APPENDIX A

Service Hierarchy, System Performance and Standards

DESTINATION 2045

LONG RANGE PLAN

PierceTransit

Section 1 – Description of Services

FIXED ROUTE

Pierce Transit runs and operates 29 bus routes on set schedules, plus additional regional express bus routes under contract with Sound Transit.

SHUTTLE

SHUTTLE is a ride-request transportation service providing door-to-door rides for qualifying persons with disabilities anywhere within 3/4-mile of a bus route. A portion of these services are operated under contract. SHUTTLE services meet or exceed the requirements of the Americans with Disabilities Act of 1990 (ADA).

RIDESHARE

The agency's rideshare program provides vehicles for three or more occupants to share a commute, reducing travel by single-occupancy-vehicles. Each group has an assigned driver, backup driver and bookkeeper.

RUNNER

Pierce Transit's Runner is on-demand public transportation that allows customers to book rides from a smartphone within dedicated micro transit zones, providing flexible rides and transit connections in the areas of Joint Base Lewis-McChord, Parkland/Spanaway/Midland, Ruston Way, Port of Tacoma Tideflats, Puyallup, and Gig Harbor. These services are currently under contract.

Section 2 – Performance

KEY METRICS BY MODE

Fixed Route

The performance of Pierce Transit's fixed route services is measured by ridership, productivity, and customer satisfaction. Below is a description of key metrics associated with fixed route performance monitoring and how they are used.

Ridership

Ridership is calculated using automatic passenger counters (APCs) onboard buses which measure the number of boardings at each stop. These calculations are then rolled up to demonstrate overall boardings for a route, particular trip, or bus stop. Boardings are regularly monitored to gauge growth across routes and areas.

Route Productivity

To measure fixed route productivity, Pierce Transit utilizes passengers per revenue mile and passengers per Service Hour (boardings and passengers are synonymous). Both metrics are calculated by looking at route ridership, then dividing by the number of revenue miles or Service Hours required for the route. These metrics show two separate views of productivity. Passengers per revenue mile demonstrates how heavily the route is utilized by passengers while in revenue service. Revenue miles do not include the miles needed for a bus to travel to or from base (deadhead) or to another destination while not in service. Passenger per Service Hour shows how many passengers on a route are served while the bus is in service. It includes time for deadheads and layovers. When a route performs well given the number of boardings per revenue mile, but poorly through the lens of boardings per Service Hour, it may point to other routing or scheduling inefficiencies that should be considered.

Route Productivity Benchmarks

Using data from the prior year, Pierce Transit will create new productivity benchmarks by which routes, grouped by type, will be ranked as "Bottom 25%," "Below Average," "Above Average," and "Top 25%" based on boardings per revenue mile and Service Hour. Benchmarks will be published each year in the annual Route Performance Report and actions taken to address productivity issues will also be described.

Trip Productivity

Analyzing trip level productivity can be instrumental when considering frequency or span adjustments on an existing route. Trip level ridership can be measured by calculating the average passengers per mile or drive hour on a particular trip and by measuring the average maximum passenger load, which is the average number of passengers on a given trip when the bus is full. A trip is composed of all stops on a route from the start to finish. If certain times of the day or trips are consistently over or underperform, service adjustments may be necessary.

Cost

Monitoring costs per fixed route passenger boarding allows Pierce Transit to see how cost-effective the fixed route service is year-over-year and when compared to other services offered. Reviewing the net cost per fixed route passenger boarding shows the cost per passenger, minus any farebox revenue collected.

Reliability

Reliability is integral to the overall performance of fixed route service. At Pierce Transit, fixed route reliability is measured by on-time performance. On-time performance is calculated by measuring how early or late a bus is when arriving at a set timepoint along a route. Onboard technology is utilized to calculate when a bus arrives at a particular stop. It is important to note that not all bus stops along a given route are timepoints. The agency's current definition of "on time" for fixed route is up to one minute early and five minutes late.

