

## TRANSIT SERVICE NEEDS TO MEET POPULATION GROWTH

### Recommendation

That the October 9, 2024, City Operations report CO02481, be received for information.

|   |  |   |                  |
|---|--|---|------------------|
| <b>Requested Action</b>   | Information only   |   |                  |
| <b>ConnectEdmonton's Guiding Principle</b>                                | <b>ConnectEdmonton Strategic Goals</b>   |   |                  |
| <b>CONNECTED</b><br>This unifies our work to achieve our strategic goals. | <b>Urban Places</b>  |   |                  |
| <b>City Plan Values</b>   | ACCESS.  |   |                  |
| <b>City Plan Big City Move(s)</b>   | A community of communities   | <b>Relationship to Council's Strategic Priorities</b> | Mobility Network |
| <b>Corporate Business Plan</b>  | Serving Edmontonians   |   |                  |
| <b>Council Policy, Program or Project Relationships</b>                   | <ul style="list-style-type: none"> <li>• C539A - Transit Service Policy</li> </ul>   |   |                  |
| <b>Related Council Discussions</b>  | <ul style="list-style-type: none"> <li>• August 27, 2024, UPE02216, Mass Transit: Implementing for 1.25 Million People</li> <li>• March 19, 2024, CO2086, Edmonton Transit Service Bus Fleet Replacement Plan</li> <li>• March 19, 2024, CO02242, Bus Service Network Service Plan Update</li> <li>• August 28, 2023, CO01337, Transit Service to Newer Developing/Developed Neighbourhoods</li> <li>• February 15, 2022, IIS00426, ETS Fleet Storage and Maintenance Facility Strategy</li> </ul> |   |                  |

### Previous Council/Committee Action

At the May 2, 2024, Urban Planning Committee meeting, the following motion was passed:

## TRANSIT SERVICE NEEDS TO MEET POPULATION GROWTH

That Administration provide a report outlining a plan to address transit service needs for a population horizon in 2026, including fleet renewal, fleet growth, facility plans and how funding programs from other orders of government can be accessed to help meet these needs.

### Executive Summary

- Edmonton's population grew by 7.4 per cent from 2021 to 2023, and recent decisions to add transit service hours have resulted in an increase in transit service hours of 4.4 per cent during that period. However, from 2024 to 2026, the city's population is expected to grow by an additional 5.5 per cent, reaching a total of 1.26 million in 2026, which will further increase a gap between service levels and service standards.
- 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.
- Transit service hours should increase proportionally with population growth to maintain service levels in alignment with the Transit Service Standards, to support The City Plan goals and climate resilience objectives.
- Maintaining transit service levels requires both increasing fleet and service hours to keep pace with population growth. Over the last 17 years, ETS has consistently replaced an average of 48 conventional buses (approximately 5 per cent of the fleet) per year as part of a fleet renewal plan to replace aging buses.
- In addition to fleet and workforce requirements, addressing service levels relies on supporting infrastructure such as transit garages and rider-facing facilities. Sustained renewal of fleet and facilities is also necessary to maintain current service levels and deliver reliable service to Edmontonians.
- Funding programs from other orders of government may address a portion of capital requirements for transit; however, these capital funding programs generally require contribution from all three orders of government, and would not address operating funding requirements to sustain service.

### REPORT

The City Plan guides the way Edmonton grows, envisioning an integrated mobility network that enables a more vibrant, well connected and prosperous city. It shapes the evolution of mobility to reflect the needs of a city of two million people. Advancing the objectives in The City Plan, including establishing a mobility system where people can move seamlessly, facilitate economic opportunities and thrive socially, requires growing transit service that accommodates population growth and mobility needs. Supporting transit growth is also key to fostering social equity by offering better access to transportation options for those who need it and progressing climate objectives by reducing the number of single-occupancy vehicles. Over the last several years, Edmonton's population has been rapidly increasing. According to Statistics Canada<sup>1</sup>, in 2023,

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<sup>1</sup> Statistics Canada. [17-10-0149-01](#) Components of population change by census metropolitan area and census agglomeration, 2021 boundaries

## TRANSIT SERVICE NEEDS TO MEET POPULATION GROWTH

Edmonton was the second fastest growing Census Metropolitan Area across the country, with temporary international migrations (net non-permanent residents) being a primary driver in population growth.

From 2015 to 2021 Edmonton's population increased by approximately 11.9 per cent<sup>2</sup> but conventional transit service hours did not proportionally increase. Recent decisions to add transit service hours have addressed a portion of the gap created between the Transit Service Standards and current service levels. However, the city's population grew by 7.4 per cent from 2021 to 2023<sup>3</sup> while transit service hours increased by 4.4 per cent. From 2023 to 2026, the city's population is forecast to grow an additional 9.0 per cent.

