-up based on the GO Train arrival or departure time. Customers were charged a small fare premium for the direct connection to the GO Train and an additional fare premium if they wanted a pick-up or drop-off directly in front of their house instead of at a communal stop.</p>			
Additional Information			
https://www.milton.ca/MeetingDocuments/Council/agendas2016/rpts2016/ENG-003-16%20Dynamic%20Transit%20Pilot%20Project%20final.pdf			

3.2.8 Translink (Greater Vancouver, BC) – Bowen Island On-Demand Pilot

Characteristic	Description	Characteristic	Description
Service Delivery	Origin-to-Hub (Weekdays)/ Origin-to-Destination (Weekend)	Transit Agency	Translink
Booking / Scheduling	Scheduled On-Demand	Municipality	Bowen Island, British Columbia
Operating	Dedicated Vehicles – Municipal	Land Use Context	Suburban/Rural
Trip Booking	Call-In/Mobile App	Technology Provider	TapRide
Accessibility	Separated	Service Provider	Public
Proximity of Service	Curb	Status	Pilot
Costing	Unknown	Fare Payment	On Vehicle
Description			
<p>Translink (the regional transit authority in Greater Vancouver, BC) is piloting an app-based, on-demand transit program on Bowen Island, a suburban and rural municipality accessible by ferry from the rest of the region. The pilot is scheduled to be in operation between July 15th and September 15th, 2019.</p>  <p>The goals of the on-demand service are to put transit service where there is none, introduce service to growing area as a first phase, and provide a better level of service to grow ridership.</p> <p>The service is being offered in addition to the regularly scheduled, fixed-route service on Bowen Island and does not replace existing service.</p> <p>On weekday evenings (4:30 p.m. to 9:30 p.m.), the service operates with scheduled departures from the ferry terminal to any point in the service area. On weekends, the service provides flexible pick-up and drop-off to/from any stop in the service area from 10:00 a.m. to 5:30 p.m.</p> <p>Trips can be booked on-demand and up to two weeks in advance using a mobile app provider called TapRide.</p> <p>The service is operated using two shuttle buses that provide dedicated service in the service area. Customers can book their ride using the mobile app, but fare payment is made on-board the vehicle using cash or the smartcard. Passengers that don't have a smartphone can book a trip using the call centre during regular operating hours.</p>			
Additional Information			
https://www.translink.ca/bowen			

3.2.9 Calgary Transit – On-Demand Pilot

Characteristic	Description	Characteristic	Description
Service Delivery	Origin-to-Hub / Origin-to-Destination	Transit Agency	Calgary Transit
Booking / Scheduling	Scheduled On-Demand	Municipality	Calgary, Alberta
Operating	Dedicated Vehicles – Contracted	Land Use Context	Suburban
Trip Booking	Mobile App	Technology Provider	RideCo
Accessibility	Integrated	Service Provider	Third-Party Contract
Proximity of Service	Corner/ Stop (virtual)	Status	Operating
Costing	Service hour but monthly minimum	Fare Payment	Mobile App, Passes, Tickets (On Vehicle), No Cash

Description

In August 2019, Calgary Transit began a one-year pilot project offering on-demand transit service in the low density suburbs of Carrington and Livingston. Calgary Transit partnered with RideCo to provide a mobile-app for the service, and contracted operations to a third-party operator.



Customers book a ride through the RideCo app or call in. A single \$3.40 fare is charged for the service, which passengers can pay using a mobile app or on the vehicles. Customers are able to take origin-to-destination trips within Carrington and Livingston or origin-to-hub trips to the North Pointe shopping area and transit terminal. Virtual stops are identified through the mobile app and customers are expected to walk a short distance to access stops. At North Pointe, drivers offer transfers to customers who can continue their trip elsewhere in Calgary.

Trips can be booked up to three days in advance or on-demand when the trip is required. The on-demand service aims to arrive within 15-30 minutes of ordering a vehicle.

The average daily ridership is 70 passengers or five boardings per revenue vehicle hour.

Trips are delivered using a dedicated fleet of mini-vans. A third-party operator provides the vehicles and drivers. Maintenance to the vehicles is performed by an external service provider. Calgary Transit is the primary brand on the vehicles but RideCo has a small decal on the back. Drivers are not required to wear a uniform, but require onboarding checks (police, vulnerable sector check, driver's abstract), and training (customer service, sensitivity) through the technology provider. RideCo is compensated for use of their mobile app via flat fee per vehicle per month. Customers are required to bring their own car seat for children, and children under 12 must be accompanied by an adult. There have been minor difficulties with cellular coverage in a new community, but a larger problem is up-to-date mapping from turn-by-turn navigation providers. The mapping has since been updated manually by the provider.

Additional Information

<https://www.calgarytransit.com/news/calgary-transit-demand>

3.2.10

Cochrane Transit – COLT (Cochrane On-Demand Local Transit)

Characteristic	Description	Characteristic	Description
Service Delivery	Origin-to-Destination	Transit Agency	Town of Cochrane
Booking / Scheduling	On-Demand	Municipality	Cochrane, Alberta
Operating	Dedicated Vehicles – Contracted	Land Use Context	Suburban
Trip Booking	Call-In/Mobile App	Technology Provider	RideCo
Accessibility	Separated	Service Provider	Southland Transportation (Private)
Proximity of Service	Bus Stop	Status	Planned Pilot
Costing	Pay hourly per vehicle	Fare Payment	Mobile App/On Vehicle (no cash)


Description

In October 2019, the Town of Cochrane, Alberta will introduce Cochrane On-Demand Local Transit (COLT). It will start with 126 unique bus stops across the town where customers can board and alight. The eight low-floor, 21-seat buses will be fully accessible with rides for \$2.50. The goal of COLT is to increase coverage by adding transit to areas where there is none.

**Additional Information**

<https://calgaryherald.com/news/local-news/cochranes-colt-buses-to-take-riders-in-new-directions>

3.2.11 Winnipeg Transit – DART

Characteristic	Description	Characteristic	Description
Service Delivery	Hub to Stop	Transit Agency	Winnipeg Transit
Booking / Scheduling	Call-In	Municipality	Winnipeg, Manitoba
Operating	Dedicated Vehicles – Municipal	Land Use Context	Suburban
Trip Booking	Call-In/Driver	Technology Provider	N/A
Accessibility	Integrated	Service Provider	Municipal
Proximity of Service	Bus stop	Status	Operating
Costing	Hourly per Vehicle (operations)	Fare Payment	On-Vehicle
Description			
<p>Winnipeg Transit operates four on-demand “DART” services that are offered in low-density residential areas during periods of low demand. This includes weekday evenings and periods of weekend service. DART services start at a fixed route terminal and have scheduled departures. Passengers tell the operators which stop they wish to travel to and the operator determines a route to accommodate all requests. Passengers being picked up from the service area need to call in advance of when they are picked up. This low-tech solution works well for volumes up to ten boardings per bus hour. The goal of this service is to improve productivity of low performing routes and provide a better level of service to grow ridership.</p>			
Additional Information			
https://winnipegtransit.com/en/service/dart/about-dart/			

3.2.12 Innisfil Transit - Uber Partnership

Characteristic	Description	Characteristic	Description
Service Delivery	Origin-to-Destination Ridesharing Partnership	Transit Agency	Innisfil Transit
Booking / Scheduling	On-Demand	Municipality	Town of Innisfil, Ontario
Operating	Non-Dedicated Vehicles - Contracted	Land Use Context	Suburban/Rural
Trip Booking	Mobile App	Technology Provider	Uber
Accessibility	Separated	Service Provider	Uber
Proximity of Service	Curb	Status	Permanent
Costing	Per km	Fare Payment	Pay via app
Description			
<p>Innisfil did not have a local transit service and initiated a business case to implement one. Instead of implementing a fixed-route model, the municipality decided to partner with Uber in May 2017 to provide a public transit service pilot.</p> <p>The partnership is based on subsidizing Uber Pool trips (shared-ride) for trips within the Town. Passengers pay a flat rate of \$4 to \$6 for trips to pre-defined locations (e.g. the GO Station) and receive \$4 off the standard Uber fare for all other trips within the Town. Uber accepts payment from passengers directly and invoices the Town for the difference between the standard Uber Pool fare and the Innisfil Transit fare.</p> <p>A uniquely branded mobile app is used as a customer interface and to optimize trip requests. Passengers can book on-demand within five minutes of their desired travel time. The estimated time of pick-up will appear once the passenger books the trip, along with the estimated arrival time. Uber drivers operating their own vehicles are used to provide the service. For persons with disabilities, the Town has an agreement with Barrie Taxi to provide accessible taxis upon request. To book an accessible taxi, a customer must call the day before the trip request and cannot use the Uber app. For persons that do not have access to a mobile phone, iPads are provided at rec centers and the town hall for convenient booking. Residents can also call into a call centre to book a ride.</p> <p>One of the challenges with the service is cost control. As ridership increases, the cost of service increases (as the service focuses more on convenience rather than increasing vehicle occupancy). Ridership in the first eight months of 2017 was 27,000 and increased to 86,000 in 2018. Operating costs also increased from \$150,000 (first four months of the pilot in 2017) to \$640,000 in 2018. Based on anticipated increases in demand, the 2019 budget increased to \$900,000. To maintain this budget and avoid further increases, the town has reduced the fare subsidy and limited the subsidy to 30 trips per month per individual (customers can request up to 50 trips per month based on application process).</p>			
Additional Information			
<p>https://www.uber.com/ca/en/u/innisfil/</p> <p>https://innisfil.ca/transit/</p>			

Uber



3.2.13 York Region Transit – Mobility On-Request

Characteristic	Description	Characteristic	Description
Service Delivery	Origin-to-Hub-to-Destination	Transit Agency	York Region Transit
Booking / Scheduling	On Demand	Municipality	York Region
Operating	Dedicated Vehicles - Contracted	Land Use Context	Suburban/Rural
Trip Booking	Mobile App	Technology Provider	Routematch
Accessibility	Integrated	Service Provider	Contracted operators
Proximity of Service	Curb/Bus Stop	Status	Permanent
Costing	Per km	Fare Payment	Presto, YRT Pay App, cash

Description

York Region Transit began piloting a dial-a-ride service in 2016 with a Dial-a-Ride North service in the rural area of Georgina and East Gwillimbury. The service uses an on-demand mobile-app platform to optimize trips, connecting residents in the dial-a-ride zone to the closest fixed-route hub. The service is delivered by Mobility Plus, YRT's specialized transit service, which contracts out operations using a fleet of accessible Arboc vehicles, sedans and minivans.



The mobile app provider (Routematch) has been working with YRT over the past few years to customize an app that would allow co-mingling of trips between dial-a-ride customers and Mobility Plus riders. Once complete, it will also provide a complete origin-to-hub-to-destination solution where passengers can use the mobility app to plan their trip from origin to destination (including transfers to multiple on-demand zones). There are currently 15 dial-a-ride zones in York Region in both urban and rural areas.

The mobility app for the service was first piloted in the Fall of 2019 at the Aurora GO Station. With the success of the pilot, the mobile app will be made available in all 15 dial-a-ride zones. YRT has also undergone a rebranding, changing the Dial-a-Ride designation to "Mobility On-Request". Trips continue to be comingled with registered Mobility Plus clients and the Region is identifying new "Mobility On-Request" zones to expand the service.

Additional Information

<https://www.yrt.ca/en/our-services/on-demand.aspx>

3.2.14

Airdrie Transit

Characteristic	Description	Characteristic	Description
Service Delivery	Specialized transit: Origin-to-Destination Conventional: Origin-to-Hub	Transit Agency	Airdrie Transit
Booking / Scheduling	Call-in	Municipality	Airdrie, Alberta
Operating	Contracted	Land Use Context	Suburban
Trip Booking	Call-in	Technology Provider	N/A
Accessibility	Integrated	Service Provider	Airdrie Transit
Proximity of Service	Transfer point	Status	Permanent
Costing	Hourly cost per service hour	Fare Payment	Passes, tickets, cash
Description <p>Airdrie Transit on-demand service has been in place for two years. It services a population of about 70,000 people over an 85km² area. While the initial implementation of the service used a mobile app to plan and optimize trips, the mobile app provider chosen did not meet the expectations of the service, and therefore it was discontinued.</p> <p>Today, customers are required to call in to book a ride for areas in Airdrie that are more than a five-minute walk to the nearest local transit stop. The On-Demand service will pick customers up from a stop in an on-demand zone and connect them to one of eight designated transfer points.</p> <p>The service carries about 45 daily riders. The fare is the same as the regular local fare; transfers can also be issued.</p> <p>Additional Information https://www.airdrie.ca/index.cfm?serviceID=1353</p>			



3.3

Common Characteristics

Based on the above industry scan, a number of common characteristics can be noted.

1. **Technology** – Most new applications of on-demand service use mobile apps for booking and dispatch purposes. Of these, all offer a booking alternative for those without access to or comfort with smartphones.
2. **Integration with fixed-routes** – While there are origin-to-destination examples, most of the examples provide first-mile/last-mile service to fixed-routes (origin-to-hub).

3. **Productivity** – Most dynamic on-demand services are implemented to achieve cost savings compared to conventional fixed-route transit. This is typically in the form of after-hours service, or to meet coverage targets in low-demand areas.
4. **Limited accessibility integration** – Most services are currently being provided separately from specialized transit operations.

3.4 When Dynamic On-Demand Transit is Applicable

It is important to note that the introduction of dynamic on-demand transit services is not a one-size fits all solution and is not applicable in all contexts. There are many situations where continuing to provide and enhance fixed-route service will provide the most convenient level of service for customers, and will be more cost effective.

To be successful, dynamic on-demand transit services should complement and be integrated with a fixed-route network. This first involves an assessment of where a fixed-route is more effective, and which areas of the City or periods of the day should be considered for a dynamic on-demand service. A summary of typical service level criteria is presented in **Table 1** below:

Table 1: Service Level Criteria for Fixed-Route versus Dynamic On-Demand Transit

	Fixed-Route	Dynamic On-Demand
Proximity to Service	Majority of residents in close proximity to transit stops (less than 400 m walking distance)	Residents are outside of 400m walking distance of a fixed-route service
Route Structure	The route is relatively direct with minimal deviations that increase travel times	The route is fairly circuitous or has large one-way loops
Headway	Route provides headways of 20 minutes or better	Route has low headway (30 minutes or greater)
Key Origins and Destinations	There is a high demand for service between similar origins and destinations along the route	There are minimal origin / destination pairs on the route that have a high demand (ridership is more scattered)
Productivity*	Ridership above 15 boardings per revenue vehicle hours	Ridership below 12 boardings per revenue vehicle hour

**Note: The exact productivity rate is dependent of the geographic area and the operating model and cost implemented for dynamic on-demand service and should be used as a guide.*

4.0

Application in Burlington

4.1

Guiding Principles

A working session was held with key Burlington Transit staff to help identify guiding principles in the development of a dynamic on-demand transit strategy. Staff were engaged in identifying their vision, which was used in the evaluation of different dynamic on-demand transit models. Based on this session, the following guiding principles were identified:

1. **Convenience:** The solution should emphasize customer convenience and reduction in travel time in order to encourage ridership growth.
2. **Adaptable and Scalable:** As technology evolves and new applications are found within the City, the solution selected should be adaptable and scalable to meet future needs.
3. **Accessible:** The solution should be accessible for all residents regardless of age or ability. This includes having a dial-in option available to book a ride if a mobile-app based on-demand model is selected and accessible vehicles available that can support persons with disabilities.
4. **Safety and Security:** The solution selected should emphasize customer and operator safety and security through appropriate driver training, use of safe vehicles, etc.
5. **Environmental Footprint:** The service model should be reflective of current environmental efforts and plans proposed by the City of Burlington.
6. **Congestion Reduction:** The service model selected should decrease overall vehicle kilometres and/or time travelled by placing emphasis on ridesharing.
7. **Branding:** The service should be branded as a part of the Burlington Transit system.
8. **Financial Sustainability:** The service should be financially sustainable and be implemented in areas/periods where it leads to an improved level of service at a lower cost.
9. **Fare Integration:** The service model should be integrated with the Presto card and follow the same fare structure as the fixed-route service.
10. **Reliability:** The service should be reliable in terms of on-time performance and vehicle availability.
11. **Ease of Use:** The service should be easy to use and simple to understand.

