

Further Analysis of Alternative Transit Solutions

Recommendation

1. That the February 25, 2020, City Operations report CR_7812, be received for information.
2. That Attachment 3 of the February 25, 2020, City Operations report CR_7812 remain private pursuant to Section 25 (disclosure harmful to economic and other interests of a public body) of the *Freedom of Information and Protection of Privacy Act*.

Previous Council/Committee Action

At the November 26, 2019, City Council meeting, the following motion was passed:

That in addition to implementing the Bus Network Redesign, as generally described in the November 19, 2019, City Operations report CR_6719, Administration report back to Committee in February 2020, prior to spring supplemental operating budget adjustments, on the details of a 24 month on-demand passenger van service pilot, specifically expanding on Options 2, 4 and 7, as described in the November 19, 2019, City Operations report CR_6788, as well as further analysis on the pros, cons and costs of an optimized fixed route peak hour service for affected areas, for implementation concurrent with Fall 2020 implementation of the Bus Network Redesign, and include work done through the GBA+ process.

a. That Administration provide a detailed analysis of options 2, 4 and 7, as described in the November 19, 2019, City Operations report CR_6788, operated on a public (not contracted out) basis including a comparison of operating and capital costs, infrastructure requirements, potential benefits and drawbacks and metrics for how each option meets the City's transit policy, and include work done through the GBA+ process.

b. That Administration report back to Committee in February 2020, prior to spring supplemental operating budget adjustments, on the examination of an on-demand flex service for people with limited mobility and/or prioritized snow clearing strategy for locations where residences for people with limited mobility are within a short distance of the new service, for implementation concurrent with Fall 2020 implementation of the Bus Network Redesign, and include work done through the GBA+ process.

Executive Summary

Following approval of the Transit Strategy in 2017, Administration initiated a Bus Network Redesign. Concurrently, research was conducted on innovative service delivery options for areas that are challenging to serve with conventional transit. At the November 18, 2019 Urban Planning Committee, Administration presented on-demand service delivery options for 32 candidate neighbourhoods. These neighbourhoods do not have conventional fixed route transit service in the new network and were deemed to have sufficient demand to support an on-demand service through City Operations report CR_6788. Following approval of the new bus network City Council requested additional information for a refined set of options regarding on-demand transit.

This report compares on-demand service delivery using a contracted service and public delivery model and presents refined information for three specific service levels. Options for modifying the fixed route network to address some first/last km challenges are also identified. Lastly, two options to address the transportation needs of persons with limited mobility are discussed.

Report

In 2017, Council approved the ten year Transit Strategy, which was developed with input from over 20,000 Edmontonians. The strategy identified five key Pillars to modernize transit, guide improvements, increase transit ridership, and provide safe, fast, convenient and reliable transit service. Council directed Administration to undertake a comprehensive redesign of Edmonton's bus network, grounded in the guiding principles of the Transit Strategy. The Bus Network Redesign, approved by City Council on November 26, 2019, is designed to use existing resources more efficiently and effectively to meet transit priorities in areas that currently have service.

Concurrently with developing the new bus network, Council directed Administration to research innovative service delivery solutions for areas that will experience significant increases in walking distance. In January 2019, Administration presented CR_5353 First km/Last km Transit Challenge, discussing service delivery approaches. Council requested more analysis and information, identification of additional neighbourhoods that could be served, the relationship with community bus routes and how other sustainable transportation modes could support the approach.

Subsequently, City Operations report CR_6788 First/Last Km Community Solutions expanded the scope of communities considered for alternative service and completed a detailed analysis of how the service would operate in each neighbourhood. Public feedback was gathered through open houses and surveys in potential recipient neighbourhoods and further information was gathered from peer transit agencies.

Tiers and Options

CR_5353 First km/Last km Transit Challenge presented in January 2019 discussed solutions for areas that currently have fixed route service but do not have this service with the Bus Network Redesign. Based on Council interest in widening the scope of potential neighbourhoods to receive an alternative transit solution, candidate neighbourhoods were expanded to include communities that had service in the past but do not currently have service due to low ridership and new areas that have never received service. These candidate neighbourhoods were grouped into two tiers in CR_6788 First/Last km Community Solutions:

- Tier 1: Communities that currently have service but do not have service in the Final Draft Network Design.
 - Aspen Gardens, Avonmore, Breckenridge Greens, Brookside, Cameron Heights, Cloverdale, Falconer Heights, Grandview Heights, Henderson Estates, Kenilworth, King Edward Park, Lansdowne, Montrose, Patricia Heights, Potter Greens, Rio Terrace/Quesnell Heights, Wedgewood Heights, Westridge, and portions of Gainer Industrial, Girard Industrial, Northwest Industrial and Southeast Industrial areas.
- Tier 2: Communities that do not currently have service, but meet the proposed new guidelines for on-demand service.
 - Cavanagh, Edgemont, Graydon Hill, Hawks Ridge, Hays Ridge, Keswick, Starling and Trumpeter.