Customer Satisfaction

The fixed route customer satisfaction is measured using two tools: comments received and the results of the agency's annual customer survey. Customer comments are logged, responded to, and used to assist in decision making prior to fixed route service changes. The annual customer survey includes questions aimed at gauging passenger satisfaction with the components of fixed route service. The elements of the survey that are regularly monitored in terms of fixed route customer satisfaction are listed below.

- Passenger Satisfaction with Frequency of Bus Service
- Passenger Satisfaction with On-Time Performance of Bus Service
- Passenger Satisfaction with The Amount of Time It Takes to Get Places
- Passenger Satisfaction with Transfer Wait Time

The survey also collects responses from individuals who do not use Pierce Transit services. For the purposes of fixed route performance, analysis is focused on feedback from existing riders.

Bus Stop Amenities

Bus stop amenities include shelters, benches, and trash cans. Standards for these amenities are set forth in the agency's Bus Stop Manual. To ensure that the agency's limited resources are used to benefit the greatest number of passengers, ridership thresholds exist for the placement of shelters and trash cans. The percentage of amenities in compliance with those ridership thresholds at bus stops is monitored. Pierce Transit has a goal of 90% compliance with standards.

SHUTTLE

The agency's paratransit SHUTTLE program regularly reviews two key metrics to measure performance: on-time performance and passengers per service hour. Unlike fixed route, on-time performance for SHUTTLE is defined by whether the vehicle picks up a passenger within thirty minutes of the scheduled time.

The agency currently has a target of 92% on-time performance and two passengers per service hour.

Runner

The performance of Pierce Transit's microtransit service, Runner, is evaluated using metrics focused on gauging customer experience, efficiency, and overall cost.

Wait Times

Average waiting times are used to monitor how the Runner program is performing compared to other services at Pierce Transit, as well as how different Runner zones are performing when compared to each other. The agency's goal is wait time of 25 minutes or less, which is similar to most fixed route bus lines.

Customer Satisfaction

Customer comments associated with the Runner service are tracked and help inform the overall stability of the program, as well as where Pierce Transit needs to focus time and resources. Monitoring comments allows staff to shift resources to areas that are of most concern to customers and to improve service.

Available Seats

To determine how well the agency is meeting demand for Runner service, the percentage of available and unavailable seats per day is monitored. The Runner program has a goal of 95% seat availability, which is a common target in micro transit, leading to the service operating effectively and efficiently.

Operating Costs

The overall operating cost of the Runner service is monitored to ensure viability of the micro transit operation. Because the service is contracted, there are no capital costs associated. Cost is ultimately used to determine how many vehicles the agency can operate now and in the future.

Rideshare

Measuring Commute Trip Reduction

By tracking boardings, the Rideshare team is able to identify demand trends, peak usage times, and popular routes. High numbers indicate good utilization, suggesting the program meets user needs. Demonstrating high utilization is critical for securing funding and support.

The number of participants is used to evaluate the program's success and impact. A higher participation rate indicates the program's effectiveness in meeting transportation needs and reducing traffic congestion. It also demonstrates the program's value to the community and helps secure funding and support from stakeholders.

Miles traveled demonstrates the program's effectiveness in reducing the number of cars on the road, which helps alleviate traffic congestion and lower emissions. It also lessens wear and tear on roads, leading to reduced maintenance costs and longer road lifespans.

Revenue

Overall revenue reflects the financial health of the rideshare program. It helps assess budgeting, resource allocation, track growth, and the program's sustainability.

Customer Satisfaction

To help gauge service quality, the number of customer comments is utilized. A low number of comments indicates participant satisfaction and effective program management. Analyzing comment trends helps identify areas needing improvement, guiding necessary adjustments to enhance the user experience.

Complete List of Metrics

Below is a complete list of service metrics that are collected and used for ongoing monitoring of performance system-wide or by mode of service.