During the Fall 2021 Supplemental Operating Budget Adjustment, Council approved the addition of 500 weekly off-peak hours, as well as a 25 per cent increase to On Demand transit service, which were added to the network in September 2023. The August 28, 2023 CO01337 Transit Service to Newer Developing/Developed Neighbourhoods report provided an assessment of the gap between Transit Service Standards and current transit service levels citywide, and found a gap of 5,000 weekly service hours (260,000 annual service hours) as of December 2022. In response to these challenges, during the Fall 2023 Supplemental Operating Budget Adjustment, City Council supported several opportunities to grow transit service, including:

- \$5.2 million in annual operating funding to redeploy the Valley Line Southeast precursor buses and associated 70,000 annual service hours. These were added to the network in February 2024.
- \$7.4 million in annual operating funding to operate 50,000 annual service hours from a satellite garage facility. These will be added to the network in April 2025.
- \$15.8 million in capital funding to purchase 20 growth buses to support the April 2025 additions.

These investments contributed a total of 120,000 service hours to address the 2023 gap of 260,000 annual service hours. While these investments will help to ease the pressure on transit service, the gap between current service levels and the Transit Service Standards continues to expand as the city's population grows.

### Service Levels for 2026 Population Estimate

Service performance is assessed using the service productivity and quality standards in the Transit Service Standards Procedure, particularly passenger boardings per hour, on time performance and overloaded routes. In 2023, ETS performed an extensive evaluation of the current bus network, two years after implementing the redesigned bus network and post-pandemic ridership recovery. Although most routes were performing well, some have been experiencing overloads in one or more time periods.

Several gaps in service were identified in various categories:

- New routes and network changes: to address increased walking distance beyond existing service in growing areas.

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<sup>2</sup> Statistics Canada. Table 17-10-0142-01 Population estimates, July 1, by census subdivision, 2016 boundaries, inactive.

<sup>3</sup> City of Edmonton and Stokes Economics, summer 2024 economic outlook

## TRANSIT SERVICE NEEDS TO MEET POPULATION GROWTH

- Transition from On Demand Transit to conventional: to transition On Demand Transit service in high ridership areas to fixed-route service.
- New off-peak service: to address limited span of service in existing areas.
- New peak service: primarily for service related to new secondary and post-secondary schools.
- Improved frequency: for routes achieving high productivity.

These service level components were specified in the August 2023 report, identifying an existing gap of approximately 5,000 weekly service hours (260,000 annual service hours). Council invested a total of 2,308 weekly hours (120,000 annual hours) as part of the Fall 2023 Supplemental Operating Budget Adjustment, reducing the gap in weekly service hours from 5,000 to 2,692.

These hours were allocated in 2023 and 2024 by striking a balance between the needs for increased frequency, expanded span of service, new service and improved schedule adherence. However, this gap was a current state snapshot; it will continue to grow as the population grows.

Administration has updated this assessment to provide a projection to 2026, based on the City's population growth and forecasts<sup>4</sup>, changes in ridership trends, a review of existing service gaps and performance and wait times of On Demand Transit service in busy areas. Projections show that the 2026 weekly service hour requirement will grow from 2,692 hours to 4,750. A description and breakdown of these service additions is provided in Attachment 1.

Delivery of 4,750 additional transit service hours would require \$16.1 million in ongoing annual net operating budget. This includes direct costs only such as operator wage, diesel fuel and vehicle maintenance. This costing reflects service delivered with diesel buses, and would need to be updated to reflect decisions on vehicle type. Final costing would also need to include indirect costs for supporting roles such as mechanics, dispatchers, training and inspectors.

### Transit Fleet and Facilities to Support Service Levels

The addition of transit service hours requires additional fleet, as well as sufficient capacity in maintenance facilities to store, maintain and deploy buses into service. Delivering an additional 4,750 weekly service hours would require an additional 99 buses. Between \$90.6 million and \$158.4 million in capital budget would be needed to fund 99 additional buses, depending on the fuel type.

At the February 15, 2022 Urban Planning Committee, City Council approved the ETS Fleet Storage and Maintenance Facility Strategy. The strategy presented a current state assessment of conventional bus and paratransit storage and maintenance facilities, along with projected needs to support fleet expansion and facility energy transition. Fleet storage and operations and maintenance facilities are operating at full capacity. To expand, respond to future increased service demands, and achieve greenhouse gas emissions targets by 2030 and beyond, significant investment into the design and construction of new and expanded facilities will need to be considered.