Using these two tiers, seven service level options were outlined, using combinations of peak and off peak service. This report presents information for Options 2, 4 and 7:

- Option 2: Tier 1 only, peak and partial off-peak service (for communities that currently have off-peak service)
- Option 4: Tier 1 peak and partial off-peak service (i.e., same as Option 2), plus peak service for Tier 2 communities
- Option 7: Full peak and off-peak service for Tier 1 and Tier 2.

Contracted Service Model Compared to Publicly Operated Service Model

Publicly Operated Service Model

To operate an on-demand service, Administration would need to procure vehicles, establish a storage location and maintenance facility, procure trip booking/scheduling technology, and hire operators, maintenance staff and service management staff. These operating and capital costs are summarized in Attachment 1.

The City has existing maintenance and storage capacity to accommodate the six month implementation timeline, however procurement of vehicles generally requires 10 to 14 months from budget approval to vehicle delivery. A possible solution to the

procurement timeline pressure is to contract with a fleet services company to deliver vehicles within the timelines. This approach minimizes capital infrastructure commitments and allows for greater flexibility for a pilot project. The operating costs of this approach are summarized in Attachment 1.

Other timeline pressures include the need to procure on-demand trip booking and scheduling technology and completing recruitment, training and other steps to establish the necessary positions to support the program in a six month window.

Contracted Service Model

The City issued a Request for Proposals (RFP) in December 2019 for an external provider to begin operation by August 30, 2020. Subject to Council's approval of the program and budget, the City may award a contract to the successful proponent. The refined costing for a contracted delivery of Options 2, 4 and 7 is presented in Attachment 2.

A refined costing for the preferred bidder is outlined in Attachment 3. This attachment is recommended to be held in private, pursuant to Section 25(1) (disclosure harmful to economic interests), of the *Freedom of Information and Protection of Privacy Act*, as release of the information would compromise Administration's ability to negotiate procurement.

A contracted service model offers two main benefits: flexibility and speed of deployment. A contracted model allows for the option to pilot on-demand service with no upfront commitment to capital, technology and labour requirements. Upon completion of the 24-month pilot, Administration would evaluate the contracted model and could make various changes such as replacing on-demand service with fixed routes, changing the vehicle type or trip booking software. This model would allow faster deployment to align with the rollout of the new bus network. As demonstrated through the RFP process, a variety of proponents are capable of full deployment within the timeline, whereas a fully public deployment would be challenged in terms of procurement, recruitment and training.

Neither a public or contracted on-demand service model clearly outperforms the other when comparing all factors. The contracted delivery model outperforms the public model in regards to operating and capital costs. The two models are further compared in detail in Attachment 4.

Metrics for Meeting Transit Policy

The City's Transit Service Policy C539a and the associated Transit Service Standards Procedure outline service productivity and quality standards to ensure all transit services are meeting the City's goals for safe, reliable, fast and convenient service.

Both a publicly operated and a contracted service would routinely track and report on the same metrics to meet these objectives, monitoring the number of passengers, capacity, and total ridership, service reliability (total trip, wait and delay times, missed trips) and customer satisfaction. Customer satisfaction can be collected on a continuous basis through trip booking software, 311, customer care inquiries and quarterly customer satisfaction surveys.

Strong contract management will be critical. This would include holding the contractor accountable to the same service quality, safety and productivity metrics as a publicly operated service. The contractor would be obligated to provide monthly reports on key performance indicators including safety statistics, vehicle performance and costs. In addition to ongoing contract management, these reports would be used to evaluate the pilot project.

GBA+ Analysis

The success of an integrated transit system relies on all customers feeling safe, secure and welcome at all phases of their journey. Achieving these objectives is equally possible under the two delivery models. A discussion of a GBA+ analysis of an on-demand service is provided in Attachment 5.

Pros, Cons and Costs of Optimized Fixed Route Peak Hour Service

Adjusting some fixed routes may address the first/last km challenge by adding a deviation or tail to a route, due to the proximity and frequency of the new fixed route. Of the neighbourhoods identified as candidates for on-demand transit, 13 of the 31 could be addressed through such modifications. In these cases, the level of peak and off peak service and frequencies would be determined by the amount of service on the modified fixed route. This approach would require an additional \$1.6 million annual operating budget and four new buses, as well as addressing constraints on fleet maintenance and storage space.

For the remaining 18 neighbourhoods, the only solution available is to implement a new fixed route. Additional fixed routes would require 18 new buses and \$9.8 million increase to the annual operating budget.

While fixed route modifications would address the first/last km challenge in these neighbourhoods, it would introduce inconsistencies and could set a precedent for other neighbourhoods. The modifications would contradict the Route Design Principles in the Transit Service Standards Procedure. They would also reduce overall route productivity, which may later require service reductions on these routes to align with performance requirements.

