



# Service Standards and Performance Measures 2018 Edition



# Today's Presentation

## *Service Standards and Performance Measures*

- Update Process Timeline
- What are Service Standards and Performance Measures
- Show how the document changed
- Next steps



# Update Process Timeline

2018

2019

Part I

Part II

## Simplify & Clarify

- Clarify document
- Add graphical context
- Incorporate adopted Title VI policies
- No change to standards



**Completed July 2018**

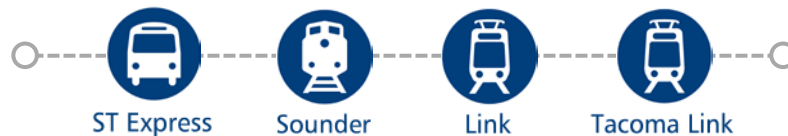
## Evaluate & Propose Changes

- Peer analysis
- Adapt to future growth
- New BRT mode standards
- Includes public engagement
- **Requires Board approval**

# What are Service Standards?

## *Guidelines to design, measure, & manage service*

- Ensure design consistency
- Establish performance targets
- Manage the customer experience
- Define process to change service



# What are Performance Measures?

## *Framework for evaluating & managing service*

### Productivity



Boardings per Trip



Boardings per Revenue Hour



Subsidy per Boarding



Passenger Miles per Platform Mile

### Service Quality



Passenger Load



On-Time Performance



Customer Complaints



Operated as Scheduled

# Example of Changes

## New Executive Summary & Overview



### Executive Summary

#### What are Service Standards and Performance Measures?

Service standards and performance measures are the policies and parameters used to design, modify, and evaluate transit service. Think of them like a toolbox for managing transit service.

Sound Transit uses these guidelines and measures to optimize efficiency and effectiveness while maintaining or improving service. Service standards are intended to serve as a decision-making tool to assist Sound Transit staff, management, and Board members when considering service changes.

In 1998, Sound Transit adopted its first set of Service Standards and Performance Measures. This original policy document was revised in 2006 to include Sounder commuter rail and Tacoma Link, and then again in 2010 to include the Link light rail system. The standards and measures were revised once more in 2014 to include updated productivity measures.

The 2018 revision simplifies and clarifies the 2014 Service Standards and Performance Measures, but does not change any of the system standards.

#### Service Design Guidelines

- Ensure service design consistency
- Address infrastructure, route, schedule efficiency, and passenger amenities

#### Service Performance Measures

- Establish performance targets
- Determine productivity and service quality throughout the system

#### Service Evaluation & Management

- Defines the process for making changes to service
- Maintains standard of service quality and continued improvement of the customer experience

### Overview of Performance Measures

Service performance measures provide the framework for evaluating service and informing management of Sound Transit service. A quick reference table of performance targets for each of Sound Transit's services is provided below. For a detailed explanation of each performance measure, please refer to Section 1: Introduction to Service Standards and Performance Measures.

