

Calgary



# Calgary Transit Service Guidelines

May 2025 Edition 1.0



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# Introduction

## Calgary Transit's vision and mission

Transit plays a vital role in shaping Calgary's future. As a guiding vision, Calgary Transit integrates movement and land use by creating an intuitive, safe, accessible, and welcoming public transit system that is convenient to use for Calgarians and visitors.

As leaders in the industry, Calgary Transit's mission is to move people of all ages and abilities safely and conveniently, by building a Primary Transit Network using sustainable travel modes and technologies that harmonize destinations and movement.

In 2023, Calgary Transit advanced its vision and mission by updating [RouteAhead, the 30-Year Strategic Plan](#). The plan reinforces Calgary Transit's core principles – customer experience, network planning and financing transit – to ensure the delivery of the best transit service possible to Calgarians.

*RouteAhead* outlines strategies to improve the transit service network by setting clear parameters for designing and reviewing services to improve efficiency. This includes the development of transit service guidelines that build on the network principles established in *RouteAhead*.

## Calgary Transit Service Guidelines

These Service Guidelines will provide consistent and transparent direction for designing and modifying Calgary Transit's bus network while balancing operational and budgetary needs. They are intended to guide Calgary Transit teams in

decision-making when adjusting transit services, and serve as an evaluation tool to assess the performance of the current network and determine when changes are necessary. While providing structure, the guidelines should be applied with flexibility.

Calgary Transit strives to maintain service in alignment with the guidelines and minimize the impact to customers when faced with operational challenges.

Calgary Transit's Service Guidelines are publicly available to provide information about the principles guiding the design of Calgary's transit network and to support implementing network changes when needed.

These guidelines align with Calgary Transit's Customer Commitment to delivering safe, reliable, helpful, informative, easy-to-use, and clean service. They explain how route evaluation and design criteria inform changes, helping customers understand how decisions are made.

This document includes examples to clarify topics and provide context. Given the dynamic nature of Calgary Transit's operations, examples and route numbers may change and will be updated in future editions of these guidelines.

Where relevant, the document also refers to work done by other areas of The City that Calgary Transit will consider in decision-making or that involves cross-divisional efforts to align services.

While light rail transit (CTrain) and Calgary Transit Access (CTA) are important aspects of Calgary Transit's services, these guidelines focus exclusively on conventional bus services.



# Calgary Transit service definitions

## Calgary Transit's network of integrated services

Calgary Transit's network connects customers to their destinations through a range of services, including light rail transit (LRT), buses, On Demand Transit, and Calgary Transit Access (CTA). These services are organized with routes, schedules, stops, and stations to facilitate efficient movement throughout Calgary.

This section provides an overview of how conventional bus services work together across the network, with different service types and levels.

### Network level

Calgary Transit's network of bus services consists of the Primary Transit Network and the Base Transit Network.

The **Primary Transit Network** (Figure 1) is envisioned as a network of high-frequency corridors that have transit services operating every 10 minutes or less at least 15 hours a day, seven days a week. It connects customers to key

destinations in the city, including the Greater Downtown, employment areas, major shopping centres, hospitals, educational institutions, and residential areas. **Frequent service** gives customers more freedom, allowing them to show up and go without needing to check a schedule.

The Primary Transit Network consists of routes that follow key corridors, typically with longer, more direct crosstown service. These routes connect to other Primary Transit Network routes and help customers reach destinations outside their communities.

Investments in transit will be prioritized to support implementation of higher frequency on the Primary Transit Network.

The **Base Transit Network** is a network of **community-level transit services**, providing comprehensive community coverage and enabling connections to the Primary Transit Network. The Base Transit Network consists of a range of **feeder**, **mainline**, and **crosstown routes** that provides community coverage and supports connections to high-frequency transit corridors.