As part of the 2023-2026 budget, City Council approved capital funding for the City's contribution towards the design and construction of the southeast transit garage. Design and construction of

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<sup>4</sup> Analysis using Geodemographic Projection Program dataset developed by the Administration in alignment with The City Plan growth targets, housing development trends and the 2023 Fall Economic Outlook

## **TRANSIT SERVICE NEEDS TO MEET POPULATION GROWTH**

the southeast transit garage is currently underway, with the facility projected to open during the 2027-2030 budget cycle. Administration recommends adding up to 75 growth buses each year once this facility opens, which would mean the 99 buses needed to address the 2026 service gap could be addressed within the first two years of the facility opening.

### Rider-Facing Facility Needs

As transit service grows, expansion of rider-facing facilities is needed to support efficient and reliable service. The Mass Transit Plan for the 1.25 million population horizon reflects a need to build bus-based mass transit solutions to support the mobility needs of a growing city. Investing in mass transit attracts more riders to transit and enables mode shift, and supports development around nodes and corridors.

During the 2023-2026 capital budget, Council approved funding for the planning of Bus Rapid Transit (BRT) Routes B1 and B2. While the next stages of design and construction have yet to be funded, the rider demand for these routes is already established. Advancing these projects will help to meet city-building and climate action goals, and provide more efficient delivery of bus service hours to move riders. They also influence rider-related facility needs for transit centres.

Advancing mass transit requires the development of rider facilities that serve as mobility hubs connecting transit with other modes. For example, a future Windermere North Transit Centre and park and ride facility has been identified to support connections between the Terwillegar Drive express bus service, local routes, On Demand Transit and other modes such as cycling. The Windermere North Transit Centre and park and ride requires \$30.3 million in capital funding for design and construction.

### **Renewal Needs to Maintain Transit Service**

Reliability of service is one of the guiding principles for City Policy C539A - Transit Service Policy and is a critical component of the rider journey. ETS monitors both actual on-time performance and rider satisfaction with on-time performance through the monthly transit rider satisfaction survey. In 2023, satisfaction with on-time performance was 78 per cent, compared to 82 per cent in 2022. While there are many factors that impact on-time reliability, maintenance of the bus and LRT fleet play a critical role.

### Bus Fleet Renewal Needs

Maintaining transit service levels requires both increasing fleet and service hours to keep pace with population growth, while also ensuring a sustained investment in fleet and facility renewal. The March 19, 2024 City Operations report CO2086 Edmonton Transit Service Bus Fleet Replacement Plan outlined the current state of transit bus fleet renewal.

ETS currently owns and operates a fleet of 968 conventional transit buses, including 797 forty-foot units. Over the last 17 years, ETS has consistently replaced an average of 48 conventional buses (approximately 5 per cent of the fleet) per year as part of a fleet renewal plan to replace aging buses. For the period of 2023-2026, a transit fleet renewal investment of \$257.6 million was identified, which includes the replacement of 322 conventional buses due to fleet age. In the 2023-2026 capital budget, due to significant constraints on the City's budget, renewal profiles citywide were reduced from ideal levels. As a result, the bus fleet renewal profile included

## TRANSIT SERVICE NEEDS TO MEET POPULATION GROWTH

funding of \$17.8M to replace only 22 conventional buses over the four-year cycle, leaving a gap of 300 unfunded bus renewals, or approximately 35% of the 40' bus fleet.

Recognizing the challenges this poses to maintaining this core service, during the Spring 2024 Supplemental Capital Budget Adjustment, City Council approved \$37.9 million in additional bus renewal in 2025 and 2026, which will support the replacement of approximately 40 additional buses. This investment will reduce the unfunded fleet renewal to 260 buses in 2026, at a cost of approximately \$202 million. However, this will increase during the 2027-2030 capital budget as there are 103 buses reaching end of life in 2027.

### LRT Fleet Renewal Needs

Maintaining reliable LRT service is a critical component for sustaining current service levels. During the 2023-2026 capital budget, City Council approved funding of \$240.5 million to replace the aging Siemens U2 light rail vehicle (LRV) fleet, which represents 39 per cent of the ETS LRV fleet. These replacement LRVs are being procured in coordination with the growth vehicles to support the Capital Line South and Metro Line Northwest LRT extensions, with the first vehicles expected to arrive in 2028.

