

EDMONTON TRANSIT SERVICE IN NEWER DEVELOPING/DEVELOPED COMMUNITIES

Recommendation

That the August 29, 2023, City Operations report CO01337, be received for information.

Requested Action	Information only		
ConnectEdmonton's Guiding Principle	ConnectEdmonton Strategic Goals		
CONNECTED This unifies our work to achieve our strategic goals.	Urban Places		
City Plan Values	ACCESS		
City Plan Big City Move(s)	A community of communities	Relationship to Council's Strategic Priorities	Mobility Network
Corporate Business Plan	Serving Edmontonians		
Council Policy, Program or Project Relationships	<ul style="list-style-type: none"> • Bus Network Redesign • City Policy C539A - Transit Service Policy • First Kilometre/Last Kilometre Solutions (On Demand Transit Service) • ETS Annual Service Plan • Mass Transit: Planning for 1.25 million people 		
Related Council Discussions	<ul style="list-style-type: none"> • CR_6788 Bus Network Redesign and Transit Service Policy, Urban Planning Committee, November 19, 2019 • CR_7812 Further Analysis of Alternative Transit Solutions, Urban Planning Committee, February 25, 2020 • CO00605 Bus Network Redesign - Interim Review, Executive Committee, January 19, 2022 • UPE00342 Mass Transit: Planning for 1.25 Million People, Urban Planning Committee, February 15, 2022 • CO00803 Bus Network Expansion Opportunities - Transit Funding Model Options, Executive Committee, March 23, 2022 • CO01320 On Demand Transit - Service Delivery Model, Community and Public Services Committee, October 14, 2022 • CO01450 Transit Network Equity Analysis, Urban Planning Committee, November 22, 2022 		

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Previous Council/Committee Action

At the June 7, 2022, City Council meeting, the following motion was passed:

That Administration provide a report on the performance metrics of Edmonton Transit Services in newer developing/developed communities and outline the ETS Service Standards and associated budget required to increase the service levels of ETS in these communities.

Executive Summary

- City Policy C539A - Transit Service Policy, the associated Transit Service Standards Procedure and approved operating and capital budgets provide the framework for guiding transit service decisions. Rider feedback, equity considerations and quantitative performance metrics are also considered when implementing service adjustments.
- Service standards outlined in City Policy C539A represent minimum thresholds for new service. New service is considered “warranted” when minimum thresholds are reached.
- Capital and operating funding is required for the bus fleet, transit operators, maintenance staff and fueling/electricity required to operate conventional transit service. Constraints to adding new service include the size of the bus fleet, facilities to maintain and store buses, as well as the number of staff needed to operate and maintain the fleet. Service improvement in some areas is further constrained by incomplete neighbourhood infrastructure.
- Administration regularly looks for opportunities to improve transit service in newer areas as part of regular service planning.
- Transitioning On Demand Transit service areas with high ridership to conventional transit service allows these areas to be served more efficiently and meet service standards. This enables On Demand Transit resources to be redeployed to neighbourhoods that are currently unserved by transit, or to improve existing On Demand Transit service in areas where the service is oversubscribed.
- There are additional opportunities to provide service to schools, in collaboration with school boards such as Edmonton Public and Edmonton Catholic school boards.
- Conventional transit service hours did not increase from 2015 to 2022. During that time, Edmonton’s population grew by approximately 15 per cent. As a result, service hours per capita decreased. Administration has outlined potential scenarios for maintaining service levels per capita to accommodate Edmonton’s growth.

REPORT

City Council sets policy direction for transit service and allocates the capital and operating budgets. Policy direction is outlined in City Policy C539A - Transit Service Policy. The associated Transit Service Standards Procedures identifies the minimum requirements (referred to as “standards”) for introducing new transit service and provides guidance for service adjustments. When an area without existing transit service meets all of the standards outlined, service is said to be “warranted”.

From 2015 to 2022, Edmonton’s population grew by approximately 15 per cent. While the urban footprint and roadway network also expanded during this time, conventional transit service hours (bus, LRT and on demand service) did not keep up with growth; more specifically,

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conventional bus service hours did not increase during this timeframe to meet this level of growth.