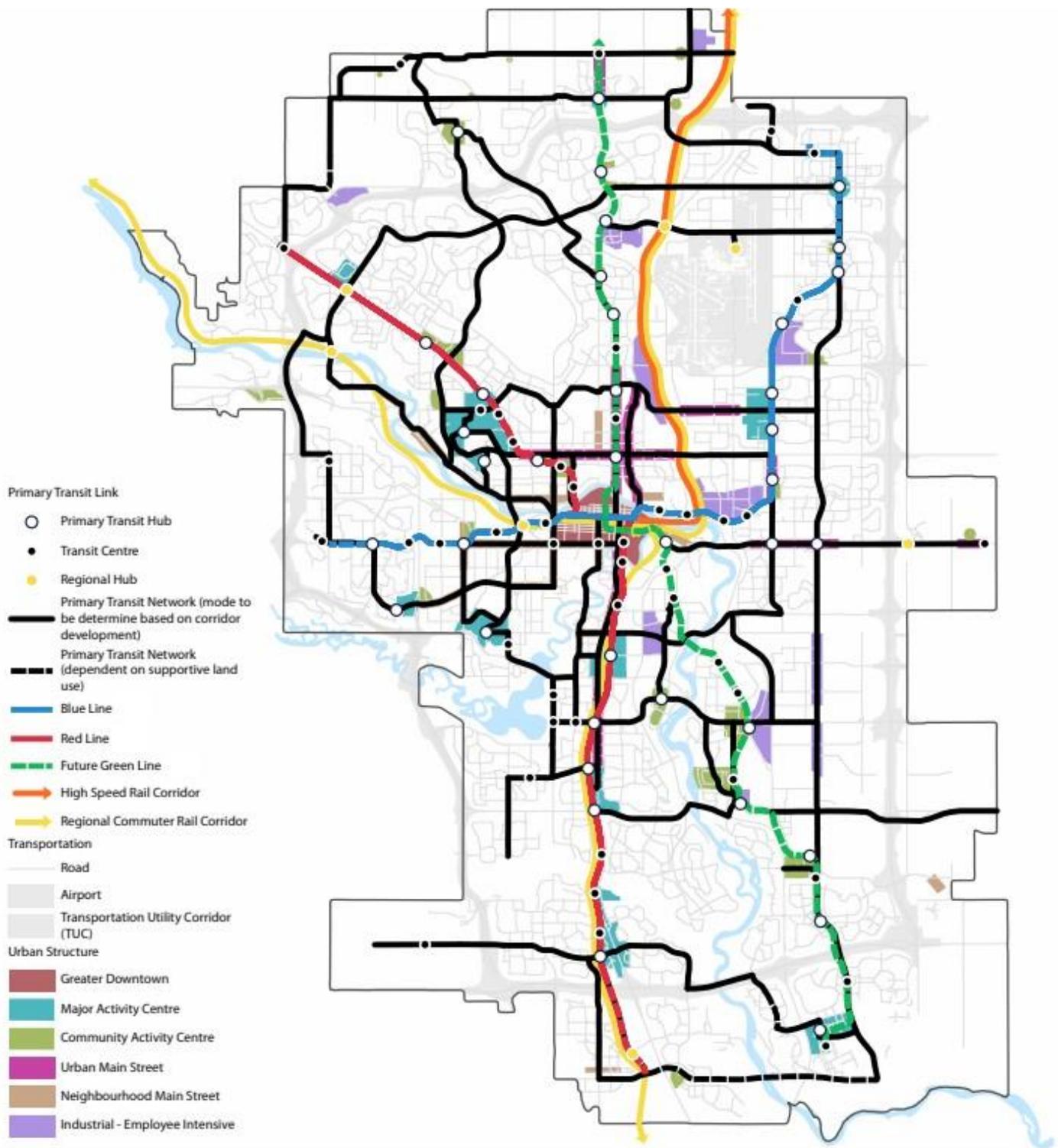


Figure 1: RouteAhead's map of the Primary Transit Network.

## Service types

Calgary Transit offers a variety of service types to meet diverse customer needs and demand levels.

### Regular routes

Regular routes are often called **fixed routes**. These are all-day bus routes that typically serve most transit stops along a route. Regular routes can be part of either the Primary Transit Network or the Base Transit Network.

Regular routes are identified by their blue and white bus signs (Figure 2), with the route numbers displayed.



Figure 2: Bus stop with regular route.

### Bus rapid transit (BRT)

In the early 2000's, Calgary Transit introduced a bus rapid transit (BRT) system to complement regular services. BRT lines differ from regular routes by having **limited stops** spaced farther apart, which allows for faster travel times. Currently customers can access rapid transit through MAX and BRT lines.

BRT lines are a type of rapid transit offering limited stops. Unlike MAX, BRT lines require fewer infrastructure investments and serve bus stops instead of stations. The goal of a BRT line is to eventually transition it to a MAX line with the same transit priority upgrades, with a fast and frequent standard of service.

BRT lines are identified by a distinctive red bus sign (Figure 3). Currently, there are three BRT lines:

- 300 BRT Airport/City Centre
- 301 BRT North/City Centre (in the process of becoming a MAX line)
- 302 BRT Southeast/City Centre



Figure 3: Bus stop with BRT and regular route signage.

### MAX

Introduced in 2018, MAX lines are high-frequency transit routes supported by infrastructure investments. As part of the Primary Transit Network, they offer limited stops (express-style service) and specially designed stations with enhanced customer amenities.

Infrastructure investments along MAX corridors, such as dedicated **bus lanes/transitways**, **transit signal priority**, and **queue jumps** reduce traffic delays and improve travel times. Station amenities like large platforms, heated shelters, and information displays provide a higher level of comfort, **accessibility**, and safety for customers.

MAX connects major destinations, reduces transfers, and integrates with the broader transit network to deliver fast, frequent, and reliable two-way service.

MAX branding is distinct from regular service routes (Figure 4), featuring both a colour and a number to identify each line:

- MAX Purple/307
- MAX Orange/303
- MAX Teal/306
- MAX Yellow/304



Figure 4: MAX branding.

### Other service types

Calgary Transit offers additional service types to meet specific seasonal or specialized needs, such as Stampede or school express routes. The ability to provide these services depends on resource availability, with priority given to regular routes.

The preferred approach to meet school travel demand is to invest in regular routes that can benefit a broader customer base, before adding in school express services.

### Route numbering

Route numbering generally follows the structure below.

- 1 – 199 series: Regular routes
- 200 series: CTrain
- 300 series: MAX & Bus Rapid Transit
- 400 – 900 series: special service (e.g. school service)

While some routes currently do not follow this structure, Calgary Transit will make the necessary adjustments over time to ensure consistent numbering.

## Service levels

### Headways

**Headway** is the time between two vehicles travelling in the same direction on the same route, usually measured in minutes. A 10-minute headway means a bus arrives every 10 minutes, or six times an hour. Managing headways is important for a reliable, predictable service.

Calgary Transit attempts to balance demand, policy, and costs when designing services. High-demand routes have shorter headways, while lower-demand routes may have longer ones. Proper headway management helps avoid "bus bunching", where multiple buses arrive at the same stop at once, creating gaps in service elsewhere.

In some cases, headways are set based on policy rather than demand. This ensures minimum service frequencies or maximum wait times, providing reliable, equitable, and accessible transit, even with low ridership. For example, *RouteAhead* guides the frequency and headways for **Primary Transit Network corridors**, while demand and overloads guide the addition of service.