Of the eleven guiding principles identified above, emphasis was placed on “Convenience”; having a system solution that will be attractive and result in ridership growth.

4.2 Context

The identification of a dynamic on-demand transit service in Burlington must also consider the context in which it will operate. There are a number of opportunities and constraints that should be considered when selecting a model. These are highlighted below:

Presto Fare Card System

Burlington Transit uses the Presto fare card system for all discounted fare media. This includes monthly passes and discounted tickets. Any solution that is selected must ensure it is capable of being integrated with Presto. Currently, this would require every vehicle to have a mobile Presto Card reader.

Fare Policy

Burlington Transit currently offers discounted fares based on demographics (seniors, students and children) and frequency of use (monthly pass, tickets and cash). Any solution proposed should be integrated with and use the existing Burlington Transit fare system, including fare discounts. Cash fares are the exception. In a mobile-app based solution, single-ride fares should be paid for on the mobile app instead of cash exchanging hands with the operator. Higher fares may be considered for premium service, but only if a fixed-route option at the standard Burlington Transit fare is also available to the customer.

Accessibility

The Accessibility for Ontarians with Disabilities Act will need to be adhered to for any solution. This means that the solution should ensure:

- an accessible vehicle is available upon request;
- the ability to accommodate attendants at no fare;
- mobile apps (if used) are able to be read by screen readers (WCAG); and
- drivers receive sensitivity training for accommodating persons with disabilities.

Use of Specialized Transit Vehicles

Currently, Burlington Transit's specialized transit fleet of 14 vehicles are occupied during the daytime period, but do have some capacity to operate dynamic on-demand transit services during the evenings and early mornings. In order to offer a consistent and reliable service, the use of these vehicles would require the features of the dynamic on-demand vehicles to match those of the specialized transit fleet.

Potential to Use Existing Specialized Transit Scheduling Software

The potential to use the existing scheduling software used to book specialized transit trips for dynamic on-demand transit services was explored. Based on the review, it was determined that the existing software does not have the capability to achieve a number of the guiding principles noted by City staff. To ensure that this is possible in future, dynamic on-demand transit solutions for Burlington should be capable of supporting specialized transit scheduling functions in addition to dynamic on-demand services.

Hours of Operation of Existing Call Centre

Burlington Transit currently operates a customer call centre to book specialized transit trip requests and answer questions from customers and residents about the Burlington Transit service. The call centre is open from 8:00 a.m. to 5:00 p.m. on weekdays, with no service on weekends. Supervisors are available to handle specialized transit trip cancellations when the call centre is not open, but they do not book new trips. The call centre does have some capacity to book new dynamic on-demand trips, but this is limited. Any significant increase in ridership may warrant adding new staff. There is also no current capability to book trips outside of the customer call centre hours using existing Burlington Transit resources.

Collective Agreement

The existing collective agreement with current operators limits Burlington Transit's options with regards to the provision of transit services by other parties. As such, it is important that any dynamic on-demand service does not replace the role of current operators. If a contracted operating model is selected, it should augment the current municipal-run fixed-route system, resulting in no job loss.

Taxi Service By-Law

As taxis and Uber already operate in the City of Burlington, existing taxi service by-laws are expected to allow for dynamic on-demand transit services involving ridesharing. However, these by-laws should be reviewed to ensure that they do not preclude any vehicle types, service models or future innovations in the dynamic on-demand transit space.

Policies around Travelling with Young Children, Packages and Service Animals

Currently, Burlington Transit allows children, packages and service animals on all transit services, including Specialized Transit. As the carriage of packages, young children and service animals is expected to continue, some dynamic on-demand transit vehicles will need to accommodate this. Additionally, any booking system will need to allow passengers to identify these requirements to ensure that an appropriate vehicle is scheduled for their trip.

Risk Management

Like any transit service change, the introduction of dynamic on-demand services should be aware of and work to mitigate Burlington's identified enterprise risks. In helping to improve mobility within the City, dynamic on-demand transit is expected to help mitigate enterprise risks.

4.3**Service Objectives (applications of dynamic on-demand service)**

Based on the industry scan of systems, the guiding principles and the understanding of the Burlington context, there are a number of general applications for dynamic on-demand transit services that should be considered in Burlington:

- Replace Poor Performing Routes (or Route Segments):** Areas with boardings less than 12 boardings per revenue vehicle hour could be considered to improve productivity. This may not need to be a full route, as large route deviations could be considered for dynamic on-demand service if the removal of the fixed-route deviation improves the directness of the main route and reduces operating costs or vehicle requirements (or allows for a frequency improvement using existing fixed-route resources). In certain cases, dynamic on-demand service may replace existing routes during low demand periods of the day or days of the week (e.g. weekday late evenings or Sundays).
- Introduce to Areas with Limited Proximity to Transit Service:** As certain routes are removed and focus shifts to the arterial roadway network, there will be certain residents that are no longer within a 400-metre walking distance of a fixed transit route. Dynamic on-demand transit offers a significant advantage in terms of proximity to service, as the dynamic on-demand route has more opportunity to access the entire service area based on customer trip requests. Since the vehicle is not tied to a fixed-route, this increases the number of residents within a five-minute walk of a dynamic on-demand transit stop. When assessing this, consideration should also be made to understanding the demographic of the community. Communities with a high senior population are more impacted by long walking distances, and these become good applications for dynamic on-demand transit service.
- Early Introduction of Service:** Similarly to areas with limited proximity to transit service, dynamic on-demand service may be applicable to growing areas that do not yet have the population/employment to support a fixed-route service. Smaller vehicles operating only where needed offer the opportunity to provide greater coverage of developing areas, allowing people to use transit from the early days of a development area. This allows transit to be instilled as a mobility choice, reducing reliance on other modes. As these areas grow and road networks expand, the transit service can be converted to a larger fixed-route model.
- Improve Connections to Rapid Transit Stations:** GO Transit schedules do not always align with local Burlington Transit schedules. This can result in long waiting times for customers transferring between the two services. Providing good transit access to GO stations is important. As space for parking is limited and congestion around major stations becomes problematic, tools to reduce the attractiveness of driving and parking are important to keep the station functional. When GO Train service is more frequent than fixed-route Burlington Transit connections, dynamic on-demand transit can be used to connect to GO Trains that do not have a seamless Burlington Transit fixed-route connection (e.g. early morning or late evening services). This ensures that customers using GO Train services have a seamless Burlington Transit connection for any train they take (either fixed-route or dynamic on-demand). These are similar benefits to the provision of high frequency transit services to stations, with the added convenience of more personalized routing.

- **Provide a Premium Level of Service to Supplement Existing Fixed-Route Service:** As a further development of improved connections to stations, dynamic on-demand transit can provide a more convenient and personalized transit experience across the entire network. By increasing rider convenience with on-demand services, overall ridership would grow and premium services could be a gateway, bringing in new customers who then go on to use the conventional system as well. This could be applicable in low demand periods where there are low-frequency fixed-routes, but passengers that do not want to wait could select a more frequent dynamic on-demand option at a premium fare.

5.0

Evaluation of Alternatives

In reviewing the many aspects and models currently available for dynamic on-demand transit, not all are the best fit for the Burlington context. This decision-focused evaluation aims to guide the selection of features that are most relevant to the Burlington Transit context and to select an appropriate option to pilot. The evaluation is based on:

- alignment with guiding principles;
- ease of implementation in the City of Burlington; and
- alignment with service objectives (purpose of the service).

The evaluation of alternatives includes the use of technology, service delivery models and operating models.

5.1

Booking and Scheduling Interface

One of the first steps in developing a dynamic on-demand model for Burlington is to confirm the booking and scheduling interface. As noted previously, there are two options to consider: manual scheduling and the use of a mobile app.

Manual scheduling for dynamic on-demand transit has a long history and has been used by a number of transit agencies to provide dial-a-ride service, trans-cab and zone bus service. The solution does not require a large investment in technology, but is not as effective in optimizing trips (to share rides and minimize vehicle kilometres traveled). It is also not seen as an attractive interface by many customers, as manual scheduling typically involves more notice and effort by the customer to book a ride. A mobile app, on the other hand, provides the opportunity for customers to book, track and pay for their trip in real-time.

Based on the assessment of guiding principles noted above, a mobile app-based solution was felt to be more convenient and easier to use and more effective at optimizing trips and thus reducing vehicle kilometres traveled over a manual scheduling solution. For these reasons, any dynamic on-demand service model piloted for Burlington should utilize a mobile app-based booking and scheduling platform.

Recommended Strategy:

1. Procure a mobile app-based platform to pilot a dynamic on-demand transit service in Burlington. The platform should be capable of supporting several service delivery and operating models, enabling the implementation of different service types at different times of the day and in different parts of the City.

5.2 Purpose (Service Objectives)

The purpose and role of a dynamic on-demand transit service must be determined. Each purpose has implications for service delivery and operating model choices, as well as, how the services would integrate with the rest of the transit network.

Table 2 below illustrates the five potential applications (service objectives) of dynamic on-demand transit and includes potential applications and suitability in the Burlington context as a pilot. Based on this assessment, an evaluation is made as to the suitability of potential service delivery objectives.

Table 2: Service Level Criteria for Fixed-Route versus Dynamic On-Demand Transit

Purpose	Poor Performance Routes	Limited Proximity Areas	Early Service Introduction	Rapid Transit Connectivity	Premium Transit Service
Burlington Example	Late night only routes (50, 51, 52) Late night services on local routes	Areas along Lakeshore Road Between arterial roads	New growth areas - Tyandaga	Aldershot GO Burlington GO Appleby GO	Network-wide
Implications	Reduce cost by providing less resources in areas of lower demand Specialized Transit fleet available during evening periods only App-based origin-to-destination or origin-to-hub	Improve coverage by providing service in fringe areas Service area(s) needs to be large enough or joined together to support service App-based origin-to-hub	Improve coverage by providing service in new areas Encourage early adoption of transit App-based origin-to-hub	Incremental benefit over existing transit services Duplicates fixed-route changes in Business Plan App-based origin-to-hub	Incremental benefit over existing transit Ridership growth App-based origin-to-destination Ridesharing Partnership
Suitability	Yes	Yes	Yes	Yes	No

Recommended Strategy:

1. Explore the suitability of dynamic on-demand transit services (via a pilot) for the trip purposes identified in **Table 2** above).

5.3 Service Delivery Model

The selection of a service delivery model is dependent both on the guiding principles for service as well as the service objectives (the reason for implementing a dynamic on-demand service). There are five service delivery models that were considered. The suitability of each service delivery model for each service objective in Burlington is assessed in **Table 3** and discussed further below.

Origin-to-Destination

The application of an origin-to-destination model in Burlington would be most applicable as a replacement of poor performing routes or routes in a large geographic area and/or where customers received a poor level of service (e.g. infrequent service with poor proximity and long travel times due to long, circuitous route design).

A potential application that could be considered would be the replacement of the late night service (Routes 50, 51 and 52) with an origin-to-destination dynamic on-demand service. In this example, the service model would utilize three to four smaller vehicles to provide a one-seat ride with connections to the GO Stations and key stops along Route 1.

Table 3: Application of Various Dynamic On-Demand Service Delivery Models

Purpose	Poor Performance Routes	Limited Proximity Areas	Early Service Introduction	Rapid Transit Connectivity	Premium Transit Service
Origin-to-Destination	✓	✓			
Origin-to-Hub	✓	✓	✓	✓	✓
Origin-to-Hub-to-Destination	✓	✓	✓	✓	✓
Flex Route	✓	✓	✓		
Ridesharing Partnership	✓	✓		✓	✓
Suitability	Yes	Yes	Yes	Yes	No

Origin-to-Hub

As noted in the industry scan, the majority of Canadian examples utilize an origin-to-hub approach, connecting passengers in low-demand areas to a fixed-route stop. This approach is also referred to as the first-mile/last-mile of service. An origin-to-hub model is typically used in smaller geographic areas

to accommodate various service objectives. It is important to note that the size of the geographic area planned for this service is dependent on the headway of the fixed-route service at the transfer point and the demand for service. For example, if the on-demand service connects to a GO Station with trains that operate every 30 minutes, the size of the zone should be based on the ability of the on-demand vehicle(s) to travel within the on-demand zone and get back to the GO Station to make the train connection. Some examples to consider include:

- Rapid Transit Connectivity:** There are certain routes in the Burlington Transit network that could be modified or eliminated to improve the directness to major hubs such as GO Stations. Additionally, there are some conventional routes that may not meet early or late GO trains that could be supplemented by on-demand services. Specific dynamic on-demand zones could provide internal full origin-to-destination service and origin-to-hub connections to GO Stations or other major hubs. Identifying specific routes that may be applicable should only be recommended after careful analysis of customer data at least six to nine months following Burlington Transit's update to the route network in September 2019.
- Improve Proximity to Service:** An origin-to-hub service model could also be used to connect residents in areas with limited access to transit to a fixed-route service. The area along Lakeshore Road provides a potential example of where this type of service could be piloted, with connections provided to key intersections on New Street (e.g. Guelph Line, Walkers Line and Appleby Line).
- Poor Performing Routes:** Since most routes on the Burlington Transit network meet minimum productivity targets, there may be limited opportunities to replace entire routes with this model. Routes to be further explored include Route 87 and services to industrial areas (Routes 80 and 81). Route 87 is fairly short and operates through local streets and have some indirect one-way loops. The industrial routes can be very peak-oriented based on shift-times, with other periods attracting minimal ridership. These may be potential candidates to consider once the impacts of the new service change are better understood.

Origin-to-Hub-to-Destination

This model is an evolution of the origin-to-hub model, and allows customers to plan their entire trip using the dynamic on-demand software (instead of just the portion of their trip from origin to transfer point). The existing or future capability of mobile app providers to accommodate this should be explored, as it is seen as an evolution of the service.