Metric	System-Wide	Fixed Route	SHUTTLE	Runner	Rideshare
Annual Service Hours*		Yes	Yes	Yes	Yes
Annual Service Miles*		Yes	Yes	Yes	Yes
Annual Vehicle Revenue Hours*		Yes	Yes	Yes	Yes
Annual Service Revenue Miles*		Yes	Yes	Yes	Yes
On-Time Performance		Yes	Yes		
Annual Boardings	Yes	Yes	Yes	Yes	Yes
Missed Trips		Yes	Yes		
Average Passenger Load		Yes	Yes	Yes	Yes
Cost Per Service Hour		Yes	Yes	Yes	Yes
Cost Per Service Mile		Yes	Yes	Yes	Yes
Cost Per Revenue Hour		Yes	Yes	Yes	Yes
Cost Per Revenue Mile		Yes	Yes	Yes	Yes
Cost Per Passenger Boarding		Yes	Yes	Yes	Yes
Net Cost Per Passenger Boarding		Yes	Yes	Yes	Yes
Seat Availability				Yes	
Average Wait Time				Yes	
Annual Operating Expenses	Yes	Yes	Yes	Yes	Yes
Annual Capital Expenses	Yes	Yes	Yes	Yes	Yes
Annual Farebox Revenues	Yes	Yes	Yes	Yes	Yes
Farebox Recovery Ratio		Yes	Yes	Yes	Yes
Number of Passenger Amenities (Benches, Shelters, Trash Cans)		Yes			
Number of Customer Comments	Yes	Yes	Yes	Yes	Yes
Number of Compliments	Yes	Yes	Yes	Yes	Yes
Overall Satisfaction Index	Yes				

*Service hours/miles and revenue hours/miles are identical for Rideshare.

Strategic Plan Performance Targets

In early 2024, Pierce Transit adopted a six-year strategic plan that focused on customer service, community engagement, employee experiences, and stewardship. The plan included the following service performance targets:

- 6% ridership increase per year
- 20% increase in overall customer satisfaction, personal security on the bus and at the bus stop, and cleanliness of buses and Pierce Transit facilities
- 85% on-time performance
- 25% of service area residents within a 10-minute walk of routes with 15-minute weekday frequencies, or better

Section 3 – Fixed Route Standards and Design Guidelines

DENSITY AND STREET CONSIDERATIONS FOR FIXED ROUTE TRANSIT

Density

Research has shown that fixed route transit functions best and is the most cost effective in areas of high density (both residential and employment) within a 1/4-mile of bus stops. Furthermore, the Puget Sound Regional Council Metropolitan Planning Organization (PSRC MPO) has guided local jurisdictions to focus growth on regional centers where transit can improve mobility while addressing the effects of climate change. Pierce Transit runs its most frequent service in these areas of high density while also aiming to create connections between growth centers and provide a realistic alternative to private automobile trips. Service considerations are also given to less dense areas to provide an equitable level of coverage across the agency's service area.

Street Considerations

While areas of high density have been shown to create an ideal environment for successful transit service, the layout of street networks and community planning can similarly help or hinder transit. Grid street networks allow transit routes to efficiently operate in a relatively straight line, connecting multiple points, while cul-de-sacs mandate deviations that slow down service, increase costs, and decrease efficiency. Similarly, significant destinations that are built with large setback distances from major roadways present challenges to serve. Safety concerns also play a significant role in where transit can be provided. Where roads are narrow or lack infrastructure, it may not be possible to operate a large bus. Generally, Pierce Transit's fixed route bus service will operate on streets constructed at a functional classification of arterial or collector, which supports a higher volume of vehicles and connects major destinations. Additional information on functional classifications is available on the Puget Sound Regional Council's website at https://www.psrc.org/our-work/federal-functional-classificationurbanized-areas.

Where communities are not planned and built in a way for bus service to easily access or safely serve, it may be necessary to implement flexible services like the Pierce Transit Runner.