### Service span and operating days

**Service span** is the total time that transit operates on a given day, from the beginning of the first trip to the end of the last, on a route or across the system (e.g., from 6:00am to midnight). Service span and headways are the backbone of transit schedules, affecting convenience, operating costs, and accessibility.

The different service span periods that are phased in for a route over time include:

- Weekday peak service
- Weekday midday service
- Weekend service
- Evening service

**Guideline:** Calgary Transit is working to meet these service level targets.

*Table 1: Summary of Calgary Transit's service levels, frequency and span.*

<b>Service Level</b>	<b>Service Frequency</b>	<b>Service Span</b>
Primary Transit Network	Every 10 minutes or better	15 hours a day or better, seven days a week
Frequent routes	Every 10 to 15 minutes	15 hours a day or better on weekdays, service on weekends may vary
Base Transit Network	Every 30 minutes or better on weekdays, weekend service may vary	15 hours a day on weekdays, service on weekends may vary
Introductory service	Between every 30 to 60 minutes in peak period direction	Introductory service begins with either On Demand service, or peak weekday service where the span will gradually increase over time

# Calgary Transit service design principles

## Network design

Calgary Transit follows the **network design principles** outlined in *RouteAhead* to improve frequency, reliability, and travel speeds. These principles help find the right balance in each community while meeting goals within operating budgets.

### Frequency and coverage

In a **frequency-oriented network**, buses are distributed over fewer routes, providing faster travel times and more frequent service. While some customers may need to walk farther to a

bus stop, most will have a walk of less than five minutes.

In a **coverage-oriented network**, buses are less frequent because they are distributed over more routes. Customers have a shorter walk to a bus stop but slower travel with more stops.

Currently, Calgary's transit network is more coverage-oriented, which spreads limited resources thinly and results in infrequent bus service on many routes. While future investments will emphasize frequency, customers will continue to have local access to transit service (Figure 5).

**Guideline:** Calgary Transit is working to shift the priority to frequency when designing the transit network.

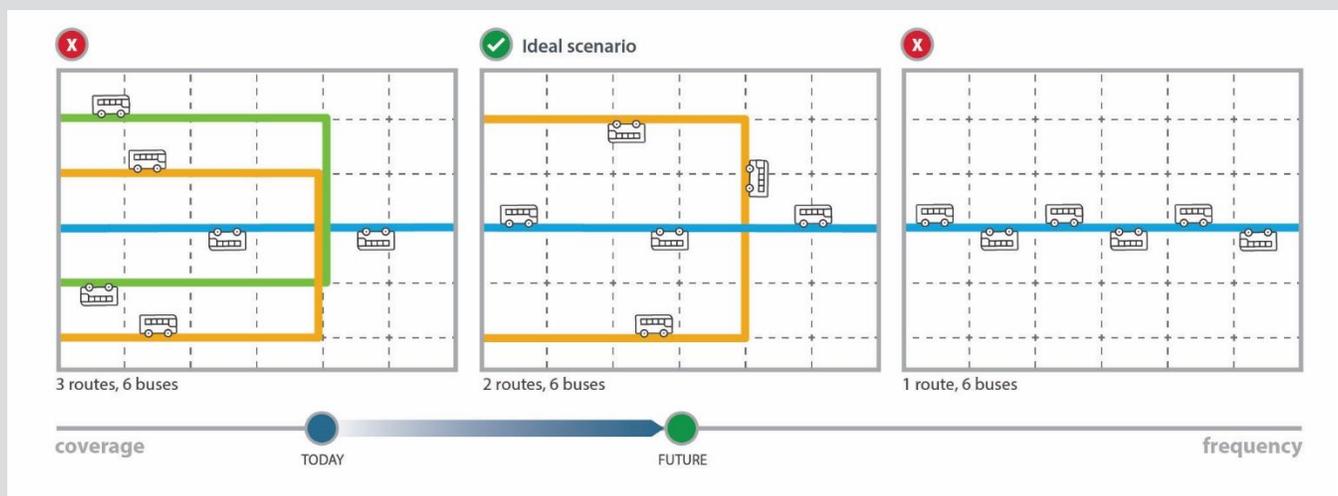


Figure 5: Ideal balance of frequency and coverage.

### High frequency

Route frequency is determined by the number of vehicles on a route and the travel time of a route. Frequency can be improved by adding vehicles to a route, shortening the route, or adding **transit priority measures**.

Primary Transit Network routes are designed for high frequency. These routes are more direct

between destinations to reduce travel times. Over time, more service will be added to these routes to further improve frequency.

### Local coverage

Coverage refers to how easily customers can access transit, typically measured by a 400-metre distance from a bus stop, or a five-minute walk. It depends on the availability of suitable roads for

buses, availability of walking infrastructure, and the ability to build bus stops. For example, Base Transit Network routes provide the coverage function, which can be improved by adjusting routes, stop location, and adding stops.

Road lanes must be wide enough for buses to travel safely and intersection geometry must allow buses to make necessary turns. Factors like road speed and available space impact the ability to build stops where buses can safely pick up and drop off customers.

Efficient community design is key to achieving maximum coverage possible with the fewest routes needed to serve the area. This includes safe and direct pedestrian connections to bus stops, well-placed bus stops, and a grid street network. This also includes locating a dense mix of uses and destinations close to transit.

## Service duplication and connective network

### Service duplication

Service duplication is when there are routes that overlap, potentially reducing the frequency on each route. This duplication weakens the network when buses are not distributed evenly, and these routes do not provide direct connections to major destinations. It spreads ridership and resources too thin, making it harder to improve service in the future.

A connective transit network has buses running more frequently on fewer routes, leading to more consistent service with fewer gaps. For example, a grid is a perfect connective network as customers can connect to other services and routes without overlap. A simpler, connected system allows for more frequent service within the same budget (Figure 6).