Flex Route

The flex route model could be applicable on local routes that provide a linear service that deviates from the most direct path. Two examples may be Route 4 (which provides service on the local roadway network between North Shore Boulevard / New Street and Plains Road / Fairview Street) and Routes 80 and 81 (which provides service to a number of industrial employers and could be used to provide closer

service to the door of a large industrial employer when a flex stop is requested). Moving to a flex route should only be considered if a technology-based solution is applied.

Ridesharing Partnership

Ridesharing partnerships can be beneficial in terms of providing a high level of service, but do not focus as much on optimizing vehicles to share rides. Because the service typically operates with non-dedicated contracted vehicles, issues of cost control and an increase in vehicle kilometres travelled can also arise. Where ridesharing partnerships are most effective are in areas of very low demand (e.g. less than five trips per revenue vehicle hour) or if the objective is to supplement existing low frequency service at a premium fare (e.g. providing customers a choice to pay more for a direct on-demand route rather than wait for a fixed-route service). When assessed against the guiding principles, this service delivery model is not suitable in the near term to replace existing services or to provide a premium service at a subsidized fare. However, consideration should be made to creating a more seamless experience between transit and ridesharing services to provide customers with more choice, particularly for the first/last mile of their trip.

Recommended Strategy:

1. Explore the use of an origin-to-destination service model during late night and early morning periods with the potential to start service earlier based on performance of existing fixed-routes and the pilot dynamic on-demand transit service.
2. Explore the use of a flex route on linear local routes where there are concerns over walking distance.
3. Explore the use of an origin-to-hub pilot to improve connections to the GO Station and other core routes in areas with poor performing routes.

5.4 Operating Model

The operating model is important to consider when identifying how to operate the dynamic on-demand transit pilot in Burlington. Each has its own benefits, depending on the purpose of the dynamic on-demand service. The implications of each operating model assessed in **Table 4** below are based on the potential service strategies stated in the Purpose (Service Objectives) and Service Delivery Model sections above.

Recommended Strategy:

1. Explore the use of a dedicated municipal model for any pilot focused during the off-peak periods only (based only on availability of specialized transit vehicles).
2. Utilize a dedicated contracted model for any pilot projects that are implemented during core operating hours to limit capital expense during the pilot project.
3. Assess the effectiveness of both operating models at the conclusion of the pilot before expanding.

Table 4: Assessment of Operating Models

Operating Model	Dedicated (Municipal)	Dedicated (Contract)	Non-Dedicated (Contracted)
Model	Vehicles and drivers procured by Burlington Transit	Vehicles and drivers procured by contractor	Vehicles and drivers procured and coordinated by contractor
Availability of Fleet	Use existing vehicles and drivers during off-peak periods. Need to purchase new vehicles and hire new drivers during peak periods	Vehicles can be supplied by the operator and included as part of the operating rate (no capital purchase)	Vehicles can be supplied by the operator and included as part of the operating rate (no capital purchase)
Cost Effectiveness	More cost effective as ridership grows (vehicle supply fixed, therefore goal to fill up capacity through ridesharing)	More cost effective as ridership grows (vehicle supply fixed, therefore goal to fill up capacity through ridesharing)	Cost effective for low demand areas (only pay when a trip is complete). Less cost effective when demand is higher
Cost Control	Certainty of cost based on hourly operating rate and fixed supply of drivers	Certainty of cost based on hourly operating rate and fixed supply of drivers determined in the contract	Less cost control if Burlington is not in charge of dispatching vehicles (supply is added to accommodate increasing demand)
Branding	Burlington Transit vehicles used	Vehicles can be branded with Burlington Transit logo	Vehicles may not be branded with Burlington logo
Fare Integration	Easy integration with Presto card and cash payment (fare equipment typically on vehicle)	Easy integration with Presto card and cash payment (may require purchase of a Presto card reader)	Integration with Presto card more difficult (each non-dedicated vehicle requires a Presto Card reader)
Reliability	Guarantee availability of a driver during low demand periods when it may be difficult to attract a non-dedicated driver	Guarantee availability of a driver during low demand periods when it may be difficult to attract a non-dedicated driver	Non-dedicated drivers may not accept short trips that may not generate income or may choose not to be available during certain periods
Integration with Specialized Transit	Ability to integrate dynamic on-demand trips with specialized transit services (utilize same fleet)	More difficult to integrate services if provided by two different operators	Services are not typically integrated unless there is a fleet of accessible non-dedicated vehicles to accommodate trips

Operating Model	Dedicated (Municipal)	Dedicated (Contract)	Non-Dedicated (Contracted)
Collective Agreement	Few collective agreement concerns	Potential collective agreement concerns	Potential collective agreement concerns
Suitability	Good solution for late night or other off-peak service models where specialized transit vehicles are available	May be a simpler/lower risk option for all-day operation options. Allows Burlington to pilot daytime service with limited capital expense	Good for very low-usage areas that don't warrant dedicated vehicles
Suitability	Yes	Yes	No

5.5 Other Considerations

There are a number of other factors to be considered when designing a dynamic on-demand service. Based on the guiding principles noted above, some preferences for each are noted below:

5.5.1 Proximity of Service

Service models should use existing bus stops or virtual stops to connect customers to the dynamic on-demand service. Requiring customers to converge to a common area can increase the effectiveness of the service (rather than picking up passengers from the curb of their home or destination).

Stops used as transfer points should be fully accessible (concrete pad, sidewalk), have passenger amenities (e.g. bench, shelter, trash receptacle), be safe (e.g. well-lit area) and connect to two or more fixed-routes.

5.5.2 Trip Booking

The trip booking model should promote on-demand service, with the ability to also book scheduled and subscription trips ahead of time. For on-demand trips, it will be important to identify the degree of spontaneity in which customers can book trips. During low demand periods where there are fewer vehicles operating in a large geographic area (e.g. potential replacement of late-night service), customers should be recommended to provide between half hour to one hour's notice when booking a ride. This increases the ability to optimize trips. The amount of notice required decreases as the geographic area covered by the on-demand service decreases.

5.5.3 Accessibility

For the pilot service, specialized transit and dynamic on-demand transit should continue to be separated, particularly if the service is contracted. The specialized transit service uses its own scheduling software program which may not be compatible with the dynamic on-demand mobile app. In the process of selecting a mobile app provider, the ability to integrate dynamic on-demand service with specialized transit should be a key consideration.

5.5.4 Costing Model

If the service is contracted to a third-party operator, the costing model selected should encourage trip optimization. Costing models that pay the contractor by the hour or per kilometre can help maintain cost control by optimizing the number of passengers that share rides.

5.5.5 Level of Service and Customer Focus

In order to function as a viable part of the transit network, dynamic on-demand services needs to be able to provide service to customers without excessive wait times. Whether this is regulated by being a scheduled on-demand service, or there are maximum wait times specified for a fully dynamic service, these impact the cost and efficiency of the service. While lower wait time options provide greater customer benefits, the cost is higher as additional vehicles are required to ensure that they can provide the required coverage. As such, utilization time per vehicle will likely decrease.

If dynamic on-demand transit is feeding to other transit services, it is beneficial that the level of service matches that of the conventional fixed-route service it is connecting to. In this way, scheduled on-demand or flex services may be appropriate, particularly if the fixed-route service isn't operating at a high frequency.

Beyond customer convenience, service levels affect the overall capacity and attractiveness of the service. If demand and capacity are high, the cost of providing the service may exceed that of a fixed-route and therefore productivity gains are lost. If this is the case, a dynamic on-demand service may be the precursor to conventional fixed-route transit as demand grows.

5.6 Summary

Burlington Transit's dynamic on-demand transit pilot should target poor performance routes, areas with poor transit proximity and/or new service areas. The pilot should use an app-based system, with a non-app booking option, to allow for the greatest efficiency and passenger convenience. Technology providers can cater to different service purposes simultaneously and Burlington should consider whether a pilot would cater to one or multiple purposes initially.

To ensure vehicle availability, branding and consistency, the pilot should use a dedicated fleet, provided either in-house or through a contractor. Choosing a dedicated fleet means that new, potentially very low-ridership areas may not be viable for a pilot. Therefore, the pilot should target existing low-ridership services, such as after hours or low-ridership areas. If after hours services are targeted, then the Specialized Transit fleet and existing bus stops could be utilized, which would reduce upfront costs and risk. Such a pilot would connect passengers in certain low-after-hours-ridership areas to fixed transit routes and hubs.

6.0

Next Steps

Based on the above information and summary, the next step is to work to finalize and document a dynamic on-demand transit service. Prioritizing potential purposes and areas will help to define and refine the characteristics of a potential pilot project.

With a fixed purpose, service delivery model and operating model identified, an RFP can be developed for a dynamic on-demand service pilot. This RFP should be specific in articulating Burlington's requirements and desires, but flexible enough to allow for innovation from potential bidders. Depending on the desired purpose, it is anticipated that Burlington's dynamic on-demand transit RFP will include the following specifications:

- Service hours and level of service;
- Service area(s);
- Service delivery model;
- Operating model;
- Length of pilot;
- Whether Burlington Transit is providing operators and vehicles;
- Accessibility requirements;
- Branding requirements; and
- If Specialized Transit integration is a current or future goal.

DILLON
CONSULTING

BURLINGTON TRANSIT
Five-Year Business Plan
(2020-2024)



October 2019 – 19-9087

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This report references 2019 year-end estimated ridership for all calculations and all financial figures are in 2020 Canadian dollars. All forecasted costs, ridership, and resource requirements do not include specialized transit.

1.0 Introduction



1.1 The Value of a Business Plan

The 2020-2024 Burlington Transit Business Plan represents Burlington Transit's first business plan in many years. A business plan is an effective tool that can be used to manage the delivery of transit services, particularly during periods of change. The primary purpose of the plan is to ensure individual strategies, projects and activities are aligned and contributing to Burlington Transit's vision and policy objectives. This includes prioritizing and staging key decisions to fit within the City's financial guidelines.

The business plan is also an important communication tool that will clearly set out steps required to move towards the long-term direction of the City. Over the next five-years, the business plan will form the guiding document in which operational decisions and financial budgets should be built around. The plan will layout an action plan based on the priorities which will be evaluated yearly throughout the duration of the plan to ensure priorities are being achieved.

1.2 Burlington Transit – Past and Present

To understand how Burlington Transit got to where it is today, it is important to understand our history and recent achievements. Over the past ten years, our ridership grew by 6.1 percent. This did not represent a linear growth, with our ridership peaking in 2012, only to experience a decline between 2013 and 2016. This decrease in ridership was reflective of a similar decline that was seen in a number of transit systems across Canada. Much of this was due to an increase in unemployment rates as well as changing attitudes towards mobility, particularly from younger generations who have placed a higher emphasis on demand responsive service levels with the introduction of ride hailing services.

Over the past few years, our ridership has been rebounding, and is anticipated to reach approximately 2 million rides by the end of 2019. These recent increases in ridership are a result of a number of changes in how we deliver service and a renewed focus on our customers. This has also resulted in an increase in productivity (measured through boardings per revenue vehicle hour).

To be successful and meet our customer needs, investment in service must also be effective, and allocated in areas where our customers will benefit the most.

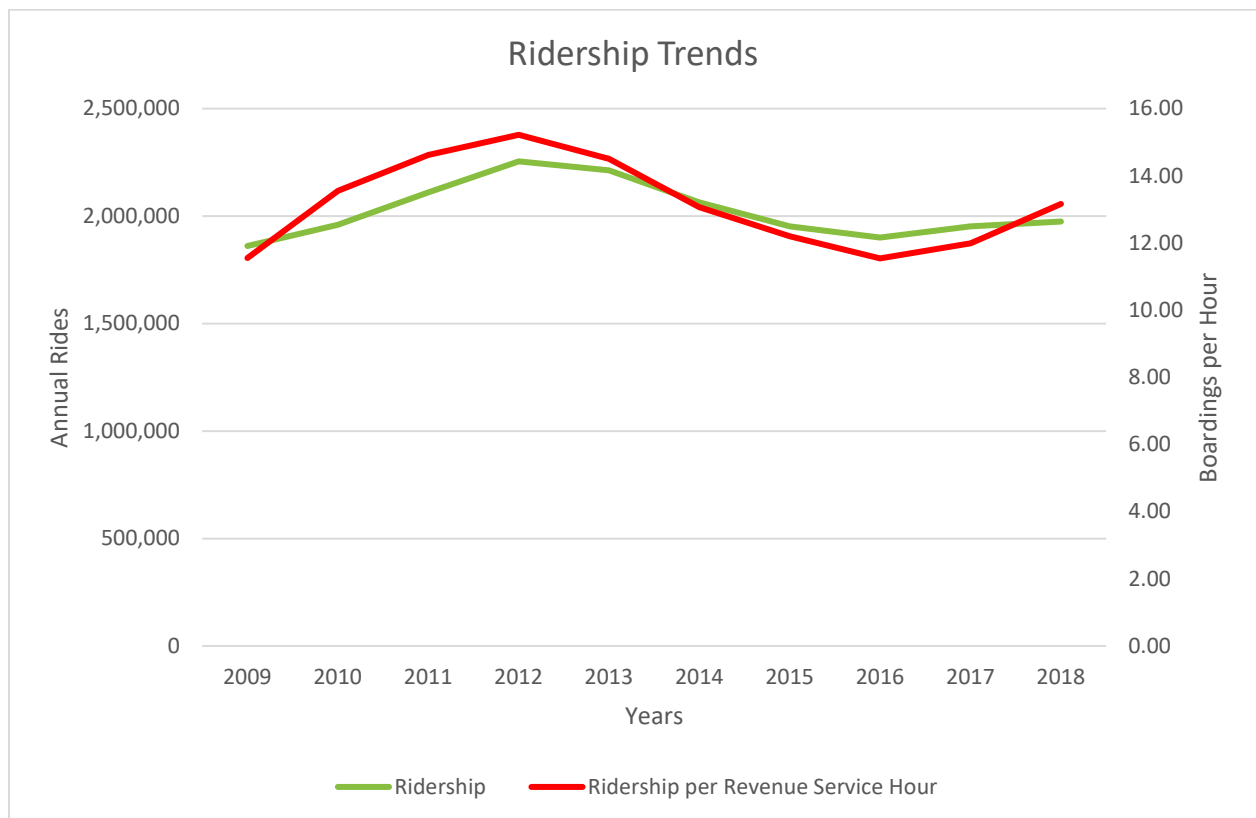


Figure 1: Historic Ridership Trends

There are a number of milestones and achievements that we have achieved that has resulted in this recent increase in ridership and are important to recognize when developing a business plan for the next five years. Since 2017, Burlington Transit has undergone significant changes, underscoring the ridership and efficiency improvements witnessed towards the end of the past ten-year period. These changes and achievements include:

Improved Engagement with Customers

We have undertaken a number of recent initiatives to improve engagement opportunities with our customers. This includes the initiation of an Annual Survey and improved on-street communications with customers to better gauge customer responses to the service. These types of activities have helped our staff better understand how the current service is meeting the needs of existing customers and how it could be improved.

Communications and Legibility

To attract new customers to the system, residents must first understand how the system works and how to use Burlington Transit to connect to different areas of the City at different times of the day and days of the week. One of our key initiatives was to develop a new Ride Guide with a new and more legible map format. New customer friendly printed schedule formats have also been made available to customers that do not have access to a smart phone and prefer a paper format to know when and where their next bus will arrive.

