Metro Tasmania's Urban Bus Service Guidelines

Introduction

These guidelines have been developed to ensure that urban bus service planning proceeds systematically and transparently using an approach that aligns service levels with demand and enables resources to be effectively targeted to areas of need.

Objectives

The objectives of the urban bus service guidelines are to enable Metro to design bus services that:

- reflect travel demand and meet a broad range of community needs;
- are cost effective and best matched to the transport needs of the wider community within the available budget;
- increase the mode share for public transport;
- contribute to the Government's equity and environmental objectives;
- contribute to the Government's social inclusion objectives;
- provide a framework for the ongoing planning and review of urban bus services that Metro operates;
- provide a well-designed and integrated network that improves service delivery, links people to their local centre and amenities, reduces duplication and optimises the effective use of appropriate infrastructure and available resources;
- ensure the greatest chance of support for service changes; and
- deliver school transport services in a way that optimises the route network.

Relevant Legislation, Strategies and Contractual Requirements

Metro Tasmania Act 1997, Section 5

> *The principal objective of the Company is to provide road passenger transport services in Tasmania and to operate those services in a manner consistent with sound commercial practice.*

Tasmanian Infrastructure Strategy

Key Reforms

- Develop a public transport system to cater more effectively for both commuter and social needs.
- Improve integration of passenger transport.

Vision Characteristics

- Public transport system a first choice option providing a cost effective alternative to more road infrastructure.
- Integrated passenger transport system with appropriate services and concessions to alleviate social disadvantage.

New Service Contract, Clause 2.2

> *In delivering the Metro Service Activity within the Metropolitan areas of Hobart, Launceston and Burnie, Metro will, when planning or designing Major or Minor Changes aim to maximize the weighted average Level of Service associated with the provision of year round regular passenger transport services, for all catchments and all time periods as defined in Schedule 7, and to provide such additional school day services as Metro believes are necessary to meet the peak student travel needs that cannot be reasonably accommodated on normal weekday services.*

Passenger Transport Network Plan

Metro's Passenger Transport Network Plan provides a strategic framework for reviewing and developing bus services and infrastructure in support of the Tasmanian Urban Passenger Transport Framework developed by the State Government.

Network Planning Principles

The following network planning principles will be applied in the urban areas that Metro provides services and will be the basis for developing an integrated network.

Route Hierarchy

A hierarchical approach to network development has been defined to support the development of an integrated network that improves service delivery, links people to their local centre and amenities, reduces duplication and optimizes the effective use of appropriate infrastructure and available resources. The four categories of route are:

- Principal routes;
- Link routes;
- Express routes; and
- School services.

Principal routes

Principal routes have the following service characteristics:

- They provide links between key urban activity centres;
- They may operate express or limited stop services during peak periods;
- They are direct and frequent; and
- They are multifunctional – serving journeys to work, education, shopping and recreation.

Link routes

Link routes have the following service characteristics:

- They link residential areas to the nearest key activity centre or Principal route; and
- They may integrate with Principal routes to provide high frequency services between key urban activity centres.

Express routes

Express routes have the following service characteristics:

- They operate as an all stop service in the residential areas of Link routes to a certain point, after which they become non-stop to the capital city centre;
- They are designed to serve commuter travel patterns and offer a fast service; and
- They operate during the weekday peak period and in the peak direction.

As a guide, Principal and Link routes should be no longer than 25 kilometres in length or 60 minutes in total travel time. This allows the route to be long enough to carry a substantial load with turnover but not so long as to be unreliable.

School services

Additional services dedicated to transporting students to and from school may be required when student travel needs aren't able to be accommodated by general access services. These are addressed in the 'School services' section later in the document.

Network Legibility

Principal and Link routes will be designed so that the network is clear and simple to understand. Routes will follow the same course wherever possible to reduce confusion and concentrate the provision of infrastructure and information.

Route Directness

Routes that are more direct have faster running times which enable passengers to complete their travel more quickly. Principal routes should therefore be designed to be as direct as possible. Link routes will be permitted to deviate from the shortest route between termini provided such a deviation would collect an average of at least 20 passengers per hour of the deviation. The measurement of patronage for deviations will take into account seasonal fluctuations. Analysis of ticketing data over a number of months will be undertaken before any permanent changes are made.

Route Spacing

Principal and Link routes will be designed to avoid competing for the same passengers. In general, routes should be designed so that the shortest walking distance between routes is one kilometre. However, where this is not possible due to road design or terrain, routes should be designed so that the shortest walking distance between routes is no less than 500 metres apart. Routes may overlap where routes converge to serve activity centres.

Service Frequency

Table 1 shows the service frequencies for Principal and Link routes that Metro will aim to provide in line with the objectives of Metro's Passenger Transport Network Plan. However, as Metro has a limited budget, bus fleet and other resources (funding for drivers, fuel etc.), some routes may not meet the frequencies, particularly where there is insufficient demand for such frequency.

Table 1 – Frequencies for Principal, Link and Express Routes

Time period	Target minutes between services (subject to resource availability)		
	Principal	Link	Express
Pre-peak (before 7am)	30	60	-
Morning peak (7am-9am)	15	60	30
Inter-peak (9am-3pm)	15	60	-
Afternoon peak (3pm-6:30pm)	15	60	30
Evenings (6:30pm-last service departure)	30	60	-
Saturdays daytime	30	60	-
Sundays & public holidays daytime	30	60	-

Frequency Change Triggers – Principal, Link and Express routes

Maintaining the overall viability of the bus network requires ongoing monitoring to ensure that services are well patronised and resources are allocated to meeting the required needs and demand. Demand in an area will change over time and this is a key reason for reviewing services. The following demand-based benchmarks will be used to increase/decrease frequencies or capacity:

Increasing frequencies or capacity

Consideration will be given to increasing frequencies or capacity when:

- Patronage exceeds 85% of the legal bus capacity (averaged by the number of trips operated during any 20 minute period); and/or
- Passengers are required to stand for more than 30 minutes of a timetabled service, or patronage exceeds the legal seated capacity for the same length of time (averaged by the number of trips operated during any 20 minute period).