**Guideline:** Calgary Transit is working to shift toward a more connected network.

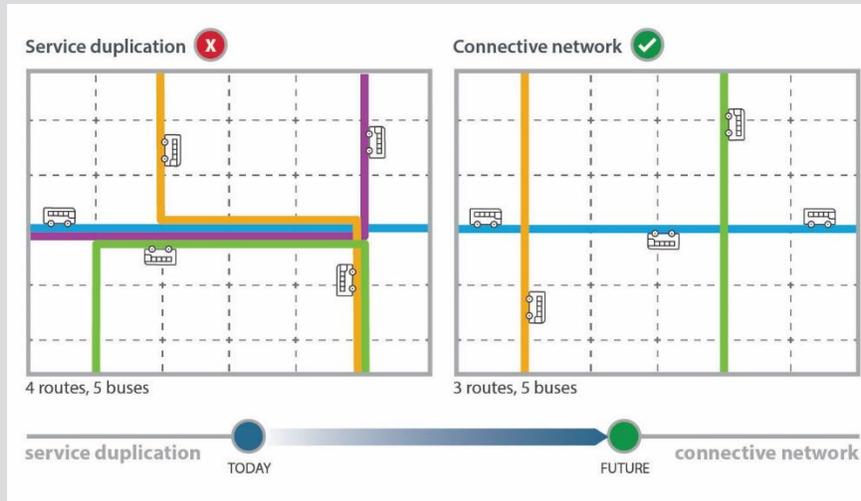


Figure 6: Calgary Transit's plan to move from service duplication to a network where services and routes are not competing.

### Connective network

Calgary Transit's network will shift from a radial design focused on downtown to a connected

network that links **activity centres** across the city. Customers may have to transfer more often to reach their destination, but it will allow them to access more destinations. Some duplication may

still occur in areas with limited access or where road connections are missing.

Calgary Transit performs **Transit Service Reviews** where one of the goals is to reduce service duplication to improve frequency and simplification of the network. Where possible, routes will be designed to interconnect to maximize transfer potential. For example, Base Transit Network routes will interconnect with Primary Transit Network routes.

### **Circuitous and direct routing**

#### *Circuitous routing*

Circuitous bus routes do not follow the most direct path between end destinations. They typically

have longer travel times and less frequent service, but can provide shorter walking distances to bus stops. Direct routes are shorter and have lower operating costs, so buses can be more frequent. While direct routes may require some customers to walk slightly further to a stop, most stops are still within a reasonable distance.

As Calgary Transit continues to implement *RouteAhead*, there will be opportunities to improve the directness of routes (Figure 7). The Area Structure Plan and Local Area Plan program will support this by promoting a connected-grid street network and placing major destinations at key intersections to support the Primary Transit Network.

**Guideline:** Calgary Transit is working to expand the transit network to connect residential areas, activity centres and industrial areas.

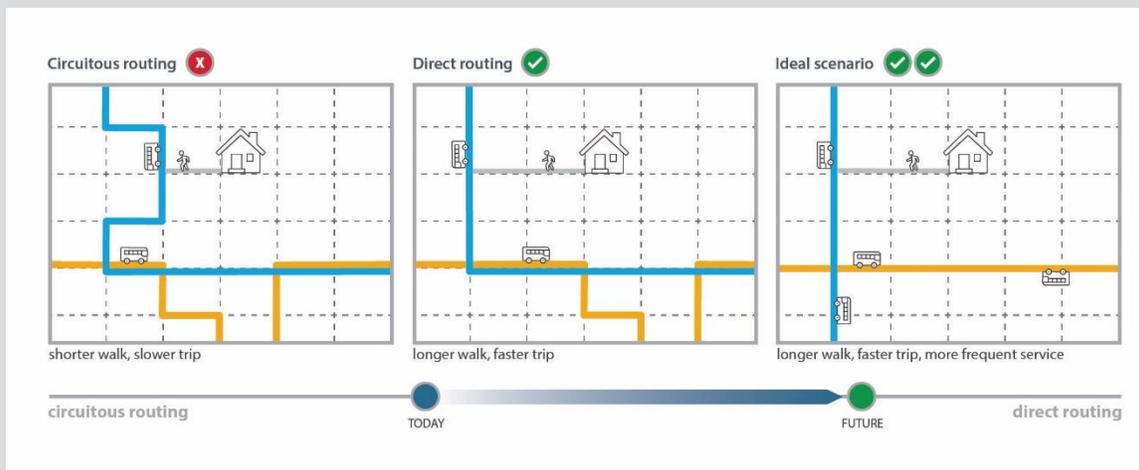


Figure 7: Calgary Transit's plan to move towards a direct connected grid on the Primary Transit Network.

#### *Direct routing*

Primary Transit Network routes are generally direct, running along major corridors on the perimeter of communities. Calgary's varied community designs mean that some parts of a route may be less direct to balance serving communities and providing direct routing.

Base Transit Network routes are typically designed to avoid unnecessary deviations, minimizing the impact on travel time. In some cases, a deviation may be added to provide easy access to major destinations like hospitals or employment centres if benefits outweigh the additional travel distance.

## Peak service and all-day service

### Peak service

A **peak-oriented service** is designed to meet higher demand during peak travel times. Outside peak times, service is limited with fewer routes operating at a lower frequency, requiring customers to consider other transportation options.

There may be **peak-only routes**, routes that only operate during peak periods with no service outside of peak times. Unlike regular service, which operates in two directions, peak-only routes typically run in a single direction. Peak-only routes are expensive to provide because the bus is only picking up and dropping off passengers in one

direction, which is inefficient. These routes mainly bring customers from a few select communities to downtown, creating duplication with limited destinations. Over time, routes that run only at peak times will be reviewed and converted to two-way, all-day routes.