In addition to replacing the LRVs, ongoing capital investments are needed to maintain the younger SD160 fleet, which was purchased in 2008-2009, as well as the U2 fleet until they are retired. Recognizing the impacts of reduced funding for LRV renewal, during the Spring 2024 Supplemental Capital Budget Adjustment, City Council approved an additional \$4.6 million for this renewal profile. While this profile, like bus fleet renewal, remains below ideal levels, this additional funding will allow ETS to sustain current LRT service levels for the remainder of the 2023-2026 budget cycle.

### Transit Facility Renewal Needs

Transit facilities include garages to store and maintain vehicles, as well as rider-facing facilities such as LRT stations and transit centres. In the last 10 years, several transit facilities have seen significant renewal work including the Belvedere, Castle Downs and Jasper Place Transit Centres. In addition, some downtown LRT stations underwent upgrades to lighting, platform tiles and safety features. Most recently, a major renewal of Stadium LRT Station significantly improved accessibility, rider amenities and sightlines, resulting in an improved perception of safety. There are several facilities that are overdue for major renewal activity. These include:

- The Coliseum LRT Station and Transit Centre has an outdated design which is challenging to maintain and contributes to low perception of safety. The station is planned to eventually be relocated south to 115 Avenue as part of the Exhibition Lands redevelopment plan. In the interim, the bridge supporting the station is being renewed and mechanical and electrical systems are being repaired, which will extend the life of the aging station until the new station is constructed.
- The Government Transit Centre is in need of renewal due to the very poor condition of the facility and outdated design, which means the facility does not meet accessibility requirements and has reduced operational capacity.
- Replacement of components in LRT stations that are beyond useful life, including escalator replacement, HVAC and electrical system replacement in stations and utility complexes.

## TRANSIT SERVICE NEEDS TO MEET POPULATION GROWTH

- Replacement of pavement in several transit centres which is in very poor condition.

### Plan to Address Transit Service Levels

Incorporating all of these components, Administration has developed a plan to meet transit service levels for the population horizon of 2026, which includes:

- 4,750 weekly transit service hours to address the projected gap to meet service standards;
- 99 additional buses to deliver the increased service hours;
- New rider-facing facilities in growing areas, such as the Windermere North Transit Centre and park and ride; and,
- Fleet and facilities renewal to maintain current service levels, including 260 renewal buses.

Additional funding is required to implement this plan and align the level of transit service available to Edmontonians with the Transit Service Policy and Transit Service Standards.

### Funding to Support Transit Service Levels

Recent Council investments in transit service capital and operating needs have been supported primarily by tax levy, with some partner funding for the design and construction of the southeast transit garage and significant partner funding for LRT expansion projects. Meeting future transit service needs will require partner funding support.

On July 17, 2024, the federal government announced the launch of the Canada Public Transit Fund (CPTF), a \$30 billion investment over the first 10 years to expand public transit across Canada<sup>5</sup>. The CPTF will provide funding for capital investments. Funding will begin to flow in 2026, within three program streams:

- **Baseline Funding:** Funding for communities of all sizes that have eligible public transit systems. This stream will provide transit-related funds for routine growth and rehabilitation, such as system expansion, extension of asset lifecycle, and/or transit performance upgrades. A medium-term capital plan will need to be developed and submitted for this stream. The CPTF will partially fund projects in this stream and requires the remainder to be funded by municipalities. Funds will be allocated using figures that will include ridership and population.
- **Targeted Funding:** Funding to support specific types of public transit and active transportation projects such as rural and remote transit or active transportation. Funding will be application-based and delivered on a project-by-project basis. Currently, no additional information is available on this stream.
- **Metro Region Agreements:** Funding for metropolitan regions with higher funding demand and larger public transit networks. Regions will need to submit a 10-year Integrated Regional Plan outlining regional capital projects and supporting actions that advance housing, equity, climate and mode-shift goals. This stream expects regional participation as well as representation from provincial and local entities responsible for public transit, transportation infrastructure, housing and land use planning. Provincial contribution is required for this

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<sup>5</sup> Housing, Infrastructure and Communities Canada, [Canada Public Transit Fund](#). July 2024

## TRANSIT SERVICE NEEDS TO MEET POPULATION GROWTH

stream in addition to municipal contributions prior to the federal funding being considered. Projects will need to be submitted individually for consideration.

Administration has been actively engaging in discussions with regional partners and the Government of Alberta around CPTF and is preparing to participate in the program in collaboration with partners. Based on proposed timing for the program, Administration will start to bring projects forward in the Fall 2025 Supplemental Capital Budget Adjustment for Council consideration to access the funding. Future renewal and growth opportunities, such as adding buses to the new transit garage to increase bus service hours, can be supported by this transit funding program.