In September 2023, off-peak bus service hours will increase by 500 hours per week, representing an approximate one per cent increase in service hours. While the increase in off-peak service will benefit transit riders, it does not address all of the service gaps in the network.

The City Plan establishes three development pattern areas: the redeveloping area, developing area and future growth area. This report examines transit service in the 79 developing neighbourhoods that are either currently served by transit, or are expected to meet the minimum development thresholds for the introduction of transit service by 2026. The remaining neighbourhoods in the developing area do not meet these criteria. The neighbourhoods considered in this work and listed in Attachment 1 includes:

- 44 served by conventional transit
- 22 served by On Demand Transit (as of September 2023)
- Seven served by conventional transit and On Demand Transit where road infrastructure does not support conventional buses
- Six unserved by transit.

Developing Neighbourhoods

Criteria for Adding Transit Service in Neighbourhoods with No Service

Transit Service Standards, as set out in C539A Transit Service Standards Procedures, consider specific criteria for expanding service to new residential areas or employment centres.

For new service to be warranted in a residential area, all of the following standards must be met:

- Residential areas next to areas with existing transit service are prioritized.
- A minimum of 80 per cent of the development's dwelling units are located more than 600 metres walking distance from the nearest bus stop with existing transit service.
- A minimum of 600 dwelling units are being built, with a minimum of 200 occupied units when transit service is introduced.
- Transit vehicles can safely operate in the neighbourhood.
- Required infrastructure for transit operations, such as curbs, sidewalks, paths, street lighting, bus stop platforms and turnaround loops are in place.

For new service to be warranted in an employment area/post-secondary area, all of the following standards must be met:

- There is a minimum of 500 employees in the employment area or minimum of 500 students at the post-secondary site.
- Employment/post-secondary areas that are close to existing transit service areas are prioritized over those that are further away.
- At least 80 per cent of employees or students in the employment/post-secondary area are located more than 800 metres of walking distance from existing transit service.

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Service is warranted for the following neighbourhoods based on all of the above service standards and projected growth to 2026:

- Crystallina Nera East
- Marquis
- Mattson and South Orchards
- River's Edge
- Discovery Park (Edmonton South Central)
- Aurum Industrial (Clover Bar Area)
- Rampart Industrial

There are other neighbourhoods that meet the minimum population standard, but do not meet one or more of the other standards referenced above. For example, although the Stewart Greens neighborhood meets the population standard, the majority of dwelling units are within 600 metres of existing transit and the collector roadway network is incomplete. The Paisley neighborhood also meets the population standard, but the road infrastructure and neighbourhood design do not support conventional or On Demand transit.

Conventional Transit Service

Route productivity is defined as the number of people boarding a bus in an hour of service. The Transit Service Standards Procedure indicates the following minimum productivity targets for local routes:

- Twenty five boardings per hour in weekday peaks
- Fifteen boardings per hour in off-peak one (weekday midday and evening, Saturday midday, Sunday midday)
- Twelve boardings per hour in off-peak two (weekday morning and late evening, Saturday morning and evening, Sunday morning and evening)

Attachment 2 shows the performance of routes serving developing neighbourhoods, measured across 14 weekly time periods. The majority of routes are meeting service standards across all time periods. Nine of 32 routes are failing to meet service standards in at least one time period. Route 117 (Ebbers) is the only route that fails to meet service standards in most time periods.

Transit Service Standards also include a crowding threshold of 50 passengers during the peak hour for local routes using a standard 40 foot bus. Additional service is considered on existing routes that consistently exceed 50 passengers. None of the routes serving developing neighbourhoods meet the crowding threshold.

The productivity of routes serving developing neighbourhoods is comparable to the system average, with some routes having higher productivity than the average. Routes 516 (Laurel) and 919 (Secord) have some of the highest productivity, which makes them candidates for expansion of service.

Most bus routes serve multiple neighbourhoods, and many serve both developing and redeveloping areas. Changes to transit service would be considered only after assessing all of the

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neighbourhoods served by the route, including areas of higher/lower ridership, alternate service and walking distances, and equity considerations.