### All-day network

An **all-day network** provides frequent service throughout the day, making transit more useful to more people.

Today, Calgary's transit network is more focused on peak-oriented service. Over time, Calgary Transit will shift toward an all-day network (Figure 8). Routes will run all day, with additional frequency and capacity added as needed.

**Guideline:** Calgary Transit is working to shift toward an all-day network.

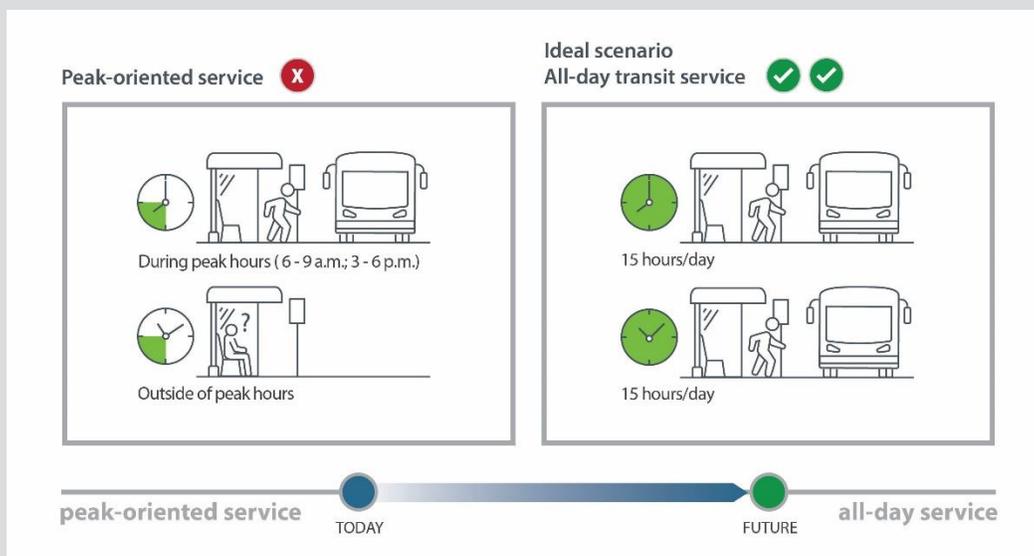


Figure 8: Calgary Transit's plan to move from peak-oriented service to all-day transit service on the Primary Transit Network.

### Stop spacing

Stop spacing refers to the distance between two consecutive stops on a route. Several factors are considered when determining spacing, including the type of route, the service needs of each stop, the block pattern and community design, and available space.

Closely spaced stops require a bus to stop more frequently, which in turn slows the bus travel time, making it less efficient. Conversely, bus stops that are too far apart can limit route coverage, requiring customers to walk longer distances. A balance is needed to ensure both efficiency and accessibility.

Routes can serve stops in two configurations:

- Local – the route will stop at most stops along a route. This results in slower service with more frequent stops.
- Limited stops – the route has fewer stops along a route. This results in faster service with less frequent stops.

**Guideline:** Calgary Transit is working to have service types serve stops according to the table below.

Table 2: Stop spacing by service type.

Service type	Stop pattern	Target stop spacing
Regular routes	Local	250m-400m
Bus Rapid Transit	Limited	800m-1,500m
MAX	Limited	800m-1,500m

## Transit service introduction

When considering the introduction of new service to a community or area Calgary Transit must evaluate the following:

*People:* The community must be sufficiently developed to generate ridership to support transit service. The specific level of development may vary based on each community, but typically requires several hundred housing units in place before an area is a candidate for new service.

*Operating budget:* Calgary Transit must have available operating budget to pay for the new service. Calgary Transit's operating budget is approved as part of the four-year budget and

business planning cycle. Services in new communities must also be balanced with the need for new/additional services in other parts of Calgary.

*Fleet availability:* Calgary Transit has a fixed number of buses available to put into service. Adding a bus to a route or creating a new route requires pulling buses from another area of the city.

*Road connections:* The community must be sufficiently connected to allow for the efficient provision of transit service. This includes connecting the community to the broader street network, and enabling regular movement of transit vehicles within the developing community.

**Guideline:** Calgary Transit is working to evaluate the introduction of new service and provide it according to the context of the community and resource availability. Based on this, the service type can be either:

- **On Demand** service: This can be used as a first step to introduce transit in new communities before transitioning to fixed-route service.
- **Regular/fixed-route** service: This could either be an extension of an existing route or a new, independent route.

## Service reliability

### *On-time performance and service level disruptions*

Various factors can create delays on a route. Examples include traffic congestion, road construction, the intersections the bus travels through, emergencies onboard vehicles, and environmental elements such as severe weather. Calgary Transit monitors on-time performance and responds by adjusting route schedules.

**Guideline:** Calgary Transit is working to achieve the target of 90 per cent on-time performance across the system.

### *Crowding*

As of 2024, Calgary Transit's fleet includes approximately 1,300 buses. The **fixed-route** service uses two types of buses: low-floor (12-metre, and 18-metre articulated), and smaller community shuttles. Buses are not attached to routes, as flexibility is essential for efficient service delivery and maintenance needs. The type of bus serving a route can be adjusted based on operational needs, ridership, and fleet availability.

Another consideration for choosing vehicle types is the operating costs. These include costs for maintaining infrastructure (e.g., garages,

Calgary Transit strives to maintain the headways listed in Table 1. However, during unplanned disruptions, such as environmental emergencies, service levels may be reduced. Every effort is made to minimize the impact to customers and restore full service as quickly as possible.