Types of Routes

Route classifications are based on a density analysis. For each route, the number of jobs, students, and residents within a 1/4-mile buffer was calculated using data from the 2020 Census and data.wa.gov. The total area of the buffer, in square miles, was also determined. Route density was then calculated by dividing the number of activity units (jobs, residents, and students) by the total buffer area, resulting in activity units per square mile. Routes were compared both to each other and to the overall Public Transportation Benefit Area (PTBA) to establish appropriate density thresholds for each classification.

Stream (High-Capacity)

Densities Served: Residential, Employment, and Students > 8,000 per square mile

Stream encompasses Bus Rapid Transit and enhanced bus routes. This type of route is expected to have higher productivity than core routes due to speed and reliability improvements that decrease travel times. These routes may include offboard payment, real-time arrival/departure signage, transit exclusive or Business Access and Transit (BAT) lanes, queue jumps, and/or transit signal priority. Enhanced bus routes may have limited stops to further decrease travel time between major destinations.

Core

Densities Served: Residential, Employment, and Students > 8,000 per square mile

These routes serve the densest parts of Pierce Transit's service area and warrant the highest levels of service, depending on demand. Within the Core route category, certain routes have been flagged for additional service in accordance with the agency's 2023 Fixed Route System Recovery and Restoration Plan. These Core routes have a target frequency of 15 minutes from 6:00am-7:00pm.

Urban

Densities Served: Residential, Employment, and Students 6,000 - 8,000 per square mile

Urban routes serve less dense areas of the service area but provide additional coverage and create vital connections to more central routes.

Connector

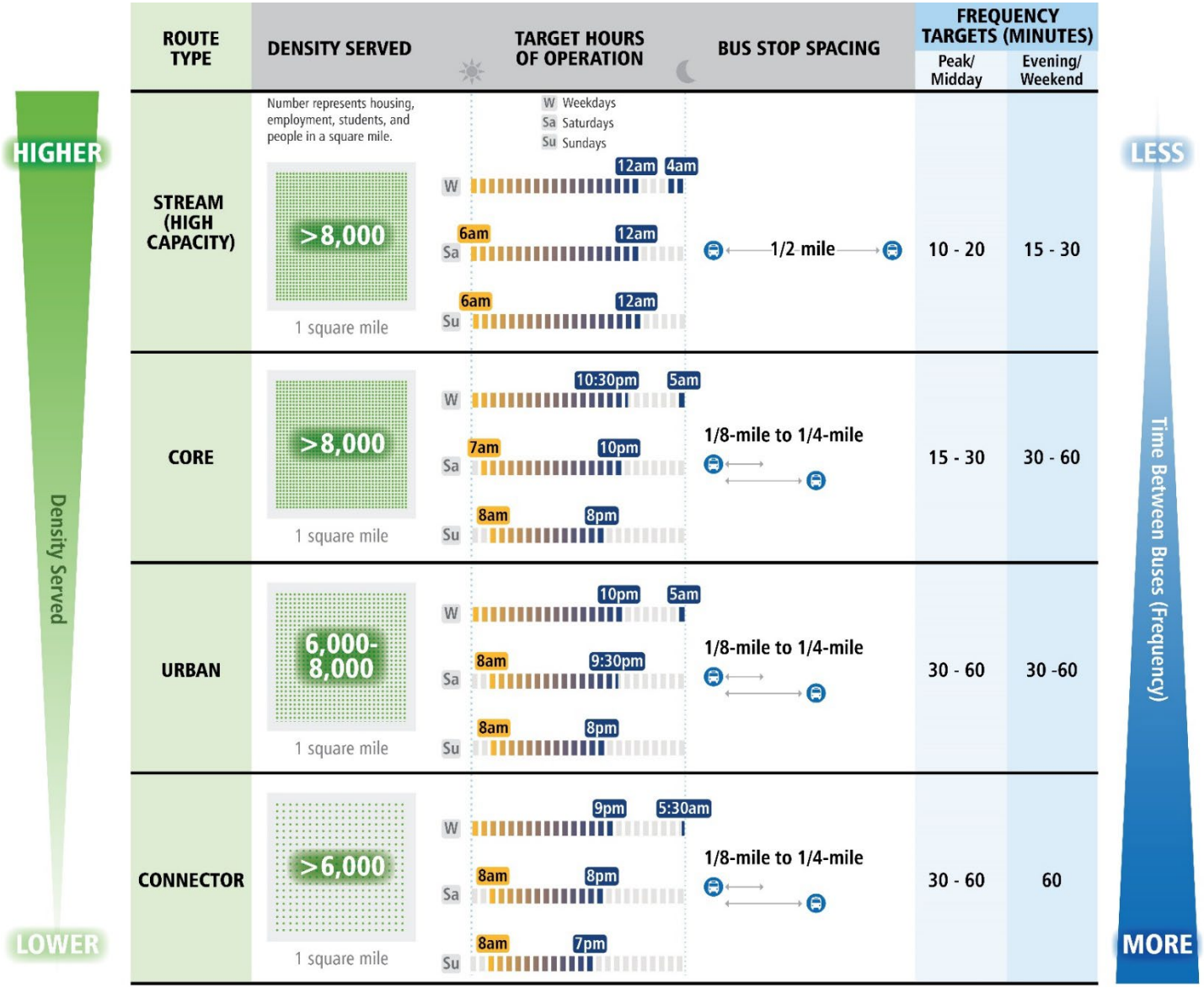
Densities Served: Residential, Employment, and Students < 6,000 per square mile