On Demand Transit Service

On Demand Transit service is designed as a first kilometre/last kilometre solution, connecting neighbourhoods that are not directly served by the conventional transit network. The service connects riders to transit hubs in areas that do not meet the service standards set out in City Policy C539A for conventional bus service. On Demand Transit provides adaptable, cost-effective access to transit by using smaller buses and flexible, demand-responsive routing. On Demand Transit provides transit service in areas that have reduced ridership or do not yet meet thresholds (e.g., population density, ridership, etc.) for conventional bus service. The typical weekday boardings for each neighbourhood is shown in Attachment 3. The weekday peak hour requests for each zone are included in Attachment 4.

Conventional transit offers higher capacity and more predictability for riders. As ridership increases, conventional transit becomes a more appropriate service type for an area. Several neighbourhoods currently served by On Demand Transit would be more efficiently served by conventional transit due to high ridership volumes. These areas include:

- Cashman / Cavanagh
- Edgemont
- Glenriding Heights / Glenriding Ravine
- Big Lake / Northwest Industrial

Some neighbourhoods with high ridership are inaccessible for conventional transit service, as they lack safe turnarounds for transit vehicles. These include portions of Graydon Hill, Hays Ridge and Keswick. Neighbourhoods without appropriate infrastructure are not under consideration for a transition to conventional service.

Seven developing neighbourhoods receive both conventional and On Demand Transit service. Residents in Glenriding Heights, Maple, Tamarack and The Hamptons are partially served by On Demand Transit because the neighbourhood infrastructure is not fully developed and cannot support conventional buses. Once the road network is complete, these neighbourhoods are expected to fully transition to conventional service.

On Demand Transit service in Rapperswill, Chambery and Elsinore serves areas in these neighbourhoods with longer walk distances that cannot be easily accessed by conventional bus service due to neighbourhood design. It is expected that On Demand Transit service in these neighbourhoods will continue for the foreseeable future.

School Service for Newer Developing Neighbourhoods

As part of revising the bus network, efficiencies were gained by serving more schools through conventional transit routes than through school special routes. While school boards are responsible for providing transportation if students live more than 2.4 km from their designated school, ETS is the preferred means of transportation for junior and senior high school students from the Edmonton Catholic and Edmonton Public school boards. Transit Service Standards warrant a school special route when the regular conventional service is overcrowded and an

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additional trip is able to attract at least 30 transit riders. Where transit options do not meet the school boards' standards for acceptable trip times and number of transfers, they provide alternate transportation to their students.

Administration works with Edmonton Public School Board and Edmonton Catholic School Board staff to plan school special routes based on anticipated school populations, times and projected student locations. Administration receives frequent requests for school special services.

Redeveloping Neighbourhoods & City-Wide Analysis

Attachment 5 shows the latest key productivity metrics from all routes across the city.

Route report cards, with key performance measures for every route, are produced and published five times per year. ETS' Annual Service Plan also provides an outline of system-wide performance measures and is published in the first quarter of each calendar year.

Needs are identified by analysing route performance data, system-wide data and feedback from riders. High level findings are summarized as follows:

- Multiple routes have identified high ridership, indicating there is growing demand along those corridors. Adding frequency to these routes will improve convenience for riders. Several of these routes are also candidates for off-peak service expansion. This would benefit riders who travel outside of traditional peak hours, such as shift workers. Examples of service that could be considered include:
 - Improved off-peak frequency for Route 516 (Laurel) and Route 903 (Kingsway Avenue)
 - New evening service for Route 919 (Secord), Routes 55 (Meadows) and 56 (Meadows)
- There is a need for improved connections to several areas, such as Northgate, Chinatown, Kingsway and Mill Woods.
- Cultural and religious hubs have also been identified as being candidates for improved connections on weekends when they are most active.

Budget/Financial Implications

There are three budget impacts to consider with providing transit service: the cost of capital and maintenance associated with purchasing and maintaining the bus fleet, capital cost and maintenance associated with a facility to store the bus fleet and annual operating costs for delivering conventional bus service hours.