	Productivity				Service Quality			
	Boardings per Trip	Boardings per Revenue Hour	Subsidy per Boarding	Passenger Miles per Platform Mile	Passenger Load	On-Time Performance	Customer Complaints	Operated as Scheduled
<b>ST Express</b> FAST, FREQUENT REGIONAL BUS SERVICE (SEE PAGE 15)	<ul style="list-style-type: none"> <li>• Monitored regularly and reported annually with a comparative analysis of each route's performance and a peer comparison analysis</li> <li>• Annual targets are adjusted accordingly</li> </ul>	Standing passengers not to exceed 1:23 - 1.5 times total seats and limit standing time to 30 minutes	85% of trips arrive within five minutes of schedule, never early	Less than 15 complaints per 100,000 boardings	99.8% of scheduled trips operated			
<b>Sounder</b> HIGH CAPACITY COMMUTER RAIL (SEE PAGE 19)	<ul style="list-style-type: none"> <li>• Monitored regularly and reported annually with a peer comparison analysis</li> <li>• Annual targets are adjusted accordingly</li> </ul>	Most riders have a seat, otherwise limit standing time to 30 minutes	95% of trips arrive at route terminals within seven minutes of schedule	Less than 15 complaints per 100,000 boardings	99.5% of scheduled trips operated			
<b>Tacoma Link</b> LIGHT RAIL WITH MULTI-MODAL CONNECTIONS (SEE PAGE 21)	<ul style="list-style-type: none"> <li>• Monitored regularly and reported annually with a comparative analysis by time of day and a peer comparison analysis</li> <li>• Annual targets are adjusted accordingly</li> </ul>	Standing passengers permitted up to 1.85 times number of seats	98.5% of trips depart/route terminals within three minutes of schedule	Less than 15 complaints per 100,000 boardings	98.5% of scheduled trips operated			
<b>Link</b> FREQUENT, RELIABLE HIGH-CAPACITY LIGHT RAIL (SEE PAGE 24)	<ul style="list-style-type: none"> <li>• Monitored regularly and reported annually with a comparative analysis by time of day and a peer comparison analysis</li> <li>• Annual targets are adjusted accordingly</li> </ul>	Standing passengers not to exceed two times number of seats and limit standing time to 30 minutes	90% of headways within two minutes of schedule	Less than 15 complaints per 100,000 boardings	98.5% of scheduled trips operated			

# Example of Changes

## Original Document

### 5. Directness of Travel

One of the unique aspects of ST Express is that it provides relatively fast service between major origins and destinations throughout the three-county service area. At certain times and in some locations where HOV lanes are provided, travel times between consecutive stops are less than that of a single-occupant automobile. However, most ST Express routes will have stops between major generators that will tend to increase end-to-end travel times. Therefore, it cannot be expected that all routes provide non-stop direct service between major generators with travel times equal to or better than an automobile. In order to increase average transit speeds, the Washington State Department of Transportation and local jurisdictions are encouraged to provide priority treatments for high occupancy vehicles whenever possible.

The "Coefficient of Directness" is computed by dividing the travel time by transit between two major generators by the travel time by automobile between the same two locations. This should not exceed 1.33 for ST Express routes.

### 6. Deviations

Mid-route deviations that cause a route to backtrack, or significantly deviate from the most direct route between major travel generators, should be avoided. In some instances, a deviation is warranted because of potential ridership gains. In evaluating a proposed deviation it should be determined that the total additional travel time for all through passengers should not exceed 10 minutes for each boarding and alighting along the deviation. This is expressed in the following formula:

$$(P_t \times T) / P_d \leq 10 \text{ minutes}$$

$P_t$  = Number of through passengers

$T$  = Addition vehicle travel time

$P_d$  = Number of boardings and alightings on the deviation

### 7. Short Turns

Routes that experience a significant drop in demand at a certain point should be considered for short turns. Short turns are selected trips scheduled to turn around before reaching the end of the route, thus providing more capacity on the segment of the route with the greatest demand. Since the objective for employing a short turn on a route is a more efficient utilization of resources, it should not result in excessive layover.

### 8. Duplication of Service

Outside of major activity centers, operation of more than one route on the same street or a closely parallel street should be avoided except where there is a high level of demand or HOV lane or special transit priority treatment. Schedules of routes operating on the same street should be coordinated to optimize service headways where feasible.

### 9. Route Anchors

Major trip generators located at the end of a route have a positive effect on ridership and can "anchor" the route's terminal at a logical location. Routes should be scheduled to serve peak passenger demand at these locations.