Service at Residences for people with limited mobility

The redesign of Community Bus Routes prioritized origins and destinations with the

highest ridership along the current Community Bus Routes. The redesigned routes continue to serve many residences and destinations for people with limited mobility. Attachment 6 lists residences that will no longer be served with a Community Bus Route in the new network. However, these locations remain within a short walk of transit service. Two approaches could be used to meet the same level of transit accessibility at these locations: introducing on-demand service to replace fixed route service or providing enhanced snow clearing between the residence and the nearest bus stop.

Administration estimates that these locations could be served by two additional on-demand service areas. This service would pick up customers at these residences and transport them to a few designated local destinations, such as shopping centres and medical facilities. As outlined in Attachment 6, depending on the level of service provided, this service would cost between \$328,000 and \$525,000 annually and would require up to five new vehicles.

Enhanced Snow Clearing

An alternative approach for serving residences for people with limited mobility could involve providing enhanced snow clearing between these locations and the nearest fixed route bus stop. In regards to sidewalk snow clearing, the Active Transportation Modes section in the current Snow and Ice Control Policy C409J states that the City is required to:

- Plow snow from multi use trails and sidewalks adjacent to city-owned land within 48 hours of a snowfall where there is an accumulation of 2 cm or more.
- Snow will not be hauled away.
- Plow snow from designated bicycle lanes with the roadway plowing to the same service level designated for that roadway.
- Maintain prioritized sidewalks, trails and bike routes to bare pavement within 24 hours from the end of snowfall.

Bus stops and bus shelters are all made accessible within 48 hours and fully cleared of snow within five days.

In order to provide enhanced snow clearing, these locations would be added to the list of prioritized sidewalks. However, offering a prioritized service in these areas would not be in alignment with Community Standards Bylaw #14600 and Snow and Ice Policy C409J that states that property owners are required to clear snow from sidewalks adjacent to their property (frontage and flankage). Clearing sidewalks for some residents and not others could create inequity. Treating a portion of a sidewalk as priority would also create inconsistency for snow clearing within a specific route and could require additional resources.

Conclusion

Implementation of the new network reflects Council’s stated priorities for transit service. Action 3.d of the Transit Strategy discusses exploring options for alternative transit service but is not a requirement for achieving the ridership goals of the new bus network.

Should Council wish to proceed with a two year pilot starting with the rollout of the new bus network, pursuing the contracted service model could potentially be transitioned to a public model. This approach would have the greatest potential for successful implementation in this short timeframe and would maximize Administration’s opportunities to learn this new line of business.

Administration would conduct a full evaluation of the new network design after 24 months of service and report findings to Council. The evaluation would inform changes to the fixed route network and the 2023-2026 Operating Budget. At the same time, Administration would conduct a full program evaluation of the alternative transit pilot project.

Financial Implications

The new bus network has been designed using all existing transit operating hours and vehicles, and is intended to demonstrate a more effective and efficient deployment of existing limited resources. Implementation of on-demand transit service in the communities identified will require additional resourcing as shown in attachments 1 and 2. The impact to operating and capital budget requirements vary depending on the delivery model. Should Council wish to proceed with one of these options, Administration would bring forward the necessary budget adjustments as part of the Spring Supplemental Operating and Capital Budget Adjustment processes.

Corporate Outcomes and Performance Management

Corporate Outcome(s): Edmontonians use public transit and active modes of transportation			
Outcome(s)	Measure(s)	Result(s)	Target(s)
Effective and efficient service delivery: Effective communication and collaboration with stakeholders, partners and citizens support the achievement of goals	Total number of people engaged through City-Wide engagement activities	June 2019 workshops: 333 participants June 2019 surveys: 1,124 completed September 2019 workshops: 93 participants September 2019 surveys: TBD	N/A

	Variety of ways used to engage and communicate with the public	Engagement: Workshops and surveys Communication: Direct mail, door hangers, roadside signs, social media (Facebook and Twitter), city website, community league outreach, public engagement calendar	
Mode shift to transit	Transit ridership (total)	87,121,534 (2018)	TBD
	Ridership per capita	89.6 (2018)	105 (2019)

Attachments

1. Preliminary Costing: Publicly Operated Service Model
2. Refined Costing: Contracted Service Model
3. Refined Costing of Preferred Bidder: Contracted Service Model- Private
4. Summary of Benefits and Drawbacks: Public and Contracted Delivery
5. GBA+ Analysis
6. On-Demand Service for Limited Mobility Residences

Others Reviewing this Report

- M. Persson, Deputy City Manager and Chief Financial Officer, Financial and Corporate Services
- K. Armstrong, Deputy City Manager, Employee Services
- R. Smyth, Deputy City Manager, Citizen Services
- S. McCabe, Deputy City Manager, Urban Form and Corporate Strategic Development
- B. Andriachuk, City Solicitor
- C. Owen, Deputy City Manager, Communications and Engagement