The measurement of patronage and capacity will take into account seasonal fluctuations. Analysis of ticketing data over a number of months will be undertaken before any permanent changes are made.

Where excessive loads or passenger standing times are confined to short periods during peak times, increasing vehicle capacity will be considered first. Variations in stopping patterns such as express or limited stop services will also be considered as a possible solution.

Decreasing frequencies or capacity

Consideration will be given to decreasing frequencies or capacity, combining routes or withdrawing services if:

- Patronage is less than 50% of the legal seated capacity during peak periods, 25% during inter-peak periods and 12.5% during all other times (averaged over the number of trips operated during any 20 minute period).
- Where a proposed service reduction conflicts with Schedule 7 of the New Service Contract, Metro must obtain the Department of State Growth's approval to proceed.

Span of Service

The span of service refers to the period during which services will operate. Table 2 outlines the span of service for Principal and Link routes.

Table 2 – Minimum Span of Services

Day of the Week	Principal		Link	
	Arrive destination	Depart origin	Arrive destination	Depart origin
Monday to Thursday	6:00am	11:30pm	7:00am	8.30pm
Friday	6:00am	1:00am	7:00am	11:00pm
Saturday	6:30am	1:00am	8:30am	11:00pm
Sunday	8:00am	8:30pm	9:30am	7:30pm

Services may be specified outside of these times where circumstances dictate a need (e.g. early trips to employment areas).

Services to New Areas

Minimum levels of development need to exist for an area to be considered for a bus service. The introduction of a new bus service will only be considered in residential areas with a minimum population of 750 and/or employment areas of over 250 jobs.

Road design (especially width and form) will be assessed prior to any decision to introduce services to previously unserviced areas. Services cannot be provided in areas where:

- The design of the internal road network requires that bus services enter and exit at the same location (i.e. they would require inefficient in-and-out servicing contributing significantly to total travel time for all passengers);
- Unsafe bus maneuvers, such as reversing or 3-point turns are required in order to negotiate the service area; or
- The design of the road network is such that it precludes the use of Metro's standard rigid buses (14.5m and articulated buses excepted) in a safe manner for passengers, pedestrians and all road users.

School services

Where possible, Metro will provide general access services that also meet the needs of students. Services that are specifically targeted at narrow groups of users will be limited in order to maximise services that are available to the broader public. Dedicated school services will therefore be kept to a minimum to maximise the frequency and availability of Link and Principal routes. Where dedicated school services are provided they will follow a regular timetable and route. Metro has limited ability to make changes to school services because Metro's route network and school services rely on the use of the same buses and drivers. Furthermore, because all of Metro's buses are in use at peak times, any new school service can only be provided if an existing service is removed. The provision of school services is determined by the following guidelines:

Item	Guideline
Geographic coverage area	School services will only be provided within the metropolitan urban areas of Hobart, Launceston and Burnie as defined in Appendix 8 of the Review of Core Passenger Services.
Proximity to school	Due to the significant demand for school services, priority will be given to providing services which support students attending college or their home area school where the distance they must travel exceeds 2.5km. This supports students who have no option but to travel to specific, centralised college campuses in order to access particular courses or whose home area school has a large catchment area. These students are therefore less likely to be able to use alternative means of travel, such as walking or cycling. Where there are regular route services available which have adequate capacity, additional dedicated student services will not be considered. Where possible and practical, timetabling will be undertaken to facilitate transfers between regular route services and other services.
Suitable regular route service	A suitable regular route service is a scheduled Principal or Link bus service that travels within 500 metres walking distance of a student's home and travels within 500 metres walking distance of their home area school or nearest college.
School arrival and departure times	Services will be scheduled for students to be dropped off/picked up no more than 30 minutes and no less than 5 minutes from start and finish times. Services will be scheduled for the same start and finish times every day of the school term and cannot be altered for individual days.
Days of operation	School services will only be provided on the student school term dates as defined by the Department of Education: http://www.education.tas.gov.au/about_us/pages/term-dates.aspx If schools require school services on dates other than those identified on the Department of Education website, they will be provided as a charter with the school covering the cost.
Demand	School services shall be considered where demand for each such service exceeds 25 passengers per trip, provided that: • There is insufficient capacity on suitable other bus services, or • There are no other suitable bus services AND • There is adequate funding and physical resources (buses and drivers) available. Suitable other bus services include either regular route services (whether direct or involving transfers) or school services, or a combination of the two. Demand potential is a major determinant in planning bus services to ensure satisfactory value for money. In principle, this encourages student use of spare capacity on regular route services first.

Service deviations or extensions	A school service may be deviated or extended provided such deviations or extensions would collect or drop off at least ten (10) full-time students each day. Deviations or extensions will only be implemented if they are cost neutral to Metro.
Maximum loading standards	Subject to resource availability, services shall be reviewed with the intent of providing additional capacity where the typical demand for any service regularly exceeds 85% of the maximum legal vehicle capacity over one school term.
Minimum loading standards	School services shall be reviewed with the intent of better utilisation of fleet/service improvements to benefit the wider community where the demand for any service is 15 passengers or fewer. A service review may include combining two or more services and/or service cancellation. Where service changes are considered necessary due to low demand, affected schools will be informed and encouraged to put in place measures to encourage increased usage before service changes and/or cancellations are introduced. Schools will be given one term to increase patronage before a service change and/or cancellation takes place.