Connector routes serve less dense areas compared to Core and Urban routes. They may include seasonal or specialized routes.

Express

Express routes connect transit centers or Park & Ride lots with major transit destinations. Their frequency and span are determined by external factors, such as Sounder commuter rail departure times.

Route Types, Densities Served, Bus Stop Spacing, and Frequency Targets



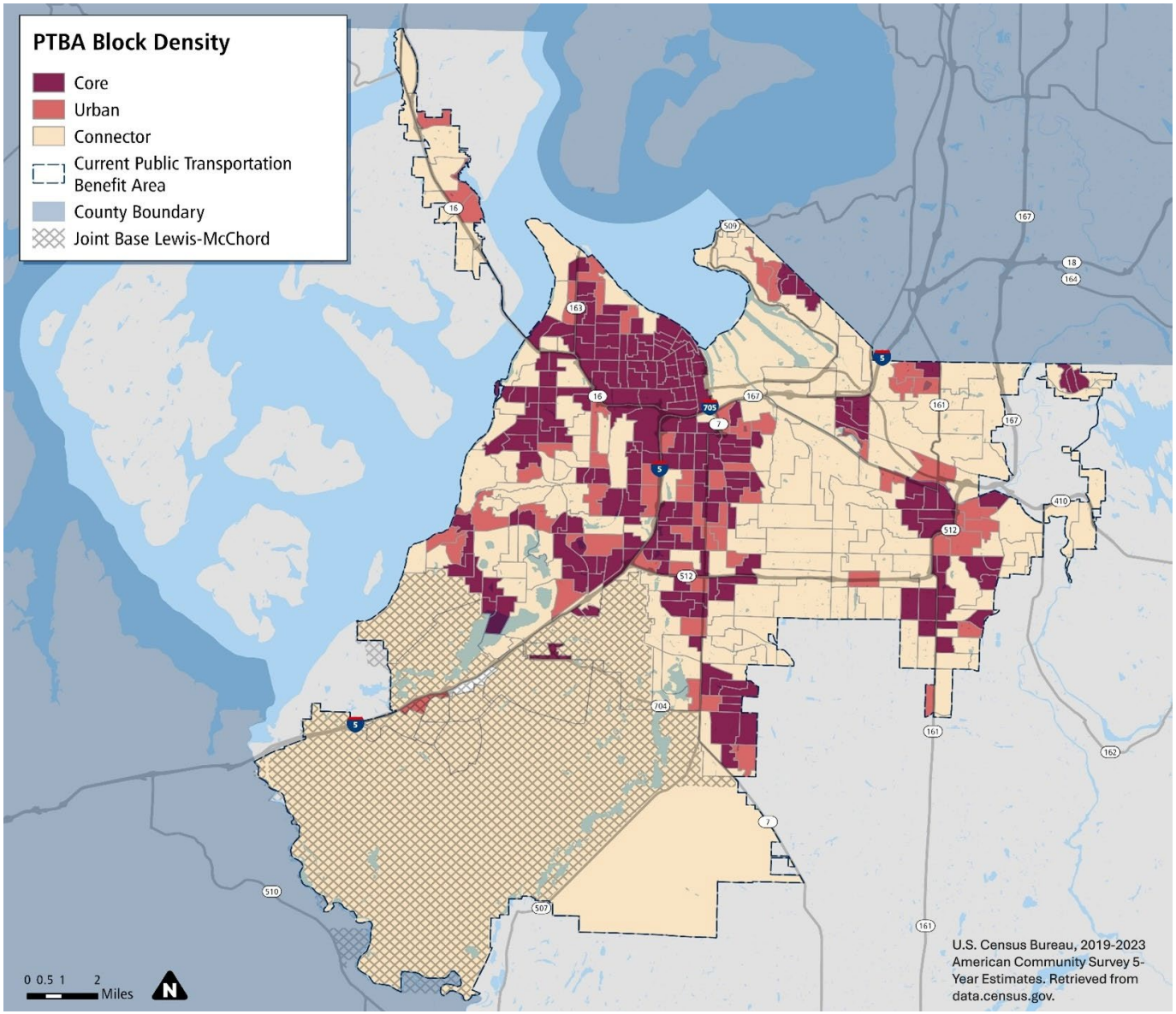
ROUTE TYPE	DENSITY SERVED	TARGET HOURS OF OPERATION	BUS STOP SPACING	FREQUENCY TARGETS (MINUTES) Peak/ Midday	FREQUENCY TARGETS (MINUTES) Evening/ Weekend
STREAM (HIGH CAPACITY)	Number represents housing, employment, students, and people in a square mile. >8,000 per 1 square mile	W Weekdays, Sa Saturdays, Su Sundays: W 12am–4am; Sa 6am–12am; Su 6am–12am	1/2 mile	10 - 20	15 - 30
CORE	>8,000 per 1 square mile	W 10:30pm–5am; Sa 7am–10pm; Su 8am–8pm	1/8-mile to 1/4-mile	15 - 30	30 - 60
URBAN	6,000-8,000 per 1 square mile	W 10pm–5am; Sa 8am–9:30pm; Su 8am–8pm	1/8-mile to 1/4-mile	30 - 60	30 -60
CONNECTOR	>6,000 per 1 square mile	W 9pm–5:30am; Sa 8am–8pm; Su 8am–7pm	1/8-mile to 1/4-mile	30 - 60	60

Note: Route spans may be adjusted outside of targets in accordance with demand or Board-adopted service plans.

Span is defined as the time from the first trip's start to the last trip's end.

Which Level of Density Warrants Which Type of Service?

Census Blocks Densities in Relation to Route Classification Thresholds:



Passenger Loads

Passenger load standards allow Pierce Transit to define and respond to persistent overcrowding on trips. For local service, the maximum passenger load is equal to 150% of seating capacity, while the maximum passenger load for express service is 125% of seat capacity. For example, on a 40-foot bus with 36 seats in local service, the maximum passenger load would equal 36 seated passengers and 18 standing passengers, for a total of 54 passengers. As of 2024, Pierce Transit is using only 30 and 40-foot buses for fixed route service. A table showing the seats of those vehicles and maximum passenger loads is below.