Calgary Transit considers a bus on time when it arrives at a **time point** bus stop no more than one minute early or up to five minutes late.

equipment) and labour (e.g., operators, mechanics), which can vary by vehicle type.

Crowding is measured by the number of customers per operating hour. If a bus has low passenger loads, it may indicate that the route has low demand. In this case, the route or type of bus can be reviewed to see if changes are needed. A load of less than 65 per cent of available seats is considered low.

If a bus route has a high crowding, it may suggest that current service in place is insufficient. The route may be reviewed to determine if crowding can be reduced by adding more buses or altering routes. A load above the seated capacity is considered high.

**Guideline:** Calgary Transit is working to balance service provision and crowding levels in the transit system. Crowding of less than 65% of available seats on a bus is considered to be low. Crowding higher than the seated capacity of the bus is considered to be high.

Table 3: Vehicle types and capacity.

Vehicle type	Length (m)	Seated capacity	Maximum assumed capacity (seated + standing)
Low floor bus	12	38 to 42 <sup>a</sup>	65
Articulated bus	18	59	120 <sup>a</sup>
Shuttle	8	21	21 <sup>b</sup>

<sup>a</sup> Capacity varies depending on bus model specifications.

<sup>b</sup> Standing capacity is not considered for shuttles, given the lack of features for customers to safely stand.

## Transit stops, centres, and stations

Supporting a customer's trip begins with thoughtful planning and scheduling of routes and continues through the delivery of transit services. It also includes considering off-board features at stops and stations that can enhance the overall experience.

### Bus stop

Bus stops are typically placed where there is direct and convenient pedestrian access and sufficient space for buses to safely pick up and drop off customers.

The configuration of a bus stop depends on the road design. The most common stop type is a curbside stop, installed parallel to the curb (Figure 9).



Figure 9: Regular and BRT bus stop.

Bus stops on regular routes should all include signage and bus pads and may include other amenities like benches, shelters, and waste bins.

### Transit station

Transit stations are a core part of the rapid transit service and come in two types: MAX stations and CTrain stations. Compared to regular bus stops, MAX stations offer more amenities, such as enhanced shelters and real-time service information (Figure 10). Station locations are determined as part of transit infrastructure

projects, considering factors like surrounding development, future and existing ridership, roads, and land use.



Figure 10: MAX station.

### Transit centre

Transit centres are off-street transit terminal locations, which may include any combination of light rail transit, bus rapid transit, and/or other transit routes and services. They are centres where multiple bus routes start or end, with several located throughout the city.

Transit centres provide a central location for customers to connect to other bus routes and the CTrain (Figure 11).



Figure 11: Transit centre connected to a CTrain station.

## Transit hub

Transit hubs are locations where passengers can transfer between transit routes, including light rail transit and bus rapid transit stations, transit

centres, and bus stops (Figure 12). The streets in transit hubs support safe access for those walking and wheeling in addition to the movement of transit vehicles.

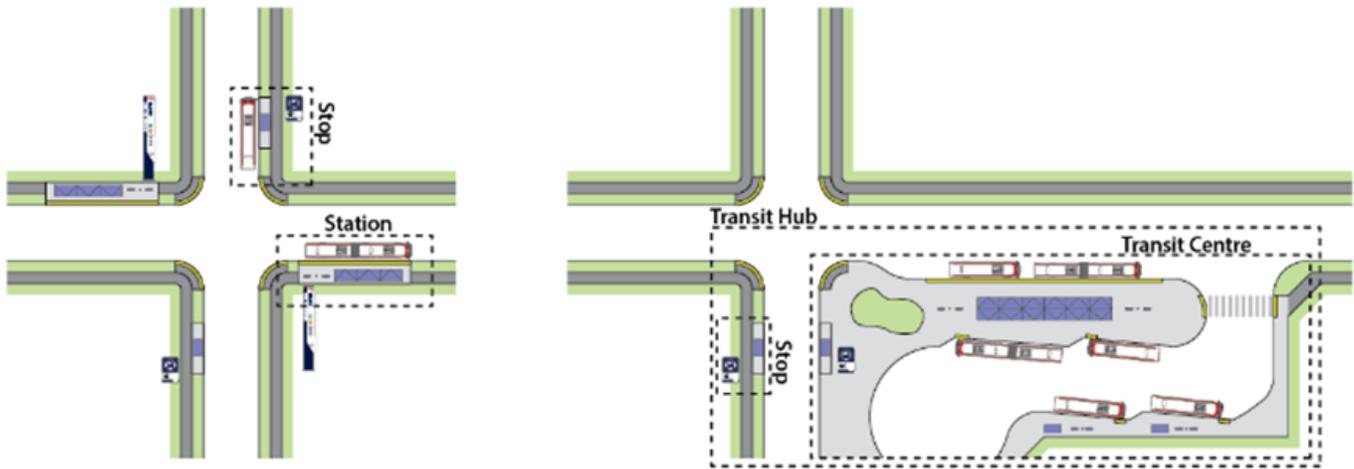


Figure 12: Stop typologies in the transit network.

## Customer amenities

### Bus pads and platforms

Bus pads create a designated waiting area for customers that is separate from a sidewalk. They provide space for operators to lower accessible ramps and for bus shelters and benches to be installed, as available/needed.

### Shelters

Shelters are key features of many transit stops, offering protection from the weather. The size and features of a bus shelter depend on ridership and available space at the stop.

Calgary's transit network uses several types of shelters, from partially enclosed shelters to MAX station shelters that are fully enclosed, accessible, and heated (Figures 13 and 14).



Figure 13: Small shelter.



Figure 14: Large shelter.