Planning and Operations Staffing

Having the appropriate staff complement will help an organization deliver on its mission. A review of the organizational structure was completed and identified a need for additional staff required to meet day-to-day operating requirements and deliver on long-term strategies. Burlington Transit has gone through a fairly significant transition in staff over the last 2 years with replacements, due to turn over, in several of the key positions including:

- Planning and Scheduling Team;
- Operations Manager;
- Marketing and Customer Service Coordinator;
- Business Services Coordinators;
- Transit IT Analyst; and
- Manager, Planning and Business Services.

In addition to the above changes, improvements were also made to staffing levels in Operations. A number of transit operators that were in a casual position were hired into a full-time position. This has decreased the exodus of transit operators leaving to seek full-time employment with other transit agencies. Maintaining this type of consistency has improved the quality of staff and how they interact with customers.

Route Design

A number of improvements were made in the route structure to increase schedule reliability and improve service levels. The most significant improvement to the service was to further streamline Route 101 and reduce the overall travel time on this semi-express route. In September 2019, Burlington Transit's plan of moving to a more grid like system became a reality. Future service plans will see the system move to a more grid-like structure, reducing overall travel time for many customers by limiting the number of indirect deviations on a route or service. Over the duration of this business plan, this will be complemented with more on-demand alternative service delivery services in low-demand areas that cannot be reliably serviced by the grid-like fixed-route network.

On-board and Off-board Customer Amenities

On-board and off-board improvements were also made to customer amenities and the safety and security of the system. New shelters were installed at the downtown terminal to improve customer comfort during inclement weather.

On board buses, new on-board security cameras were also installed. Keeping customers safe on the system is often not a visible feature on a vehicle, but is the number one priority for Burlington Transit.

1.3

Alignment with Strategic Policy and Targets

To be effective, a Business Plan needs to be aligned with the strategic directions identified in key municipal policies.

Both the Region of Halton and the City of Burlington place a significant emphasis on sustainable transportation and Burlington Transit's role in improving mobility. This includes ambitious targets to increase transit ridership and the associated actions that need to be taken to get there (e.g. focusing transit supportive development and intensification around corridors and mobility hubs and supporting transit priority features that improve the reliability and travel time of transit services).

To align with these regional and city-wide policies and targets, Burlington Transit will identify strategies to shift a greater proportion of traffic to public transit by improving service along higher density corridors and nodes, including providing seamless connections to neighboring municipalities and expanding the use of express routes and services.

Burlington 2015-2040 Strategic Plan

- Burlington is a **City that Moves** (a transportation network where people can move throughout the city more efficiently and safely, based on a variety of convenient, affordable and green forms of transportation)

2018-2022 Burlington's From Vision to Focus

- Council's 4-year work plan focuses on specific priorities which include:
- Transit Utilization: increasing Burlington Transit Service levels and growing overall ridership
- Modal Split: improving the transit and transportation modal split
- Transit Access: improving access to Burlington Transit service

Current Burlington Official Plan

- Focus on targeted intensification, innovative approaches and new technologies to enhance mobility choices
- Prioritizing active transportation and transit
- Consider Transit Priority Measures along Primary, Secondary and Employment Growth Areas

Halton Region Transportation Master Plan

- Increase the combined local and inter-municipal transit mode share target in the Region to 20 percent of all A.M. peak trips by 2031 (9 percent for Burlington Transit)

2.0 Policy Framework



Setting a policy framework is critical to providing guidance to an organization that is aligned to a common vision. Our Vision defines where we are headed and what we want to be, while our Mission and Strategic Priorities identify strategies and actions that will get us there. This must be aligned with broader City-wide goals and measured against key performance indicators that allow us to monitor how far we have come to achieving our Vision.

2.1 Vision and Mission

Our Vision is simple: ***Advancing Innovative Mobility*** for residents, employees and visitors.

To deliver on this vision, our mission is ***to provide mobility services that are reliable, efficient and innovative.***

The vision recognizes the importance of sustainable mobility options, the importance of service quality and customer convenience to reduce automobile travel, and the need for forward-thinking innovation to plan and operate the type of service that is required to achieve the strategic directions identified in the 25-year City of Burlington Strategic Plan, and within the short term with the 2018-2022 From Vision to Focus plan. Our mission describes how we will achieve our vision, with a focus on reliable, efficient and innovative service.

2.2 Strategic Directions

The final aspect of a policy framework is to define strategic directions, supported by key objectives. Strategic directions are vital to the success of the business plan and are meant to identify a course of action that supports the vision and mission. We have defined the following strategic directions and associated objectives to guide us over the next five years.

Strategic Direction #1: Be Customer-Focused in every aspect of how service is delivered

- Objective 1.1 – Service Excellence:** To plan and operate a convenient and easy-to-use service, that is frequent, comfortable, reliable, and offers complete, connected trips.
- Objective 1.2 – Image:** To grow a positive brand that is responsive to and inclusive of the community it serves.
- Objective 1.3 – Travel Time:** To strive to deliver a service that minimizes end-to-end travel times by exploring transit priority features, minimizing route deviations and reducing transfer time.
- Objective 1.4 – Safety and Security:** To offer a safe and secure environment to our customers and employees, both while on board the vehicle and at stops, stations and terminals.
- Objective 1.5 – Workplace Culture:** To foster a safe, positive and engaged work environment that stresses the importance of well-being and customer service.
- Objective 1.6 – Accessibility:** To enhance the accessibility of the service and transit facilities for all customers, regardless of their level of mobility
- Objective 1.7 – Integrity:** To treat our customers and employees with dignity and respect at all times, regardless of individual differences, fostering a culture that instils trust.
- Objective 1.8 – Affordability:** To balance affordability of fares with fiscal responsibility
- Objective 1.9 – Availability:** To provide, where feasible, mobility options when and where a customer needs to travel.
- Objective 1.10 – Information:** To provide accurate information about the service that is easy to understand and is accessible, in real-time where feasible.
- Objective 1.11 – Communications:** To provide timely and honest communications about service disruptions and responses to customer inquiries and feedback that allows the customer to feel valued.

Strategic Direction #2: Be Forward-Thinking in how services are planned and delivered

- Objective 2.1 – Technology:** To be abreast of and critically assess opportunities to introduce technological advancements that will help enhance the customer-experience, improve operations and/or reduce Burlington Transit’s environmental footprint.
- Objective 2.2 – Alternative Service Delivery:** To explore and embrace new service delivery models and vehicle types that allow Burlington Transit to effectively-serve low demand areas and periods and new mobility options that cater to a more discerning customer-base.
- Objective 2.3 – Sustainability:** To promote sustainability and develop resilience for a changing environment, taking into account environmental, economic and social factors in our decision making.
- Objective 2.4 – Proactive Planning:** To understand and forecast shifts in community and customer needs in order to be nimble enough as an organization to change how we plan and deliver service
- Objective 2.5 – Innovation:** To encourage innovation and the implementation of best practices in every decision made.
- Objective 2.6 – Transit-Oriented Development:** To work with Burlington’s Planning Department early in the planning process to encourage transit-oriented development that is compact, mixed-use and walkable around key transit corridors.
- Objective 2.7 – Environmental Footprint:** To minimize environmental footprint through green procurement practices, business operations and transit vehicle operations.

Strategic Direction 3: Be Business-Minded and aligned with municipal directions

- Objective 3.1 – Effectiveness:** To plan and operate service that makes the most effective use of resources.
- Objective 3.2 – Partnerships:** To establish partnerships with stakeholders and other mobility providers where the partnership results in a better or more cost-effective option than providing the service internally.
- Objective 3.3 – Efficiency:** To right-size fleet and staff complement, with a view to improving the efficient operation of the service.
- Objective 3.4 – Data Driven:** To make decisions based on a combination of reliable data and community feedback.
- Objective 3.5 – Accountability:** To be results oriented and fiscally responsible, setting measurable targets and holding ourselves accountable to them.
- Objective 3.6 – Investment:** To recognize the importance that investment in mobility has on achieving broader quality of life, economic development and environmental objectives.

Objective 3.7 – Active Transportation: To continue to integrate transit services with active transportation, including pedestrian and cycling facilities and the use of bike racks on buses.

Objective 3.8 – Demand Management: To develop and support demand management strategies and programs that can influence the greater use of sustainability mobility approaches.

Objective 3.9 – Asset Management: To improve the efficiency, performance and utilization of assets through a comprehensive asset management strategy.

Over the course of the next five years, we will work on achieving each of these objectives with a goal of working towards achieving our long-term vision. We will also monitor our progress to achieving these objectives using key performance indicators that are outlined in Burlington Transit's service standards.

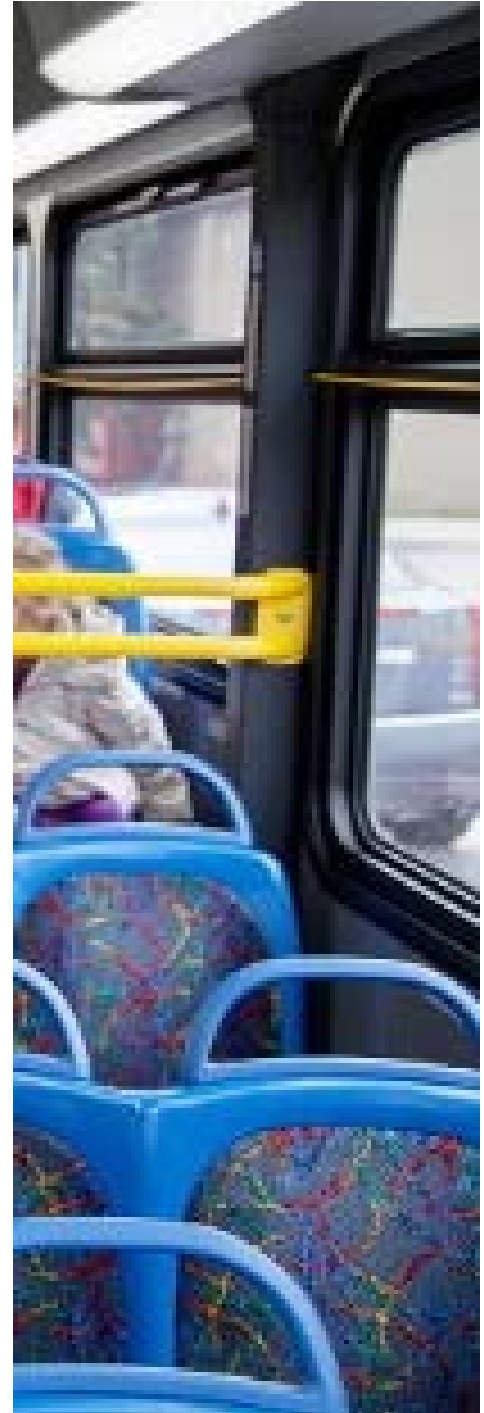
3.0 Growth Targets

One of our primary objectives is to grow ridership by ***advancing innovative mobility options***. This objective helps achieve the regional and city-wide goals of reducing peak-period congestion and green-house gas emissions from single-occupant vehicle travel, improving opportunities for Burlington residents to access employment, education, services and activities, reducing investment in roadway widenings, and improving overall quality of life.

By the end of 2019, Burlington Transit is projected to deliver approximately 2 million annual rides, representing about 2 percent of all trips made in Burlington. Over the next five years (2024), our goal is to grow to 5.7 million annual rides (or 7.2 percent of all trips). This ridership growth target is derived from the 2011 Region of Halton Transportation Master Plan, which targets an increased emphasis on transit to reduce roadway congestion and investment in roadway infrastructure.

To put this growth objective in context, over the past five years, Burlington Transit's ridership only grew by 1.9 percent per year. Over the next five years, we will need to grow ridership by an average of 23 percent per year to achieve this target. The 2024 target identified for Burlington represents a significant rate of growth over past performance and above what Burlington Transit's peers have achieved over the past five years. This will be difficult to achieve in a short period of time without significant investment in transit, a focus on customer service and culture change, including a change in how transit services are delivered.

While population growth will also help grow ridership, Burlington's population is only projected to grow by 3,300 people by 2024. This suggests that only a small portion of ridership growth will come from new residents, and the majority of growth will require existing residents to ride transit much more, creating a greater culture of transit use in the city.



3.1 Investing in Our Service

To accommodate the planned growth in ridership, we will need to invest in the level of service to accommodate both an increased demand for service and to change travel behaviour. This will require an increase in the amount of service and the fleet required to deliver the service.

The City of Burlington Development Charges Transit Background Study (2019) identifies a planned growth of 38 buses in our fleet between 2019 and 2028 to meet transit mode share target. Phased in over the five-year life of this business plan, this represents a growth in 20 vehicles by 2024 (from 63 to 83). Service hours will also need to grow to reach the mode share target. We have estimated that an investment in 100,800 annual revenue service hours is required over the next five years. This represents a 56 percent growth in service levels. The projected fleet, service hour and utilization growth is detailed below. This growth target formed a key part of the business plan as well as the ridership growth strategies we have identified to reach these targets.

Table 1 below identifies the service requirements (buses and revenue hours) to meet the mode share target identified for years 2020 to 2024. The PM peak rides is the measure in which mode share is measured and is determined based on annual ridership and time of day. Peak buses are the number of buses required to deliver the service frequency identified in the schedules during the morning and afternoon peak periods. This is the maximum number of vehicles in service at any one point. The difference between the peak buses and total vehicles as described below is the spare ratio (approximately 23 percent) which is used in case of change offs or mechanical breakdowns.

Table 1: Planned Investment in Burlington Transit (2020 – 2024)

Year	2020	2021	2022	2023	2024
Peak Buses	48	54	57	61	64
Mode Share	3.48%	4.41%	5.34%	6.27%	7.20%
PM Peak Rides	15,880	20,130	24,380	28,630	32,880
Annual Revenue Hours	214,240	230,880	247,520	264,160	280,800
Annual Ridership	2,730,300	3,460,600	4,190,900	4,921,200	5,651,500
Rides per Revenue Hour	12.7	15.0	16.9	18.6	20.1

It should be noted that a business plan does not provide detailed operating plans that are specific to each route. Rather, the plan provides strategic directions that guide operational decisions over the next five years. The level of investment in service and capital noted in the table above will also need to go through the municipal budgeting process and may be subject to change.

4.0

The Plan

One of the primary purposes of a business plan is to focus actions taken by an organization so they are aligned with the vision, goals and strategic directions of a system. Burlington Transit has a mandate to significantly expand ridership in line with the mode share targets identified in the 2011 Halton Transportation Master Plan, targeted an increase in ridership from 2 million trips in 2019 to 5.7 million trips by 2024. To achieve this growth target, we must provide **Advanced and Innovative Mobility** to residents, employees and visitors of the city. In doing so, we will:

- be Customer-Focused in every aspect of how service is delivered
- be Forward-Thinking in how services are planned and delivered
- be Business-Minded and aligned with municipal directions

To achieve our goals, this business plan outlines a number of growth strategies that will be our focus over the next five years. These reflect our vision, mission and strategic directions and will be supported by an implementation plan and forecast of budget impact summary. These growth strategies are organized into the following themes:

1. Service Structure and Delivery
2. Mobility Management
3. Customer Experience
4. Travel Demand Management

4.1

Strategic Direction 1 - Service Structure and Delivery

The way services are structured and delivered defines the primary customer aspects of any transit system. Where services go, how often vehicles are scheduled, how long the trip takes, how accessible are stops, and how the service is delivered (focus on customer service) are all key factors in residents choosing not only which services to take, but if transit is an option for them at all.