Seating Capacity	Maximum Passenger Load Local	Maximum Passenger Load Express
25	38	31
30	45	38
34	51	43
35	53	44
36	54	45
37	56	46

While the agency aims to provide a seat for all passengers to ensure positive customer experience, standing loads are at times unavoidable due to high demand, resource constraints, or special events. Pierce Transit proactively monitors passenger loads through its analysis of trip level ridership. Persistent overcrowding may be addressed by adjusting the bus size, providing an overflow bus, or increasing frequency.

Recommended Transit Supportive Improvements

Pierce Transit advocates for local jurisdictions to implement transit supportive plans and improvements in accordance with Puget Sound Regional Council's Transit Supportive Planning Toolkit, available at https://www.psrc.org/media/4908. The toolkit highlights the need for:

- Reducing minimum parking requirements in areas well served by transit
- Including transit corridor infrastructure, such as signal prioritization, bus stop curb extensions, and dedicated transit lanes, within local transportation improvement plans
- Adopting street design standards, such as Complete Streets, that support transit
- Providing space for transit infrastructure, such as bus stops and transit layover facilities
- Providing facilities that connect people to transit, such as crosswalks and pedestrian bridges, wayfinding signs, continuous sidewalks, shared use paths, bike lanes, and cycle tracks, and bicycle parking
- Developing clear, formalized, and interconnected streets and small blocks to make destinations visible and easier to access

Major corridor improvements, such as dedicated transit lanes, are appropriate where there is high frequency service. However, sidewalks, shared use paths, crosswalks, and other infrastructure improvements that improve safety, mobility, and access should be prioritized by jurisdictions for all fixed bus routes.

ROUTE DESIGN

Spacing

Generally, routes should be spaced approximately one-half mile apart in areas served by Core and Urban routes, while Connector routes should be spaced no closer than one mile. However, in certain situations, it may be necessary or beneficial to space routes more closely. This could include approaching transit centers, expanding coverage, or providing additional combined frequency to specific sections of the service area.

Deviations

Deviations should be avoided to maintain a direct path of travel between major trip generators. However, they may be considered if:

- The total travel time for through passengers does not exceed 10 minutes per each person boarding and alighting along the deviation
- Any stops added are projected to exceed the third quartile of average weekday boardings for other existing stops along that route
- And the change does not result in more than two deviations per route

Duplication

When more than one route operates along the same street, vehicles should not operate at the same time except on approaches to or from a transit center.

One-Way Loops

One-way loops should not be used on regular weekday operational routes except as necessary at route terminals for the purpose of turning buses around.

Anchors

When possible, the terminal points of each end of a route should be located at major activity centers to ensure passenger traffic in both directions of operation. At least one end of each route shall have a clear “destination” orientation.

Service Levels and Travel Patterns

Service frequency and times of operation should correspond to business hours, school class or shift change times, and other factors affecting travel patterns and rider demand. The agency’s ability to respond to all rider demands is affected by available resources.

Bus Stop Shelters, Benches, and Trash Cans

Bus stop amenities like shelters, benches, and trash cans are installed at stops in accordance with the agency’s standards. The installation feasibility of shelters and benches is affected by the characteristics of each stop and available right of way. The placement of these amenities must comply with city and county codes.

Transit Centers

Transit centers will be constructed at locations which permit the operation of a timed transfer system and allow for convenient access to major passenger destinations.