## ***Benches***

Benches are a common feature of bus stops when space allows. Calgary Transit currently uses four types of benches at bus stops, made from a combination of wood and concrete, or fully stainless steel.

## ***Digital displays***

Calgary Transit currently provides real-time service information at MAX stations, and some transit centres (Figure 15). Digital displays help customers track when their bus is set to arrive.



*Figure 15: Digital display unit at a MAX station.*

## ***Station access***

Customers can access transit stations in different ways, depending on the station's location and

design. Access can include connections to rapid transit, transfers between bus routes, and other modes of travel. The requirements for customers to access stations via different modes are described below:

- Walking and wheeling
  - 5A (Always Available for All Ages & Abilities) wheeling and pedestrian connections
  - Secure bike storage
  - Bike racks on buses
- Micromobility
  - 5A connections and parking areas and/or docking stations
- Pick-up and drop-off
  - Designated pick-up and drop-off zones
- Taxi
  - Taxi waiting areas or taxi pick-up and drop-off
- Bus
  - Bus stops, bus laybys, or bus terminals
- Rapid transit
  - Wayfinding and easy transfer routes

## ***Park and Ride***

Customers can also access transit stations through Park and Ride facilities. This is an enhanced service for a small portion of customers, and it is not present at all stations.

# Performance evaluation

## Evaluation and monitoring

Calgary Transit uses metrics to track how well its services are meeting customer needs. These measures help identify areas for improvement.

When reviewing service, Calgary Transit analyzes specific data to understand how the service is performing in different parts of the city and adjusts as needed (Table 4).

When reviewing the overall transit network, other metrics are used to evaluate and monitor how the service is being delivered and used by customers (Table 5).

Table 4: Route review metrics.

Metrics	What it measures	Why it is measured	What it means for customers
<b>Ridership</b> (weekly boardings)	The volume of customer trips over the period of a week for a service.	To understand transit demand and usage patterns.	When ridership increases, a route or area may be reviewed to decide if additional service is recommended.
<b>Service hours</b> (weekly)	The number of service hours provided over the period of a week.	To understand the availability of service is allocated to an area.	The number of hours throughout a certain period of time when service is available for customers to use.
<b>Residents within 400 metres</b> of transit service	The number of residents within 400 metres, or a five-minute walk of transit service.	To understand the coverage of the transit network.	Transit service will be accessible to customers, with bus stops located within a short distance of where they live or work.
<b>Residents within 600 metres</b> of rapid transit	The number of residents within 600 metres of rapid transit service or within an eight-minute walk.	To understand the coverage of the transit network.	Rapid transit service will be accessible to the population, with bus stops located within a short distance of where they live or work.
<b>Overloads</b> (over a 4-month period)	The number of times a full bus cannot pick up customers on a route over a period of four months.	To understand service demand.	Transit service will be evaluated and adjusted to reduce crowding and overloads in an area for a more comfortable customer experience.

Table 5: Metrics used to evaluate and monitor transit performance.

Metrics	What it measures	Why it is measured	What it means for customers
<b>Service hours</b> - actual vs future planned	The difference between the future planned service hours and the service hours provided.	To understand level of services provided and needs for additional investments to reach service level goals.	Transit service will continue to be developed as funding is secured to expand operations, e.g., adding service to new communities and expanding the PTN.
<b>Capacity utilization</b> (i.e., how much of the available space on a bus is being used by customers)	The percentage of available capacity (seats and standing space) of a bus utilized by customers throughout a route.	To understand how efficient the service is and where the service needs to be adjusted to meet customer demand.	Calgary Transit will evaluate if more buses should be deployed to meet demand, or if service should be adjusted to increase capacity.
<b>Passengers per service hour</b>	The comparison between the average number of customers and the transit service available.	To understand how productive the transit service is.	Transit service needs to be productive to ensure that transit resources are optimized to be used to efficiently serve customers.
<b>On time performance</b>	The difference between scheduled arrival time and actual departure time for public transit buses at time points on routes.	To understand how reliable the system is.	Calgary Transit has a commitment to provide reliable service to customers. Internal and external factors impact the punctuality of buses and those are considered when planning and scheduling services.

Performance metrics provide useful insights into how the service is doing, but they shouldn't be used in isolation. Calgary Transit's approach is to review them holistically, along with route design and expert knowledge to find ways to improve the transit network.

### Service review

Calgary Transit regularly monitors route performance and feedback from both customers and staff to identify opportunities for improvement.

Adjustments are made to better serve customers, meet operational needs, and increase efficiency.

Service changes can range in scale from a single stop, multiple stops, a single route, or multiple routes and service types.

### Stop changes

Active bus stops are stops that are currently in use, served by a bus route, and included in the route schedule. Newly built stops along an existing route can be activated for that route to

provide additional coverage or to serve a key location.

Future bus stops are stops not currently in use but may be activated in the future. Stops can be deactivated for multiple reasons, including stop optimization, safety concerns, or operational challenges, and can be reactivated when needed.

### ***Stop optimization***

Bus stop optimization is the process of removing or consolidating bus stops to improve convenience, speed, and reliability. When stops are too close together, travel times could slow down. The thoughtful removal of some stops can result in less time taken by buses to slow down, serve a stop, re-enter traffic, and speed up again.

The benefits of stop optimization include:

- Faster travel times
- Lower operating costs
- Increased schedule predictability and reliability

Stop optimization can happen at any time, often as part of projects to improve street infrastructure or during a service review.

### ***Route review***

A route review may be conducted for various reasons, including not meeting performance criteria, changing service types, optimizing routes, introducing new service, or responding to challenges or new opportunities. They can also be prompted by feedback from customers and operators.