With finite budgets, transit systems must balance the competing demands for services that provide a high level of accessibility to more people, but take longer and run less often, against those for services that are fast, direct and more frequent. Typically, more frequent and direct services attract higher ridership and are in line with Burlington Transit's ridership growth aspirations.

There are a number of strategic directions that Burlington Transit will implement over the next five years to improve the service structure and how services are delivered. These include the following:

4.1.1 SD 1A - Move to a More Direct Grid-Based System

A number of transit systems are reconfiguring their network to focus on providing more direct service on arterial roadways, connecting major destinations and transfer opportunities. This is particularly true for transit systems with the objective of significantly increasing ridership, as grid-based networks can provide shorter travel times and more frequent service that is more comparable to travel times using private automobiles.

Burlington Transit currently operates a combination of grid-based arterial routes and local routes. Local routes operate on local and collector roads and are designed to improve connectivity and reduce walking distance to a number of residential areas. While passengers on these routes may enjoy the convenience of having close access to transit services, local routes typically have longer travel times resulting from the meandering nature of the roads themselves. Many of these routes often have the lowest productivity in the system, limiting our ability to maximize ridership potential.

The remaining Burlington Transit network was developed largely on a grid arterial system, focused on key population and employment areas, with links to the GO Rail network. Key north-south corridors like Brant and Walkers link the established southern areas to growing northern areas. Such grid systems allow for more direct routes on arterial roads that are faster, resulting in quicker journeys that attract more riders.

While there is a role for local routes, to achieve our ridership growth targets, the focus of future investment will be on services where we can generate the greatest ridership per invested service hour.



Figure 2: Conceptual Grid-Based System

Arterial routes, particularly when arranged as a grid, are easy to remember and the roads used are better-known by the wider community, reducing barriers for new customers. Grids also allow for convenient transfers between routes at intersections, providing greater connectivity to more destinations than a single local route could. The September 2019 route modifications have already moved in this direction, and this will form a starting point for future changes in how we deliver service.

Where gaps are left in the network, alternative service delivery options such as on-demand transit services will be explored as a more cost-effective solution. This is more fully discussed in Strategic Direction 2B.

Actions/Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Delete peak-only and after-hours only routes and reinvest service hours back into the system.
- Review underperforming routes in conjunction with the exploration of alternative service delivery options (Strategic Direction 2B).
- Improve the amount of service on key arterial corridors and connections to GO Transit stations. Focus on east-west connectivity with strategic north-south corridors.

4.1.2

SD 1B - Increase Service Levels to Support Higher Ridership Growth

One of the most important factors that influence transit use is frequency. Higher frequency services attract riders because they have shorter wait times and have redundancy for when individual trips are delayed. Higher frequencies also afford riders more flexibility and thereby spread demand over more services, improving the system's ability to accommodate peaks in demand. Furthermore, higher frequency services promote greater connectivity as the system moves to a more grid-based network by reducing transfer times.

One of the challenges we will face with this strategy is that a number of arterial roads have long blocks with limited pedestrian connections into interior neighbourhoods. This makes providing a frequent service on all of the grid-routes a challenge. Since frequency improvements are necessary to facilitate transfers between north-south and east-west routes, Burlington Transit will work with the City's Community Planning Department to improve pedestrian connectivity (including road crossings) between arterial transit routes and local neighbourhoods and identify opportunities for mixed-use intensification. This will help improve the productivity of these investments in service over the medium- to long-term.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Continue to improve frequencies on arterial grid roads, particularly on the east-west corridors of Plains / Fairview and New and the north-south corridor along Brant.
- Work with the City of Burlington Community Planning Department to increase and enhance pedestrian connectivity between arterial transit routes and local neighbourhoods and identify opportunities for mixed-use intensification along arterial routes.

4.1.3

SD 1C - Introduce Transit Priority Features to Improve System Reliability

Successful transit services transport a large number of people using a small amount of road space. As road congestion increases, it is important to use road space as efficiently as possible, allowing the maximum number of people to be moved within the limited roadway space available. Transit is the best way to increase the number of people on a road without increasing congestion. Acknowledging the highly-efficient nature of transit and encouraging its use, transit priority enables transit vehicles to gain priority on congested roadway networks, thereby improving reliability and to a lesser extent, reducing travel times relative to auto travel.

Queue jump lanes and signal priority are effective treatments for important transit arterial routes that see less delays and travel time variability or operate less frequently. Such corridors include Guelph Line north of the QEW or Appleby Line.

Burlington Transit is partnering with the Transportation Department to investigate transit signal priority pilot project on the Plains / Fairview corridor, scheduled to be in place in 2020. It is intended that key data and lessons learned from this pilot project will help us understand the importance of improving the reliability of key transit routes, which may lead to broader implementation across the transit network within the five-year life of the business plan. Future priority measures, such as dedicated transit lanes, will be considered for the period after this business plan, depending upon the success of the pilot project.

In addition to potential transit priority measures, Metrolinx's 2041 Regional Transportation Plan includes transit priority along Dundas Street to central Burlington and Frequent Regional Bus services using HOV lanes on Highway 407. While these measures are focused on regional trips, the Dundas Street priority will also provide direct benefits to Burlington Transit.

Figure 3 below includes priority measures mentioned by Metrolinx, the transit priority pilot project on Plains and Fairview, as well as other corridors that will be explored as future transit priority opportunities over the five-year life of this business plan.

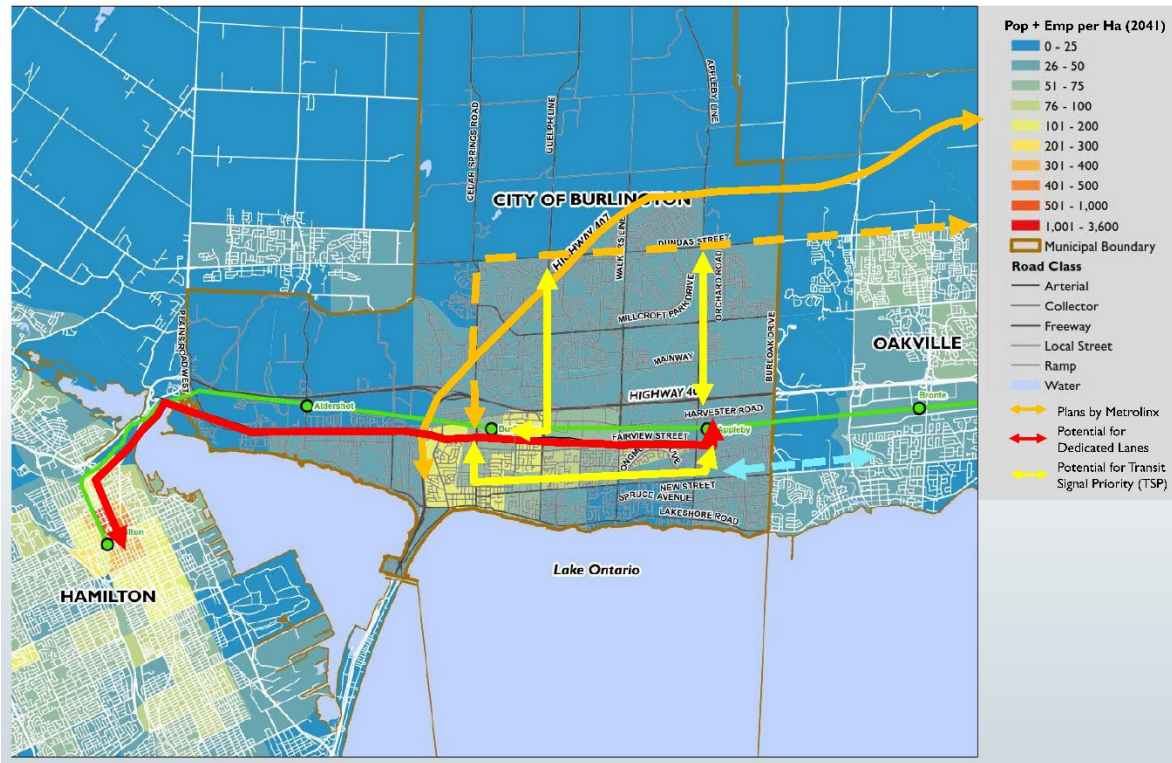


Figure 3: Conceptual Transit Priority Network

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Implement currently-planned pilot transit priority project on Plains / Fairview corridor.
- Initiate discussions with Metrolinx and advocate for the implementation of transit priority on Dundas Street and Brant Street as part of the overall Dundas BRT project. Ensure that their plans align with Burlington Transit's needs and complement other transit priority projects.
- Explore other transit priority corridors once the pilot on the Plains / Fairview corridor is complete.

4.1.4 SD 1D - Improve Connections to the GO Transit Network

Almost all of Burlington Transit's routes currently connect to at least one GO Station, providing a logical transfer point between Burlington Transit routes and links to destinations outside of Burlington. By 2025, Metrolinx plans to improve all-day frequencies on the Lakeshore West Line between Aldershot GO Station and Union Station to every 15 minutes, as part of the "Regional Express Rail" initiative. This will also see travel times between Burlington GO and Union Station reduced by up to 19 minutes, as well as two-minute savings between Burlington GO and Appleby GO. Regional Express Rail will increase the attractiveness of the service for trips to Union Station as well as other mid-line stations along the Lakeshore West line.

Parking at each of the stations is nearing capacity, and any increased demand that will result from the improved GO Train service levels will need to be accommodated by other modes. A focus on transit-oriented, mixed-use development around each GO Station will help increase pedestrian access to and from the three GO Stations and should be encouraged. Burlington Transit will also focus on improving connections to each GO Train to match the proposed 15-minute headway, which is already reflected in the future service plans that form the basis of the business plan assumptions. On-demand transit service delivery options or partnerships with ridesharing services will also help provide the flexibility required to provide GO Train passengers with convenient travel options for the first and last mile of their trip.

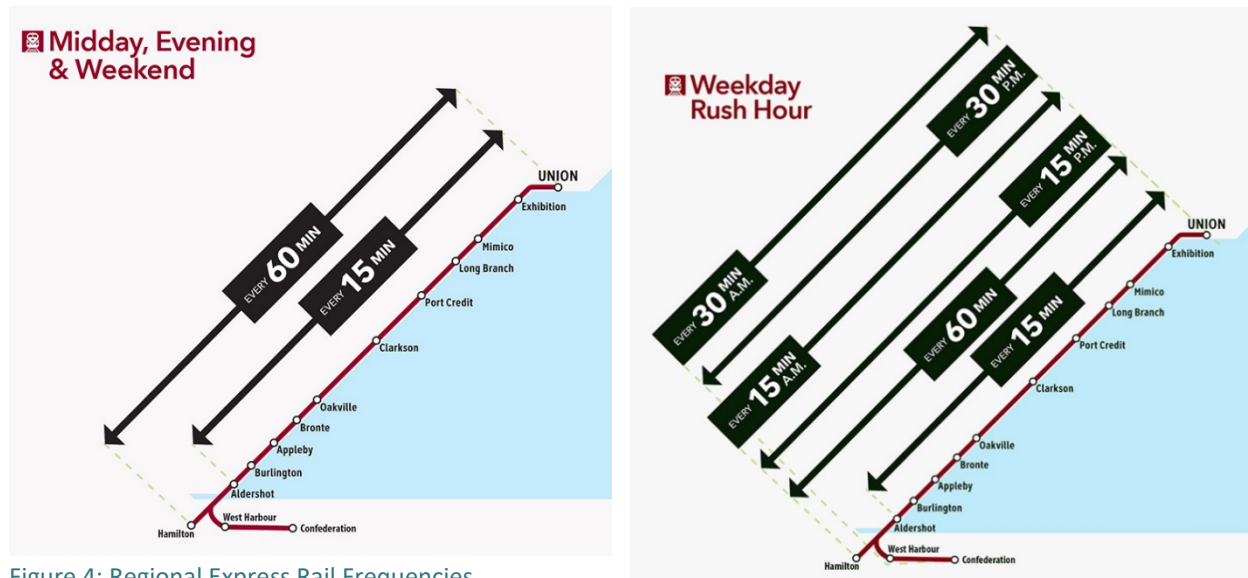


Figure 4: Regional Express Rail Frequencies

The introduction of frequent two-way, all-day 15-minute service on the Lakeshore West line, along with a recent reduction in GO Transit fares for short-distance trips, provides an opportunity to better integrate this express service with Burlington Transit's system to provide a better level of service for Burlington residents and utilize a resource that is already available. For passengers traveling between the two GO stations in Burlington, using a combination of GO Rail and Burlington Transit services may reduce their travel time by up to 13 minutes.

Rather than compete with GO Transit by offering express routes parallel to the Lakeshore West Line, Burlington Transit will focus its efforts on providing integration opportunities with this new east-west express service. This may include adding parallel full-stop local routes and increasing the number of Burlington Transit connections to GO Stations, encouraging passengers to use a combination of GO Transit and Burlington Transit routes to complete a trip within Burlington. This connectivity reduces duplication while offering passengers faster journeys and easy access to a greater number of regional opportunities.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Improve frequency of direct connections to GO Rail stations with the introduction of Regional Express Rail (RER).
- Explore on-demand alternative service delivery strategies to connect to all GO Train trips that do not conveniently connect to a fixed-route Burlington Transit bus.
- Explore integration opportunities to better utilize the Regional Express Rail (RER) network for local express trips within the City. This should include improvements to trip planning tools (i.e. Triplinx, Google Maps), marketing and communications and well as service integration.
- Investigate the implementation of a fully-integrated single fare with GO Transit. This would require local trips to be priced on the basis of distance.

4.1.5 SD 1E - Increase Service Integration with Neighbouring Transit Systems

There is also a significant travel demand between Burlington and the adjacent municipalities of Hamilton and Oakville. When drivers use roads that cross municipal boundaries, they do not experience any service level reduction or increase in cost. To attract more riders to transit, we must function the same way.

Burlington Transit already offers a level of service and fare integration with its neighbouring transit systems, the level of integration could be improved to create a seamless experience for our customers when crossing municipal boundaries.

There is an opportunity to strengthen and add to these links with Hamilton and Oakville through improving service and fare integration. There are a number of examples of this type of integration that exist in the GTHA. Brampton Transit shares the operation of select routes with MiWay and York Region Transit (YRT), allowing passengers from both municipalities, respectively, to have single vehicle journeys without either agency operating competing services. Such a shared service model could provide Burlington with cost savings for the provision of services at its borders and improve seamless passenger connections.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Meet with Hamilton Street Railway (HSR) and Oakville Transit to identify opportunities to further integrate services through sharing and coordinated timetabling and routing.
- Investigate the implementation of a fully-integrated single fare with neighbouring systems and GO Transit. This would require local trips to be priced on the basis of distance.