Across the entire network, service gaps total approximately 5,000 conventional bus hours per week or 260,000 hours per year - this figure is based on an analysis completed by Administration which identified the cumulative amount of service hours across the network that would be required if service was added to meet the identified short-term needs. The distribution of the weekly hours is outlined in Attachment 6. Four options to address current service gaps and enable service growth include:

1. Repurposing the temporary Valley Line Southeast LRT precursor bus service hours to permanently add them to the bus network. This would add approximately 70,000 annual service hours, and would be available after the appropriate overlap period post-service

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commencement of the Valley Line Southeast. Adding these hours would require \$7.2 million in tax levy funding on an ongoing, annual basis.

2. Growing service hours through the use of a small satellite transit garage, repurposing an existing facility, which would provide capacity for up to 40 40-foot buses, creating an opportunity to add approximately 100,000 annual service hours. The satellite transit garage would require funding for the lease, utilities and staff to operate the facility (total costs be determined). The growth in service hours would require funding for 40 growth buses and approximately \$12 million in direct operating costs for operators, fuel and fleet maintenance.
3. Growing service hours once the new transit garage in the southeast opens, adding up to 75 buses per year of operations. This would add approximately 187,500 annual service hours for each addition of 75 buses, representing approximately \$22 million in direct operating costs for operator wage, fuel and fleet maintenance.
4. Fleet renewal to lower the fleet age of buses, reducing the number of buses used as spare buses for service and allowing them to be put into regular service. This would depend on the volume and pace of bus renewal investment. This opportunity requires further refinement to confirm details and the associated financial impact.

The full 260,000 annual service hours could be delivered through the combination of repurposing the Valley Line LRT precursor service hours, the satellite transit garage and the first operational year of the new transit garage. Addressing these service gaps will depend on how far and how fast these opportunities are pursued. Scenarios for pursuing these options will be discussed in FCS01246 Revenue Source for Transit which is scheduled to be presented to Executive Committee on September 20, 2023. The delivery of these investments also depends on timelines for procuring vehicles as well as recruiting and training new staff. For example, procuring new buses will take approximately 18 months.

Community Insight

Since the launch of the current bus network, thousands of Edmontonians have shared feedback and requests for increased service throughout the network. Administration makes service adjustments five times per year, incorporating feedback in alignment with City Policy C539A and considering available budget and resource constraints. Additionally, there is ongoing public engagement with Edmontonians regarding plans for a mass transit network for 1.25 million people. This engagement will inform an implementation framework for mass transit.

Administration completed engagement to understand the needs of new communities in developing neighbourhoods. In spring 2022, engagement was focused on the community of Westview Village and the areas along Route 921 to understand needs and preferences for route alignment. The result realigned Route 921 from Lewis Farms to travel along Stony Plain Road to Jasper Place. In fall 2022, several communities in the Heritage Valley area along Route 722, including Rutherford and Blackmud Creek, were engaged on route alignment options. Based on the feedback, On Demand Transit will be introduced in Blackmud Creek, replacing Route 722 in September 2023.

GBA+

When making transit network decisions, ETS considers community feedback, alignment with City Policy C539A and resource availability. However, some equity-seeking groups may face barriers to providing feedback, engaging or otherwise communicating their needs for reasons outside of their control. As a result, the transit needs of these equity-seeking communities may not be fully captured when making transit network decisions.

A preliminary review of Edmonton's transit network with an equity lens was presented to Urban Planning Committee within the City Operations report CO01450 Transit Network Equity Analysis on November 22, 2022. Ongoing work will review the network to align with GBA+ principles, with the aims of identifying equity-seeking populations who may not be receiving adequate transit service to meet their needs, removing barriers, and continually working towards an equitable transit network that enables mobility for all Edmontonians. While the initial review included analysis of populations with lower-income households, Indigenous populations and seniors, ETS will conduct a more comprehensive review of equity-seeking groups in 2023 to determine where additional service improvements or policy changes would help reduce barriers and serve riders more equitably.

Attachments

1. Developing Neighbourhoods Meeting Development Thresholds
2. Productivity of Conventional Transit in Developing Neighbourhoods
3. Average Weekly On Demand Transit Boardings
4. Weekday Peak Hour On Demand Transit Requests
5. Conventional Transit System Wide Productivity
6. Conventional Service Improvements