The current context for partner funding in Alberta is complex, with several additional considerations moving forward:

- Recent legislative changes passed by the provincial government, including Bill 18: *Provincial Priorities Act*, will likely have an impact on potential new federal funding.
- Bill 18 requires provincial government review and approval of federal-municipal agreements; the supporting regulations are still under development. This could impact timelines, priorities and potential conditions.
- Some streams of federal funding programs will likely require funding from all orders of government. This means a funding strategy is needed to establish the municipal contribution.
- Funding from other orders of government generally does not include operating funding.
- Partner funding will not be sufficient to meet all components. This will require prioritization of Edmonton's needs and consideration for the priorities of other regional municipalities and the Province.

### Budget/Financial Implications

The projected financial requirements to deliver the plan as outlined above are summarized as follows:

| Service item                    | Cost Estimate                    |
|---------------------------------|----------------------------------|
| 4,750 weekly service hours      | \$16.1 million operating         |
| 99 buses                        | \$90.6 - \$158.4 million capital |
| Windermere North Transit Centre | \$30.3 million capital           |
| 260 renewal buses               | \$202 million                    |

Inflationary pressures will also need to be considered for the above elements, depending on the timing of decisions.

### Community Insight

ETS regularly engages with riders and non-riders through a comprehensive research program. The online monthly transit rider satisfaction survey assesses satisfaction along the transit journey, including service-level aspects such as time to get to first stop/station, on-time



## TRANSIT SERVICE NEEDS TO MEET POPULATION GROWTH

performance (reliability) and overall trip duration. In 2023, approximately 3,000 responses were collected from transit riders through the monthly transit rider satisfaction survey<sup>6</sup>. During this period, 75 per cent were satisfied with time to get to the first stop/station, 78 per cent were satisfied their bus or train arrived on time and 76 per cent were satisfied with their trip duration.

In addition, ETS conducts an online annual survey with non-riders to understand reasons for non-transit usage, past satisfaction with ETS, perceptions of ETS and service enhancements that would increase their likelihood of using transit. In 2023, ETS collected feedback from 400 respondents who have not used transit or have used transit very infrequently in the past year<sup>7</sup>. When asked about service enhancements that would increase their likelihood of using ETS, the most frequently suggested enhancements were safety and security measures, more routes that allow them to reach their destination faster, more direct service to destinations and more convenient stops/stations.

### GBA+

The Edmonton Census Metropolitan Area has experienced significant population growth in the last several years and continues to be one of the fastest growing metropolitan regions in Canada. According to the City's spring 2024 economic outlook, the main driver for population growth in recent years has been net immigration. As discussed in the June 18, 2024 Urban Planning and Economy report, UPE02126 Growth Management Framework Update, housing development is focused on developing neighbourhoods to support population growth. These areas tend to be more affordable, meaning newcomers, lower income households and newer families with young children are more likely to choose to reside there. Since transit service growth has lagged behind population growth, developing neighbourhoods may have lower transit service levels compared to mature and central areas. This disproportionately affects residents in these areas, reducing affordable mobility options and therefore access to economic and social opportunities.

Overall, transit service gaps are felt more acutely by equity-deserving groups. Data from the 2023 transit rider satisfaction surveys shows that transit riders from equity-deserving population groups are more likely to rely on transit as their primary mode of transportation. Over 40 per cent of survey respondents who have household incomes below \$30,000 annually, identified as persons with disabilities, parents with children under 18 years, youth under 24 years and Indigenous peoples, rely on transit more frequently for both work/school and non-work/school trip purposes such as medical appointments, shopping, running errands and leisure.

Ongoing transit equity work will review the network to align with GBA+ principles, with the aim of further identifying equity-deserving populations who may not be receiving adequate transit service to meet their needs. ETS is continually working towards an equitable transit network that enables mobility for all Edmontonians.

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<sup>6</sup> Edmonton Transit Service Monthly Transit Rider Satisfaction Survey, 2023

<sup>7</sup> Edmonton Transit Service Annual Non-Rider Survey, 2023

## TRANSIT SERVICE NEEDS TO MEET POPULATION GROWTH

### Environment and Climate Review

Research by the Intergovernmental Panel on Climate Change<sup>8</sup> shows that investing in transit growth is one of the most efficient and cost-effective solutions to addressing climate change. To limit global warming, transit capacity must significantly increase in the next few years, requiring substantial investments in transit infrastructure and operational requirements to support greater mode-shift to transit.

### Attachment

1. Conventional Service Improvements to 2026

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<sup>8</sup> Intergovernmental Panel on Climate Change, [Climate Change 2022: Mitigation of Climate Change](#)