4.2 Strategic Direction 2 - Mobility Management

Mobility Management acknowledges that people can travel in many different ways, using many different modes of transport (“mobility”). All of these potential options are brought together, managed and offered through a single service, benefitting the community through simplicity, choice and ease of use.

Investing in Mobility Management means thinking beyond the primary role of providing public transit service and becoming the sustainable mobility integrator in the community. It means better integrating conventional and specialized transit services, considering how to use or partner with other sustainability mobility providers for new or improved service, and understanding the needs of all customers in order to provide better service.

There are a number of strategic directions that Burlington Transit will implement over the next five years that are in line with the theme of mobility management. These include the following:

4.2.1 SD 2A – Research and Implement On-demand Alternative Service Delivery Models

Customers are demanding greater customization of their mobility options; seeking more adaptable and flexible services that adjust to when they want to travel in real-time, without relying on a published schedule. Similarly, transit systems continue to seek solutions to reduce costs and improve productivity of services. Fixed-route transit solutions do not always meet these two goals, particularly during evening and weekend periods when ridership demand is lower, and low demand areas characterized by low density neighbourhoods and employment areas designed around the private automobile. This combination of factors makes it difficult to provide fixed-route service cost-effectively and in a manner that meets rising customer expectations.

On-demand transit (or microtransit) is a traditional form of mobility that is experiencing a resurgence with the help of technology. On-demand transit has four components that differentiate it from conventional fixed-route transit:

- Flexible routing and/or scheduling designed based on customer demand;
- Newly-emerged “mobility brokers” who use mobile apps to connect supply and demand;
- Use of smaller, more flexible vehicles; and
- Connecting multiple transportation services to complete a trip (using a mobile app).

A key area we will explore over the next five years is the implementation of an on-demand pilot in low demand areas and periods, with the potential to expand to other areas of the City. To better understand how on-demand transit works, the following trip process is illustrated below:

- Customer requests a trip through a mobile app that links to Burlington Transit’s real-time automatic vehicle location system. Available pick-up time that are close to when the customer wants to travel is provided and the customer chooses the most suitable option and the trip is

- scheduled. If a customer does not have a mobile phone, a phone number would be provided to allow customers to book the trip directly with the Burlington Transit.
- The mobile app will optimize the vehicle by calculating the most direct route, balanced with the need to fill-up vehicle capacity (share rides).
 - Once the trip is booked, the mobile app would allow the customers to track the location of their vehicle in real-time.
 - A marked vehicle would arrive at a marked or virtual stop. The vehicle would typically be a minivan or accessible specialized transit vehicle.
 - Customers with a Presto card would pay for their trip when they boarded the vehicle by tapping onto a Presto card reader. In the future, mobile fare payment options integrated with Presto should be explored.
 - While fares would be integrated with Burlington Transit fares, there is the potential to introduce future dynamic pricing models if customers request a higher level of service.
 - The trip does not follow a predefined fixed-route. The operator will take customers in the vehicle to their destination as directly as possible, picking-up and dropping off other customers that are in close proximity.
 - The customer would be dropped off to the closest transit hub, where more than one Burlington Transit and/or GO Transit service connect, to allow them to complete their trip.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Further explore the use of On-demand transit services to complement fixed-route services. This should include a review of both dedicated and non-dedicated service models.
- Develop an On-demand transit service model and business case for low demand areas and operating periods, allowing customers to use a mobile app to book a shared-ride demand-responsive service to connect to the fixed-route service. This should coincide with the modifications to the existing route network to more of a grid-like structure.

4.2.2

SD 2B - Explore Partnerships

Travel is becoming increasingly multi-modal. A Burlington resident may cycle to a local event, drive to a get groceries and take a combination of Burlington Transit and GO Transit to work. Younger generations are not acquiring personal vehicles and driver's licences to the extent that previous generations did. While auto travel will continue to dominate in Burlington, there are opportunities for the city to partner with other mobility providers to ensure residents are fully aware of the range of sustainable travel options that are available to them for various trip needs. Ride sharing, or carpooling is now easier with technology matching those looking for rides with those having seats to fill. Car shares and bike shares are now common in urban settings. Taxis and the new Transportation Network Companies (TNCs) are adapting and offering residents an alternative to owning a second car for many trips. There are also

opportunities to better integrate transportation services with school boards, including addressing the needs for students that participate in after-school activities.

To address this expanding world of mobility, Burlington Transit will continue to evolve and see itself as not only an operator of transit services, but as a partner and collaborator of sustainable mobility services. This means making it easier for customers to take all sustainable mobility options available to them or integrating services to allow customers to easily transfer between multiple modes.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Continue and proactively explore partnerships and approaches with other sustainability mobility providers.
- Promote sustainable mobility services through awareness, marketing and education campaigns to inform residents of alternatives to driving alone in private vehicles.

4.2.3

SD 2C - Integration of Specialized Transit and On-demand Transit Service

A key strategic direction is to better integrate specialized transit trips for persons with disabilities with On-demand transit trips. The goal is to provide more flexibility in utilizing the right vehicle for the right type of trip, irrespective of whether a customer is registered for specialized transit service. This strategy helps support the integration of customers on vehicles that were traditionally reserved for specialized transit customers and will allow for more efficient scheduling and increase the available capacity to all Burlington Transit customers.

Under an integrated service model, a vehicle used to provide specialized transit service can also be used to provide on-demand transit service, and vice versa. This means that the services would be “comingled”, and specialized transit and On-demand transit service customers may share vehicles if it provides greater efficiency in the delivery of their trips. The decision to integrate trips will be based on the ability to utilize existing in-vehicle capacity and provide a better level of service to customers.

It should be noted that specialized transit will continue to operate as a core service for registered customers and any integration with On-demand transit service should not reduce the level of service for registered specialized transit customers. This approach should be evaluated based on the availability of specialized transit vehicles and ensure that vehicles are maintained and managed according to their schedule. Further review of maintenance costs should be considered.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Explore the concept of integrating specialized transit services with On-demand transit services. A prerequisite of this approach is having a demand-response software in place to support the on-demand service.

4.3 Strategic Direction 3 - Customer Experience

Residents choose to try transit for many reasons, but their experience, when taking transit, informs whether they will continue using transit regularly. While routing and frequency are key in determining whether transit is a viable option, the experience is key in making transit an option that people actively want to use.

The implementation of more in-depth real-time operational information and proactive communication can give passengers certainty and a sense of reliability. Improved accessibility and increasing the provision of shelters help to remove barriers to transit use, making it an option for more members of the community. Finally, enhanced digital connectivity builds on one of transit's competitive advantages – the ability to dedicate attention to digital devices to get work done and stay connected while travelling.

Customer experience enhancements will encourage new customers to transit and, importantly, keep existing customers on the system.

There are a number of strategic directions that Burlington Transit will implement over the next five years that are aimed to improve the customer experience. These include the following:

4.3.1 SD 3A - Improve Communications

Increasingly, customers source transit information from generic apps that require Burlington Transit to provide operational information openly. Strategies 1D and 1E particularly underscore the importance of system-agnostic third-party apps, recognizing that many journeys cross municipal boundaries and passengers will use multiple transit systems and modes.

In addition to pre-trip information, onboard information also contributes to a positive customer experience. Feedback from the community shows that Burlington Transit's operators are friendly and helpful, however they need to focus on driving and can't provide as much information as all passengers may require. As such, systems to assist operators to provide information will be considered.

Beyond real-time trip information, communications regarding planned and unplanned disruptions is the next most important information that passengers need to improve their comfort in using the service. To ensure that customers are aware of the actual operating environment on the routes and services they

need to take, a service standard will be set to publish unplanned disruptions on the Burlington Transit website and provide the information to the open data (Google Transit) application programming interface within 15 minutes of them occurring. This will require additional operations staff to address disruptions and better communication with Customer Service.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Establish a new service standard to ensure that all disruptions and unplanned events are published on Burlington Transit's website, to the open data (Google Transit) disruptions application programming interface and social feeds within 15 minutes of them occurring.
- Hire operations administrative dispatch clerks to support on-road operations supervisors and enhance communications with Customer Service.
- Investigate partnerships with third-party trip planning apps to provide riding assistance to new customers.

4.3.2 SD 3B - Improve Comfort and Accessibility at the Stop

Improved accessibility on Burlington Transit benefits both persons with disabilities and all other passengers that use the system. To continue to progress towards a more accessible system, Burlington Transit released its 2019/2020 Accessibility Plan, which forms part of the City of Burlington's Multi-Year Accessibility Plan 2019-2024. The Accessibility Plan outlines actions to remove barriers and improve accessibility. Many items in this business plan echo initiatives in the accessibility plan, including improved frequency, improved communications and improved links with neighbouring municipalities. The plan also includes a bus stop upgrade program and the addition of real-time information screens at the Burlington GO Station and the Downtown Terminal. In addition, Burlington Transit has recently formalized new bus stop design standards, which define dimensions, access, orientation and other requirements for accessible transit stops and shelters.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Continue to implement key actions in the 2019/2020 Accessibility Plan based on the Review and update methodology which includes:
 - Work plan identification (June)
 - Budget process (July)
 - Accessibility Plan Update (August)
 - Review and Consultation (September)
 - Updated Accessibility Plan (October)
- Expand the bus stop upgrade program.

4.3.3 SD 3C - Shelters

A customer's perception of the transit experience starts before they board a vehicle. One of the first interactions with the system on the day of travel is waiting for the service at a stop. Shelters provide customers with a place to take refuge during inclement weather (rain, snow and strong winds) or shade during hot summer days. They also provide a source of information about the service and a sense of permanency of a transit system, particularly on routes that provide direct, frequent and rapid service.

As Burlington Transit continues to expand its service and build on the grid-network, the expansion of shelters is a key part of improving the customer experience prior to boarding the bus.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Continue to conduct bus shelter condition assessments for all existing stops with shelters.
- Create a shelter policy, dictating how stops qualify for shelters and how to prioritize the roll-out of new shelters.
- Work with the Roads, Parks and Forestry department to increase natural shelters at stops (strategic location of tree planting near bus stops).

4.3.4 SD 3D - Digital Connectivity

One of the benefits to taking transit is that riders are free to engage in activities that are not possible when driving. Staying connected is increasingly important and it is common to see transit passengers using smartphones and tablets during their journeys. To improve the experience of customers using electronic devices during their travels, Burlington Transit will explore providing charging facilities onboard buses and Wi-Fi at major stations and transfer points.

The implementation of USB power outlets on buses and Wi-Fi at facilities will initially be on a pilot basis and focused on routes and facilities with higher ridership. The rollout of onboard charging will be tied to new bus deliveries and their allocation to certain routes will be subject to operational requirements.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Include USB charging points on all new bus deliveries. Charging ports should be located strategically throughout buses, which could be assigned to a single longer-distance route or used throughout the network.
- Implement a Wi-Fi pilot at major stations and transfer points (excluding GO Transit stations).

4.4 Strategic Direction 4 - Travel Demand Management

Travel demand management are the tools that transit agencies can employ to encourage and influence demand, through affordability, incentivization and land use planning. Travel demand management can be used to shift demand or encourage growth during non-peak times, such as the midday, evenings and weekends. This frees up peak capacity and increases resource utilization during those less busy periods. In this way, growth can be accommodated at a lower cost and overall efficiency improved.

There are a number of strategic directions that Burlington Transit can implement over the next five years that may influence travel demand. These include the following:

4.4.1 SD 4A - Free Midday Travel for Seniors

As part of the 2019 Budget, a pilot program offering seniors free travel on transit between 9:00am and 2:30pm on weekdays was approved. This became effective in June 2019 and will run until December 31, 2020. The fare policy will have both positive benefits to the senior community and cost implications that need to be monitored.

Currently, seniors make up 9 percent of all-day ridership on the system. The new free fare policy is anticipated to grow senior's ridership, which will provide enhanced mobility for seniors with fixed-incomes to live and participate in the community.

However, the pilot free fare program for seniors is anticipated to reduce paid ridership on Burlington's conventional transit service by approximately 51,000 rides. This equates to approximately \$118,810 in revenue if the service was continued for a full year based on 2019 ridership. This cost is included in the budget of this business plan.

It should be noted that free transit also applies to seniors who use specialized transit. The Accessibility for Ontarians with Disabilities Act (AODA) requires fare parity between conventional and specialized services, which will see an increase in demand on the specialized transit system. Unlike conventional transit, specialized transit peaks during the midday period and has less capacity to accommodate an increase in demand (due to the small vehicle size and on-demand door-to-door service delivery model). Therefore, the introduction of this policy is expected to see an increase in specialized transit service hours and vehicle requirements. The extent of this increase is currently unknown but will be monitored over the course of the pilot, with a plan in place to increase operations during the midday period to maintain an acceptable trip accommodation rate.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Monitor the impacts of the free midday travel for senior's pilot project on ridership, technology, customer service, revenue and operating costs for the course of the pilot before implementing further changes or mitigation measures.
- Strategies to increase specialized transit service levels during the pilot project to maintain an acceptable trip accommodation rate.

4.4.2**SD 4B - Affordability**

In conjunction with the City's decision on senior's fares, Council also agreed to change the Subsidized Passes for Low-Income Transit (SPLIT) pass program from a 50 percent fare reduction to a free monthly pass, effective May 1, 2019.

The existing SPLIT pass has been in place for almost nine years and has provided a 50 percent fare subsidy to residents of Burlington that are low income. The program is administered and initially funded by Halton Region Social Services. With the change in the program to a free pass, the City of Burlington has begun to cover the remaining 50 percent difference in the pass price. This equates to \$116,700 in annual revenue in 2019, which is included in the budget of this business plan.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Monitor the usage of the new SPLIT pass and report the program results to Council on a yearly basis.

4.4.3**SD 4C - Free Transit for Children**

As of March 9, 2019, kids 12 and under were permitted to ride for free on GO Transit. This aligns GO Transit with the Toronto Transit Commission (TTC) 'kids ride for free' policy and allows for improved system integration and a more seamless travel experience for families.

Currently in Burlington, children under 5 ride for free whereas children between 6 and 12 pay \$3.50 cash or \$1.90 with Presto.

Having a similar fare structure is important to improve the eligibility of the system of passengers travelling with children using both GO Transit and Burlington Transit, as the same fare rules would apply between the two systems. This will become increasingly important with the introduction of Regional Express Rail (RER), when the GO Rail network is further integrated with Burlington Transit routes and services.

In the short-term passengers travelling with children connecting between Burlington Transit and GO Transit still receive a reduced fare through the co-fare agreement with Metrolinx (70 cents), allowing Burlington Transit to maintain an important revenue source. The challenge will be to integrate the service with Presto and to identify which passengers boarding a Burlington Transit bus at a GO Rail station are eligible for the co-fare payment between Burlington Transit and GO Transit.