The process can take up to two years and may include public engagement. Key performance indicators and network design principles are considered throughout the review.

There are two types of route reviews:

#### ***Route Review***

A route review looks at how routes perform on an individual basis. Changes are smaller and can involve a single route or a series of routes.

#### ***Transit Service Review***

A **Transit Service Review** is a thorough evaluation of how a series of transit routes work together in an area. It typically results in a larger set of changes to many routes.

# Appendix

## Summary Service Guidelines

### *Service Levels*

Calgary Transit is working to meet these service level targets:

- Primary Transit Network: every 10 minutes or better for 15 hours a day or better, seven days a week.
- Frequent routes: every 10 to 15 minutes or better for 15 hours a day or better on weekdays.
- Base Transit Network: every 30 minutes or better for 15 hours a day on weekdays, weekend service may vary.
- Introductory service: between every 30 to 60 minutes in peak period direction, starting with either On Demand or peak weekday service.

### *Network Design*

Calgary Transit is working to:

- Shift the priority to frequency when designing the transit network.
- Shift toward a more connected network.
- Expand the transit network to connect residential areas, activity centres and industrial areas.
- Shift toward an all-day network.

### *Service spacing*

Calgary Transit is working to have service types serve stops as described below.

- Regular routes: Local stops with spacing generally ranging between 250m to 400m.
- Bus Rapid Transit: Limited stops with spacing generally ranging between 800m to 1,500m.
- MAX: Limited stops with spacing generally ranging between 800m to 1,500m.

### *Transit service introduction*

Calgary Transit is working to evaluate the introduction of new service and provide it according to the context of the community, and resource availability. Based on this, the service type can be either:

- On Demand service: This can be used as a first step to introduce transit in new communities before transitioning to fixed-route service.
- Regular/fixed-route service: This could either be an extension of an existing route or a new, independent route.

### *Service reliability*

- On time performance: Calgary Transit is working to achieve the target of 90 per cent on-time performance across the system.
- Crowding: Calgary Transit is working to balance service provision and crowding levels in the transit system. Crowding of less than 65% of available seats on a bus is considered to be low. Crowding higher than the seated capacity of the bus is considered to be high.

# Glossary

## Accessibility

Designing products, spaces, and services without the need for adaption or specialized design, ensuring everyone can use them easily and independently.

## Activity centre

An area with a high concentration of jobs and population.

## All-day network

A network where routes run for more than 15 hours a day, with service spanning throughout early morning, midday, afternoon, and into the evening.

## Base Transit Network

A network of community-level transit services, providing comprehensive community coverage and enabling connections to the Primary Transit Network.

## Bus lane

A dedicated lane allowing buses to have preferential treatment through the street. It can be shared or used exclusively by buses, with clear pavement marking to indicate that the lane is for buses.

## Community-level transit service

Service provided by the Base Transit Network, connecting customers directly to local destinations and convenient transfer points within the Primary Transit Network.

## Coverage-oriented network

A network where buses are less frequent because they are distributed over more routes.

## Crosstown route

A route that travels along a main road of the city, or a combination of main roads. It connects customers to the Primary Transit Network and to destinations outside their communities.

## Feeder route

A route that connects customers from their local communities to the Primary Transit Network.

## Fixed routes

Transit services that follow a defined route and schedule.

## Fixed-route service

Transit services that operate on a predetermined route and schedule.

## Frequency-oriented network

A network where buses are distributed over fewer routes, providing faster travel times and more frequent service.

## Frequent service

Routes that in the long-term may become Primary Transit Network routes. They have a frequency of every 10 to 15 minutes or better in the short-term, with the goal of 10-minute service.

## Headway

The interval of time between two vehicles running in the same direction on the same route, usually expressed in minutes.

## Limited stops

A bus stop pattern where stops are spaced an average distance of 400 to 800 metres apart. This type of stop spacing is used in MAX, BRT and Express routes.

## **Mainline route**

A route that travels on highways and connects to neighbouring communities.

## **Network design principles**

Refers to how Calgary Transit's service network is designed and operationalized. The principles are based on frequency, connectiveness, direct servicing, and daily span of services available.

## **On Demand**

Transit service that responds to demand and does not operate on a fixed route or schedule, typically provided to new communities.

## **Peak-only routes**

Routes that only operate during peak periods with no service outside of peak times, typically running in a single direction.

## **Peak-oriented service**

Service during peak hours, typically between 6:00-9:00 and 15:00-18:00, when demand for service is higher than usual.

## **Primary Transit Network**

A high-frequency, corridor-based transit service that connects customers to major destinations in the city, such as the Greater Downtown, employment areas, major shopping centres, hospitals, educational institutions, and residential areas. Buses come every 10 minutes or less and run through crosstown routes.

## **Primary Transit Network corridor**

Crosstown routes that serve a network function by connecting to other Primary Transit Network routes and connecting customers with destinations outside of their communities.

## **Rapid transit**

The network of light rail transit (LRT) and MAX bus rapid transit lines.

## **Queue jump**

A short transit-only lane at an intersection that allows transit vehicles to bypass general traffic and have a head start through the intersection.

## **Service span**

The length of time, from the beginning of the first trip to the end of the last trip, during which service operates on the street.

## **Time point**

A designated location along a route where a bus is scheduled to arrive and depart at a specific time to help guide service reliability.

## **Transit priority measures**

Techniques that can reduce travel time and improve reliability for buses, such as bus lanes, queue jumps, and traffic signal priority.

## **Transit Service Reviews**

A thorough evaluation of how a series of transit routes work together in an area.

## **Transit signal priority**

An operational process that alters the traffic signal timing to give priority to transit buses through intersections.

## **Transitway**

A bus lane that is physically separated from other traffic.