## Updated Document

### Deviations

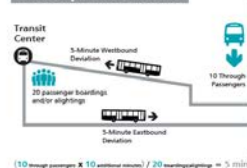
ST Express routes should avoid deviations that backtrack or deviate from the most direct route between major trip generators. In some instances, a deviation is warranted because projected ridership gains outweigh the additional travel-time burden to through passengers. Where projected ridership on the deviation warrants direct service during part or all of the day, Sound Transit considers operation of separate service patterns along mainline and deviation. For ST Express, a deviation is only acceptable if the total additional travel time for through passengers does not exceed 10 minutes for each boarding/alighting along the deviation. **The scenario below is acceptable, as the total additional travel time is only 5 minutes.**

more efficiently and effectively allocate resources based on passenger demand, short turns should be considered for ST Express routes that experience a significant drop in demand after a certain point. Short turns can be implemented if resource allocation changes.



Bus turns around to head back instead of serving full route.

### Ridership Gains Scenario



### Coordination of Corridor Service

Outside of major activity centers, operation of more than one ST Express route on the same street (or a closely parallel corridor) should be avoided, except where there is a high demand, an HOV lane, or special transit priority treatment. Schedules of routes operating on the same corridor should be coordinated to optimize service headways for customers, where feasible. Sound Transit coordinates with partner agencies, including Pierce Transit, Community Transit, and King County Metro, to provide adequate level of service in various corridors and to minimize parallel bus service where no customer benefit is achieved.



### Route Anchors

Major trip generators located at the end of a route have a positive effect on ridership and can "anchor" the route's terminal at a logical location. Routes should be scheduled to serve peak passenger demand at these locations.

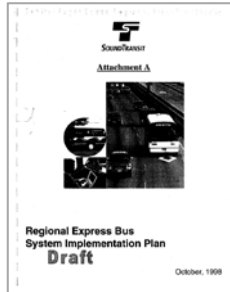
### Short Turns

Short turns are selected trips scheduled to turn around before reaching the end of the route, providing more capacity on the segment of the route with the greatest demand. Short turns should not result in excessive layover. In order to



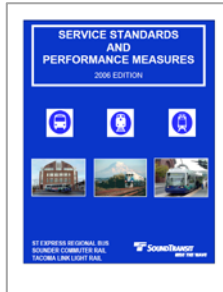
# Evolution of Service Standards Document

1998



ST Express standards and measures only

2006



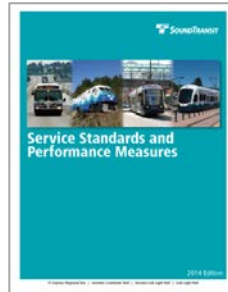
Incorporated Sounder and Tacoma Link standards and measures

2010



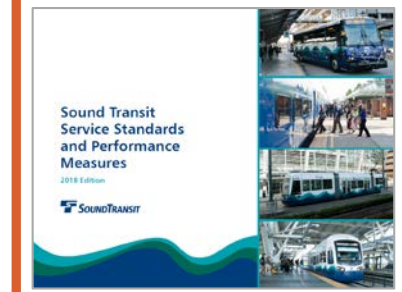
Incorporated Link standards and measures

2014



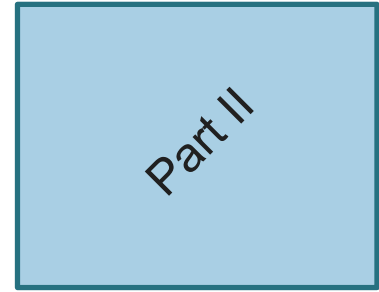
Updated measures for all modes

2018 Edition



Simplifies language and structure for a more user friendly document

2019



TBD



A close-up, low-angle shot of a white and blue Sound Transit bus. The bus features a large, stylized wave graphic in shades of blue and teal. The top half of the bus is white with several dark, rectangular windows. The bottom half is blue with more windows and a door. The text 'SOUND TRANSIT' and 'RIDE THE WAVE' is overlaid on a dark blue horizontal band across the middle of the image. The word 'SOUND' is partially visible in large white letters on the blue section of the bus.

 **SOUNDTRANSIT**  
RIDE THE WAVE