Currently, children 6 to 12 only represents 0.05 percent of total ridership on Burlington Transit, estimated at \$42,250 in 2020. This suggests that moving to a similar fare structure where children under 12 ride for free would therefore not have significant cost impacts (based on lost revenue) and may even increase ridership as more families may choose to take transit.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Continue to maintain same child fare policy in the short-term to maintain revenue stream from the co-fare agreement.
- Monitor ridership and revenue changes that have occurred on other GTHA systems that have implemented a similar child fare policy (e.g. Durham Region Transit).
- Implement the child fare policy in the medium-term, with the introduction of Regional Express Rail (RER) or prior, depending on the results of the review of the impact from other GTHA systems noted above.

4.4.4 SD 4D - Student Fare Policy

Secondary school students offer a significant opportunity to encourage transit familiarity, increase ridership and establish travel patterns that may continue into post-secondary student and adult life. To maximize this opportunity, Burlington Transit is developing a secondary student strategy. This strategy will include transit familiarization outreach for grade 7, 8 and/or 9 students.

Council is currently reviewing complimentary student travel for high school students. This will include buy-in from neighbouring municipalities due to the fact that school boards service a much larger area than the City of Burlington.

Metrolinx is currently managing a Fare Integration Forum through which they have requested that GTHA municipalities put a 6 month pause on new fare products or concessions. They have also asked that future concessions or fare products be considered together. As such, Burlington Transit should wait for the outcome of this forum before introducing any new concessions for students.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Implement an outreach program to educate students in grades 7 to 9 on how to use public transit.
- Monitor the results of the Fare Integration Forum and bring recommendations back to Council that are consistent with the municipalities in the GTHA.

4.4.5

SD 4E - Employer Partnerships

Targeting employees that regularly commute represents a good opportunity to increase ridership on Burlington Transit. Employers that have standard office hours are typically located along key arterial corridors that have direct service, with start and end times that typically coincide with peak transit frequencies. Since service levels are high, the strategy for office employees is typically to target communications and marketing of the service and work with employers to offer an emergency ride home program, where employers provide their employees who take transit with a taxi/ridesharing voucher two to three times per year in the event that the employee needs to travel home in the event of an emergency outside of their regular working hours when transit may not work for them.

Large industrial/warehousing employers, retail service employers and other employers located in areas not well serviced by Burlington Transit provide another employer partnership opportunity. These types of opportunities typically involve some degree of employer funding to provide more tailored service to meet employee requirements. This could include free or discounted transit passes, emergency ride home programs, and/or shuttle or on-demand services from transit hubs to work locations.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Explore opportunities for partnerships with employers and evaluate alternative service delivery models to provide service to employees. Target one employment area first for a year to assess level of effort relative to uptake and ridership growth.
- Look at whether regular service can be supplemented by on-demand alternatives during off-peak travel times and/or emergency ride home programs.
- In the longer term, explore an Employee Pass Program that offers discounts on transit passes based on enrollment in the program.

4.4.6

SD 4F - Enhanced Coordination with Other City Departments

Transit's biggest asset is the land use and community design it operates in. Transit services that operate along mixed-use high-density corridors with good connectivity to the places where people live, work and play offer the highest potential to grow ridership. In this way, transit and land use development are inexorably linked and therefore land use planning should always give strong consideration to transit needs, and vice versa. Ensuring the alignment of land use and transit will help create sustainable, mixed-use communities and also drive ridership by placing transit where residents and employees are located.

Burlington Transit already collaborates and participates with the Community Planning Department. Burlington Transit staff members are engaged and are circulated development applications and also long-range plans, including Official Plan (2018) amendments and secondary plans. This relationship will be maintained, with both departments working in partnership to achieve the mode share targets.

A collaborative approach is recommended to develop a revised service standard around Proximity to Service. This puts an increased onus on the Community Planning Department to target growth in population and employment around existing transit routes, particularly high-frequency arterial-corridors. To achieve this, a target will be established that directs the majority of population and employment growth within 400m walk to transit stops and within a 400 to 800m walking distance of higher-frequency arterial route and/or express service (routes that operate at least every 10 minutes during most of the day). This places the responsibility for achieving this target on the Community Planning Department, as the grid-network would have already been established. Any growth in green field development where a route extension is required should also ensure that this target is met for the new growth area.

While a similar approach exists with the Transportation Services and Capital Works Department, it is recommended to formalize a policy to ensure that construction and capital improvement projects (e.g. resurfacing, widenings), include input and comments from Transit to ensure that improvements are incorporated. This includes stop relocations, new shelters and shelter upgrades, bus stop accessibility improvements and transit priority measures.

Burlington Transit will also be a key stakeholder in the upcoming Integrated Mobility Master Plan, which will set a policy direction for all transportation infrastructure and services provided in Burlington over a 30-year time horizon. An investment in transit will play a key role in meeting any transit mode share targets identified in the long-range planning study. This should include initial recommendations to encourage the City to adopt a Multi-modal Level of Service (MMLOS) Policy for New Corridors.

While improved planning integration between land use, roadway planning and transit is unlikely to result in measurable ridership growth in the short-term, it will pay dividends as development patterns evolve over time.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Continue to play an active role in strategic land-use planning decisions, highlighting the need for high levels of pedestrian amenity and access to the arterial grid network.
- Continue to work with City of Burlington staff on the alignment of development, growth and employment areas with transit investment and service by reviewing development applications and secondary plans.
- Develop and formalize a Service Development Plan for Burlington Transit that outlines where service investment is expected in the future. This should be a living document that can help inform land use planning decisions to support transit.
- Develop a proximity service standard with the Community Planning Department. This standard should define a five-year target from proximity to transit once the grid-network has been established and place to onus on the Community Planning Department to achieve the target based on growth.
- Continue to work with Transportation Services Department and Capital Works to coordinate transit interests in roadway capital improvement programs (e.g. new stops, shelters, accessibility improvements, transit priority features).
- Work with Transportation Services Department as a key stakeholder in the upcoming Integrated Mobility Master Plan, and QEW Prosperity Corridor study to identify strategies to help meet the transit mode share target.

5.0 Organizational Structure and Staffing



Our vision and ridership growth targets are ambitious and will not only require a significant investment in service, but a change in how we deliver the service. In order to achieve our goals, we must also look internally at our own organizational structure and our ability to deliver change. Are we structured appropriately? Do we have enough staff to take-on a growing customer base? Are our staff best positioned to fulfil new mandates?

A review of our organizational structure examined these questions. Based on this review, the following initiatives will be undertaken to improve organizational effectiveness and align our structure and culture with the vision and growth strategies identified in the business plan:

1. **Bus Operators:** In order to complement new vehicle requirements, as well as additional service hours to increase frequency, it is recommended that bus operators increase by 8 in 2020, by 16 in 2021, and by 12 in the following years. This will accommodate the increase in fleet size, but also provide the ability to increase frequency during the peak periods by assigning more bus operators to the peak buses. Additionally, the increase in bus operators would allow for an increase in frequency during off-peak periods, like weekends and holidays.
2. **Supervision of Bus Operators:** It is recommended to add a dispatcher and supervisor positions to the staff complement. This increase will provide flexibility for more supervisory coverage. Supervisors will be able to provide additional on street supervision and interact more with customers; and also adjust service and manage emergencies on the road. The addition of a dispatcher position provides the flexibility for the Supervisors to be out on the road whereas the dispatcher can maintain service delivery, driver work assignments, monitor internal operations and communications. **Table 2** identifies the anticipated growth in supervisors based on the planned increase in operators.

3. **Service Development Focus:** To better meet the business plan's strategic directions, the current Business Services and Planning group will continue to focus on service development, strategic business planning and technology initiatives. However, a realignment of existing staff into subject matter experts and accountability leads are recommended as follows:
 - **Service Development and Planning** where the team will be responsible for transit service planning, scheduling, statistics and data analysis, and strategic service development.
 - **Transit Communications and Customer Care** will be responsible for marketing, customer service, outreach and engagement, relationship management and Burlington Transit branding. This role would also be the media liaison and provide strategic communications to Council.
 - **Financial Operations** focuses on transit specific budgeting, reporting, accounting, cash management and revenue collection, asset management and fleet financial management. This team works closely with the City's Finance department to ensure budgets are aligned with the City's guidelines.
 - **Accessibility and Business Service Delivery** will focus on various policies and procedures including fare strategies, accessibility policies and planning, on demand service policies and procedures, bus stop planning and construction and contract management. This area will also define service standards and monitor performance of service and contracts.
3. **Marketing:** An increased focus on marketing and communication will be key in reaching our ridership growth targets. To provide additional capacity for the marketing function, a Marketing Specialist has been recommended which would be added as part of the Transit Communications and Customer Care team. This position will assist in marketing and communication outreach programs and help build the Burlington Transit brand.
4. **Customer Service:** The City of Burlington is centralizing customer service via a 311-call centre called Service Burlington which includes the implementation of a corporate CRM. At this time, Transit's implementation is pushed to 2020. This has a potential to alter the way customer service requests are filtered to Transit and will determine the process of how customer service is managed. It is the intent for Transit to offer a unique number, different from the City's 311 number, for residents and riders to obtain detailed transit information. The outcome of the Service Burlington/Service Brilliance initiative may have an impact on staffing requirements. At this time, it is recommended to review the Customer Service positions as part of the 2021 budget process.

5. **Facility Maintenance:** Burlington Transit does not have designated staff to maintain its major physical facility (garage, downtown transit terminal, and administration building). While responsibility for this is formally assigned to another municipal department, the resources devoted to these major facilities do not meet current needs. Given the asset value of these facilities, it is recommended that a Maintenance Facilities Coordinator position within the Transit Maintenance Division will be created, possibly with a dotted line reporting to the corporate facilities department. This position will guide physical facility maintenance/development and provide quality control of building maintenance services provided by other municipal departments.
6. **Electronics Technician:** While the responsibility for Presto fare equipment on-board buses is planned to be assumed by Metrolinx, the remaining on-board electronic equipment is still significant. Such equipment includes current and future automated vehicle location, passenger counting, signal priority, passenger information, engine tracking, fuel management and communications systems. Consequently, a fully-qualified electronics technician will be assigned to the Systems Technician position in the Transit Maintenance division.
7. **Bus Servicing:** Burlington Transit continues to utilize an external contractor for Bus Servicing which includes bus cleaning, fueling and farebox handling. Given the impact of this on daily operations and on customer satisfaction amongst passengers, the performance of the contractor will be reviewed for both performance and cost measures. These functions will remain a contracted service over the life of the business plan

A summary of staffing increases required to meeting the vision, growth strategies and ridership targets is summarized in the table below, including the phasing of these positions over the five-year life of this business plan.

Table 2: Recommended Staffing Levels to Support Plan

	2019	2020	2021	2022	2023	2024
Total Buses	63	67	71	75	79	83
Revenue Service Hours	180,000	214,240	230,880	247,520	264,160	280,800
Bus Operators	121	129	145	157	169	181
Bus Operators / Bus	1.92	1.92	2.04	2.09	2.13	2.18
Revenue Service Hours / Operator	1,487.60	1,660.78	1,592.28	1,576.56	1,563.08	1,551.38
Supervisors	6	6	9	10	11	12
Bus Operators / Supervisor	20	22	16	16	15	15
Mechanics	9	9	10	10	11	11
Buses / Mechanic	7	7.4	7.1	7.5	7.2	7.5
Electronics Technician	0	1	1	1	1	1
Customer Service Staff	2 FT, 3 PT	2 FT, 3 PT	3 FT, 2 PT	4 FT, 1 PT	5 FT	5 FT
Revenue Service Hours / Customer Service Staff (FTE)	49,666	52,790	60,060	60,754	59,386	62,500
Maintenance Facilities Coordinator	0	0	1	1	1	1
Marketing Specialist	0	0	1	1	1	1

**Note: The above table does not reflect specialized transit staff or vehicles.*

The most important outcome of **Table 2** is to demonstrate that as the amount of transit service grows, the number of Bus Operators, Mechanics, Supervisory Staff and others must also grow. This is necessary to ensure that the transit service remains reliable and focused on the needs of the customer. The table shows how the number of Bus Operators / Bus, Bus Operators / Supervisor, Buses / Mechanic, and Revenue Service Hours / Customer Service Staff will change in the future. These changes demonstrate that Burlington Transit will become more productive in some areas and maintain close to current productivity levels in others.

6.0 Assets and Infrastructure

The five-year business plan identifies an increase in the number of buses used to operate the service. This will also place pressure on our existing facility used to house and maintain fleet, as well as on-street infrastructure including bus stops, terminals and shelters. To ensure we are well positioned for growth and our assets are maintained in a state of good repair, the business plan includes a strategic review of our assets and infrastructure. The results of this review are identified below.

6.1 Fleet Replacement and Growth

Burlington Transit's fleet is able to meet current needs and is planned for phased replacement as buses age. However, as service grows, additional vehicles will be required and, as technology develops, alternative vehicles will become increasingly relevant. As part of the City's climate change emergency declaration, City staff and Council are investigating all options to reduce the City's greenhouse gases, including the use of electric buses on our roads. The use of electric buses needs to be carefully, but quickly investigated as major infrastructure purchases and changes need to be made to the City's transit system. Members of Council will soon be receiving a briefing from a leading expert on electric buses to determine the best way forward. This will require changes to training, both on the vehicle and various legislative requirements to work on 600 volts. This will also require new equipment and tooling purchases, and changes to the existing maintenance facility.



Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Develop a clear fleet plan detailing all the fleet additions and changes.
- Develop 5, 10 and 20-year budgets that coordinate all existing expansion and replacement vehicles and consider new vehicle technologies.

6.2 Fleet Maintenance Management

To increase the reliability, safety and cleanliness of our fleet, the transit industry standard is to measure the performance of fleet maintenance through a series of metrics. These metrics would typically be: mean distance between failure, inspection adherence, vehicle cleanliness, quality assurance checks, etc.

An enterprise-wide City asset management system is currently being explored and defined. This system will form the backbone of Burlington Transit's future performance management and inventory program. As this system is being developed, we will assess the functionality to ensure that transit-specific Key Performance Indicators (KPIs), systems and levels of utilization can be addressed in this system.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Replace the existing manual parts management system with a more enhanced system that can meet most of Transit's specific needs.
- Work to ensure that the City's new asset management system includes automated minimum/maximum level, warranty management, latent defects, invoicing, and cost control.
- Establish KPIs and a coinciding maintenance program to meet them. The system will assist in developing and measuring preventative maintenance programs, managing work and warranties.

6.3 Fleet Maintenance Plan

Increased demands on a larger fleet will require more proactive planning and scheduling of maintenance activities. To achieve this, Burlington Transit will evolve our practices to meet industry standards by changing to distance-based maintenance planning, analysis and Quality Assurance (Q/A). By being proactive and working smarter, we will be able to review bus life optimization, with a view to extending vehicle and component life. If electric buses are considered, planning for an 18-year lifecycle with a refurbishment at 12-years should be implemented.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Implement Quality Assurance (Q/A) programs and lifecycle replacement or overhaul strategies.
- Review new technologies and develop a strategy for future implementation and integration.
- Determine if conventional bus replacement cycles can be extended to 14 or 15 years from the current 12-year cycle, by reviewing bus life optimization, taking into account areas such as proactive maintenance programs and life cycle replacement.

6.4

Operations, Maintenance & Storage Facility (OMSF)

Burlington Transit's current building was renovated approximately nine years ago and is nearing its functional capacity limits. In its current condition and configuration, it does not meet the future growth needs identified in this business plan. As such, additional space is required to increase storage and address shortfalls of the current infrastructure. This space could be in the form of an enlargement of the current site, or a second site elsewhere in Burlington.

To effectively manage the current and new/extended facility Burlington Transit will develop a life cycle replacement strategy for the current site. This will help to ensure that future growth can be accommodated. The maintenance of facilities may potentially be further streamlined by contracting-out their maintenance and lifecycle management. In order to understand this potential, Burlington Transit will investigate the benefits of transitioning to a contracted facility maintenance model.

Actions/ Priorities:

To achieve this strategic direction over the next five years, we will focus our efforts on the following actions:

- Expand the current or build a second maintenance and/or storage site.
- Develop a budget and life cycle replacement strategy for the current OMSF site.
- Investigate a contracted-out facility maintenance model including levels of service, lifecycle budgeting and replacement.

7.0 Phasing Plan and Forecast of Budget Impact

7.1 Phasing Plan

A phasing plan was developed to distribute the service improvements and other strategic directions noted in this business plan over a five-year period, adding between 15,000 to 35,000 revenue vehicle hours annually. The phasing plan was based on a number of principles:

- Focus first on establishing a sound foundation for growth, then adding key strategic directions that build on this foundation;
- Prioritize strategic directions that have the highest potential for ridership growth;
- Ensure the organizational structure is positioned to meet the growing demands on staff time that come with change; and
- Distribute service improvements and strategic direction so that service hours, operating costs and peak vehicle requirements are not onerous during a single year.

The phasing plan presents a guide for implementation over the next five years. This is presented in **Table 3**, with key highlights of each year noted below. Annual plans will be developed for each year of the business plan, identifying the key priorities that should take place and providing further detail on the level of investment, expected ridership and impacts on staffing, assets and structure.

7.1.1 2020 Annual Plan Highlights

The focus of the 2020 annual plan will be to continue the process of streamlining the route network, with a focus on providing more direct and frequent routes on major arterial roads. The increased service levels will result in additional operators being hired and the bus fleet growing by four vehicles. We will evaluate the impact that the September 2019 route modifications have had on ridership and make further modifications based on customer response and ridership growth. With significant investment, it will be important to ensure that we are allocating resources in the right areas.

By the end of 2020, we will also have a better understanding of the full impacts of the seniors and SPLIT free fare initiatives, which will provide us some valuable insights on how fare strategies can impact ridership and the impact of lost revenue (from free or discounted fares) will have on our ability to expand service. This will provide more insight into other fare strategies, including the student pass program and free transit for children between 5 and 12.

We will also initiate planning and procurement of an on-demand pilot to replace a low-ridership fixed route or in an area where residents are not in close proximity to the service.

The Integrated Mobility Plan being led by the City is also planned to be underway, and we will be active participants, bringing a full multi-modal perspective to the broader strategy.

Table 3: Phasing Plan

Strategies	2020	2021	2022	2023	2024
1 - Service Structure and Delivery					
1A - Move to a More Direct Grid-Based System					
1B - Increase Service Levels to Support Higher Ridership Growth					
1C - Introduce Transit Priority Features to Improve System Reliability					
1D - Improve Connections to the GO Transit Network					
1E - Increase Service Integration with Neighbouring Transit Systems					
2 - Mobility Management					
2A - Implement On-demand Alternative Service Delivery Models					
2B - Explore Partnerships with Other Mobility Providers					
2C - Integration of Specialized Transit and On-demand Transit Service					
3 – Customer Experience					
3A - Improve Communications					
3B - Improve Comfort and Accessibility at the Stop					
3C - Shelters					
3D - Digital Connectivity					
4 – Travel Demand Management					
4A - Free Midday Travel for Seniors					
4B - Affordability					
4C - Free Transit for Children					
4D - Discount Student Pass					
4E - Employer Partnerships					
4F - Improve Coordination with Other City Departments					

7.1.2**2021 Annual Plan Highlights**

2021 will see continued growth in the conventional transit service, requiring additional operators and another four conventional transit buses. As part of this growth, we will begin the process of assessing the optimal design and location for maintenance and storage facility expansion.

The on-demand transit pilot will be in operation, with ongoing evaluation to facilitate service adaptation during the course of the pilot.

Burlington Transit's administration will also be restructured in 2021, allowing us to better respond to ridership growth and emerging trends. This will include taking on additional staff in marketing and operational supervision roles. In concert with these changes, the customer communication service standards will be introduced to ensure the timely communication of service information to our customers. Employer partnerships will also be able to be explored more effectively.

The transit priority pilot commenced in 2020 will be evaluated with the opportunity for the technology to be rolled out to other locations commencing in 2021. The first major station or transfer point with Wi-Fi (location to be determined) and the first buses with USB charging is planned to be introduced in 2021.



7.1.3 2022 Annual Plan Highlights

The focus of 2022 will be the consolidation of ongoing service increases and the prior year's initiatives. This will include additional operators, four more conventional buses and additional operational staff.

Subject to the success of the transit priority and on-demand service pilots, these programs will be expanded to other parts of the City. With a new staff structure in place, we will also have more capacity to explore partnerships with adjacent transit providers and other mobility partners (e.g. bike-share companies) to create a more seamless network of mobility options in the City. Further USB-enabled buses will be rolled out as existing vehicles are replaced.

The stop and shelter upgrade program will continue at a more measured pace after its initial “catch-up” years from 2019. Construction of the new storage and maintenance facilities will commence. Other travel demand management strategies such as extending free transit to children and providing further discounts to students will be explored in this year.

7.1.4 2023 Annual Plan Highlights

In 2023 a further four buses and associated operators will be added to our system, with an associated increase in operations supervisors and mechanics. Following an anticipated large roll-out in 2022, transit priority investment will reduce, focussing on adding incremental infrastructure based on effectiveness and need. GO Transit’s Regional Express Rail (RER) service frequencies on the Lakeshore West line will likely be close to their 2025 targets and, therefore, any remaining route optimizations to match GO Transit frequency improvements will likely be implemented this year. This will include identifying opportunities to take advantage of the GO Rail services for local trips within Burlington. Further on-demand transit services will be introduced, subject to demand and the effectiveness of already-introduced services.

7.1.5 2024 Annual Plan Highlights

The final year of the plan will see continued service growth and the roll-out of further conventional service hours, on-demand services, transit priority and stop upgrades. Additionally, the new maintenance and storage facilities will be nearing completion, allowing for the continued growth of Burlington Transit’s services and fleet.

7.2 Forecast of Budget Impact

The forecast of budget impact outlines the operating costs, revenue and capital costs associated with the five-year business plan. **Table 4** summarizes the planned investment and ridership target to be achieved to meet the transit mode targets identified in the 2011 Halton Transportation Master Plan.

Table 4: Total Buses, Revenue Service Hours and Ridership

	2019	2020	2021	2022	2023	2024
Peak Conventional Buses	45	48	54	57	61	64
Total Conventional Fleet	63	67	71	75	79	83
Revenue Service Hours	180,000	214,240	230,880	247,520	264,160	280,800
Ridership Target	2,000,000	2,730,300	3,460,600	4,190,900	4,921,200	5,651,500

Table 5 below illustrates the operating costs, revenue and net operating costs and **Table 6** illustrates the anticipated capital requirements based on the growth strategies noted in this plan, as well as the revenue service hour, fleet and ridership projections noted in **Table 4**. All operating and capital costs are based on 2020 dollars and all revenue was calculated based on the 2019 average fare.

The majority of cost increases will come from the expansion of service as we restructure routes and increase the frequency of service. The on-demand pilot in 2020 will also require annual licensing fees and operating costs, which will be increased if the pilot is successful. Increases to administrative and supervisory staff as well as maintenance and services costs will be required to ensure the system has enough resources to effectively operate and manage growth and change.

Table 5: Planned Operating Costs and Revenue

	2020	2021	2022	2023	2024
Operating Costs					
Conventional Service Structure and Delivery	\$20,254,600	\$21,636,900	\$23,019,200	\$24,901,400	\$26,283,700
On-demand Alternative Service Delivery		\$295,000	\$590,000	\$885,000	\$1,180,000
On-demand Alternative Service & Integrated Specialized Transit Software		\$14,000	\$14,000	\$14,000	\$14,000
Organizational Structure and Staffing		\$2,380,000	\$3,440,000	\$4,560,000	\$5,600,000
Maintenance Servicing Contract	\$2,058,140	\$2,431,400	\$2,566,500	\$2,746,600	\$2,881,700
Total Operating Cost	\$22,312,740	\$26,757,300	\$29,629,700	\$33,107,000	\$35,959,400
Revenue					
Passenger Revenue	\$5,165,500	\$7,801,000	\$9,641,000	\$11,482,000	\$13,322,000
Gas Tax Funding (Operating)	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Gas Tax Funding	\$2,385,390	\$2,618,273	\$2,842,865	\$3,067,457	\$3,292,049
Free Off-peak Travel for Seniors	-\$163,000	-\$206,000	-\$249,000	-\$293,000	-\$336,000
Affordability	-\$160,000	-\$202,000	-\$245,000	-\$288,000	-\$330,000
Free Transit for Children		-\$54,000	-\$65,000	-\$77,000	-\$88,000
Discount Student Pass		-\$275,333	-\$826,000	-\$1,000,000	-\$1,174,000
Advertising Revenue	\$476,000	\$480,000	\$485,000	\$490,000	\$500,000
Charters, Commissions & Other Revenue	\$94,000	\$95,000	\$97,000	\$99,000	\$100,000
Total Revenue	\$8,797,890	\$11,256,940	\$12,280,865	\$14,480,457	\$16,286,049
Net Operating Costs	\$13,514,850	\$15,500,360	\$16,948,835	\$18,626,543	\$19,673,351
Free Transit for Children - Business Case	-\$42,250				
Expansion Buses Operating Costs - Business Case	\$833,737				
Increase from Base Budget	\$791,487				

Table 6: Planned Capital Costs

Strategies	2020	2021	2022	2023	2024
Strategic Direction 1 - Service Structure and Delivery					
Conventional Growth Bus Costs	\$2,604,000	\$2,604,000	\$2,604,000	\$2,604,000	\$2,604,000
Strategic Direction 2 - Mobility Management					
On-demand Alternative Service Delivery Implementation	\$200,000				
Transit Priority Features	\$35,000	\$550,000	\$170,000	\$40,000	\$40,000
Strategic Direction 3 - Customer Experience					
Shelter and Stop Upgrades	\$610,000	\$610,000	\$300,000	\$300,000	\$300,000
Digital Connectivity*		\$9,000	\$9,000	\$9,000	\$9,000
Maintenance Facility Expansion		\$4,150,000	\$13,550,000	\$13,450,000	
Total Incremental Capital Costs	\$3,449,000	\$7,923,000	\$16,633,000	\$16,403,000	\$2,953,000

*This item is not included in the ten-year capital program

While ridership improvements will see an increase in passenger revenue, some of the travel demand management strategies will result in a loss in passenger revenue to incentivize ridership and help reach our growth targets. The potential impact of these fare strategies is noted above. Provincial gas tax will also increase with a significant growth in ridership, and will assist in offsetting planned costs. Other funding sources will also be explored to help pay for the increased investment in both operating and capital costs.

A new maintenance facility to house a growing fleet will be largest capital costs to support this business plan. The new maintenance facility is anticipated to cost approximately \$31.1 million, with the majority of the budget spent during construction between 2022 and 2023. This facility is necessary to house and maintain a growing fleet of vehicles necessary to move more people within the City.

The growth in bus fleet will add approximately \$13 million. This only accounts for expansion vehicles. A number of existing vehicles will reach the end of their lifecycle over the five-year life of this business plan and will need to be replaced. Replacement costs have not been included in this budget. Overall capital investments are anticipated to reach \$47.3 million over the five-year life of this business plan.

Note: The resources (service hours and vehicles) identified in this business plan are guidelines and are subject to change as part of the annual budget process

7.2.1 Understanding the Need for Investment

Even with an increase in revenue from ridership growth, net operating costs and capital costs will continue to increase each year. When assessing the business case for this investment in sustainable public mobility, it is important to understand two key factors:

While Investment is Immediate, it takes time to change established travel patterns

The cost of investing in service is instantaneous impact on municipal budgets. To attract more residents to use transit and existing customers to use transit more often, improvements in service levels are necessary to make public transit more competitive with the private automobile. A number of the strategies noted in this plan help achieve this by reducing travel time (making routes more direct), reducing waiting time and improving flexibility by increasing service frequency, improving reliability through transit priority measures and increasing the comfort and convenience of the service to reflect the needs of current customers by investing in on-demand mobility and mobile phone connectivity (e.g. cell phone charges on buses and Wi-Fi at stations). While all these improvements will help lead us to our mode share targets, changing travel behaviour takes time, as most of our residents have already formed their travel patterns. Typically, it takes two to three years for the full benefit of a service improvement to be realized. This will cause a lag in revenue that will off-set operating costs.

Ridership and revenue are not the only measures of success

Reaching our transit mode share targets has other economic benefits that are not included in the operating and capital budgets noted in **Table 5** and **Table 6**. Investment in transit and other forms of sustainable mobility help achieve much more important goals, including off-setting the need for roadway widening, expansion and maintenance; reducing GHG emissions from single-occupant vehicle travel, improving public health, reducing unemployment and improving our economic competitiveness, and enhancing our quality of life. Similar to investments in health care and education, investment in sustainable mobility benefits all Burlington residents, even those who do not use the service, as it has a much broader reach.

Appendix 0



... Memo

To: Mayor and Members of Council
From: Councillor Angelo Bentivegna
c.c. Angela Morgan
Date: November 13, 2019
Re: Enforcement for Safety on Family Farms

Motion:

WHEREAS The Town of Halton Hills adopted a Resolution at their October 21, 2019 Council meeting regarding Enforcement for Safety on Family Farms;

AND WHEREAS the City of Burlington supports their local agricultural community, and want to keep their farm families, employees and animals safe.

THEREFORE BE IT RESOLVED THAT the Council for the City of Burlington endorses and supports the resolution by the Town of Halton Hills;

AND FURTHER THAT this motion be circulated to the Honourable Doug Downey, Minister of the Attorney General, the Honourable Doug Ford, Premier of Ontario, the Honourable Sylvia Jones, Solicitor General, the Honourable Ernie Hardeman, Minister of Agriculture, Food and Rural Affairs, AMO and ROMA, to find a better way forward to ensure stronger enforcement of existing laws or new legislation to ensure the safety of Ontario's farm families, employees and animals.

Background and Discussion:

Agriculture is the second largest industry in Ontario, contributing \$13.7 billion annually to Ontario's GDP and is essential for putting food on the tables of millions of people here and around the world. In recent months there has been reports of an increase in harassment of farmers and livestock transporters which has caused a growing concern with agriculture and rural communities within Ontario regarding safety of farm families, employees, animals and food production. It is essential that proper biosecurity is maintained to ensure the health and well-being of animals who are cared for on agricultural operations.

Thank you,
 Councillor Angelo Bentivegna
 Ward 6