Recommended roadway and related development improvements in the vicinity of transit centers include:

- Sidewalks and roadway crossings to provide pedestrian access from all area neighborhoods
- Roadway improvements, such as HOV lanes and improvements, that permit unimpeded travel for transit vehicles along routes of access and egress to the transit center
- Provision of bicycle facilities that directly link the transit center with surrounding neighborhoods
- Street lighting that illuminates pedestrian approaches to the transit center
- Encouragement of major new retail and office construction (high-rise construction is especially appropriate when undertaken in the vicinity of transit centers)
- Location of new retail and office construction so that pedestrian access from the transit center does not require walking through parking lots to reach a building

Generally, transit services provided at transit centers is of sufficient quality that a significant percentage of the employees at any business located within walking distance of the transit center can utilize transit for their commute. Accordingly, it is appropriate to lower the number of employee-related parking spaces provided, which are often mandated in such developments under Commute Trip Reduction (CTR) measures.

Section 4 – Developing Service Changes

SERVICE CHANGE TIMELINES

The timing of Pierce Transit fixed route service changes is prescribed by the collective bargaining agreement with the Amalgamated Transit Union, which represents Bus Operators and other positions within the agency. Per the agreement, changes may occur in March, June, September, and December. Minor adjustments may occur with the June and December service changes, though they primarily function as "shake-ups" in which Operators may bid for their work assignments. Significant service changes may occur in March and September. During these service changes, service may be added, reduced, modified, or eliminated. The ability to add service is highly dependent on Bus Operator availability and budget. Service modifications are guided by yearly evaluations of routes, including trip-level evaluations, and Board-adopted Service Plans.

ROUTE & TRIP PRODUCTIVITY EVALUATIONS

As a part of regular service planning processes, routes and trips are monitored in terms of productivity. Adjustments aimed at increasing route and trip productivity may occur with the September service change. In addition to productivity evaluations, customer feedback is tracked and compiled, then reviewed prior to each service change for potential action.

When trips associated with a particular route have consistently high average maximum passenger loads, service may be added to increase frequency and address demand during certain times of the day. Conversely, if trips are shown to have low productivity, the agency may consider removing trips, changing frequency, or adjusting the span of a route.

New services or routes that have had major adjustments require time to mature before they can be expected to meet productivity benchmarks. In these cases, a grace period of two years will be in place before any action is taken. This grace period may be extended when projects are underway to improve the productivity of the route or service in question.

BOARD ADOPTED SERVICE PLANS

The Pierce Transit Board of Commissioners may adopt service-related plans that dictate how the agency prioritizes Bus Operators and budgeted Service Hours. For example, in 2023, Commissioners adopted a gradual service restoration plan as part of the recommendations within the Fixed Route Recovery and Restoration Plan document, which set forth phases in which service would be added to the system as additional Bus Operators came onboard. The first phase included the retirement of low productivity routes and launch of the agency's first enhanced bus route, the Stream Community Line. Future phases include increased frequency on routes, expanded span, and additional weekend service. Board-adopted service plans are prioritized and will be closely adhered to when it comes to major service changes.

TITLE VI

As a recipient of federal funds, Pierce Transit is required to comply with Title VI of the Civil Rights Act of 1964 which protects individuals and groups from discrimination in the provision of transit service. In accordance with Title VI, a Service Equity Analysis for major service changes will be prepared to determine whether the proposed changes result in a disparate impact on minority populations and whether the change results in a disproportionate burden on low-income populations. If Pierce Transit finds that they are impacted by major service changes, the agency must avoid, minimize, or mitigate those impacts where practicable.

Copies of the agency's Major Service Change, Disparate Impact, and Disproportionate Burden policies, as well as prior Service Equity Analyses are available online at https://www.piercetransit.org/documents/.

Section 5 – Reporting

YEARLY PERFORMANCE REPORT

Each year, a Performance Report will be prepared and presented to agency leadership and the Board of Commissioners. The report will also be posted to the agency's website. It will contain the following:

- The route productivity benchmarks set using ridership data from the prior year.
- Each route's productivity metrics.
- A description of any actions taken during service changes to address productivity issues and their results, if available.
- Current data associated with other metrics identified for fixed route service, including costs, on-time performance, customer satisfaction, and bus stop amenity distribution.

RIDERSHIP UPDATES

Biannual ridership presentations will be provided to agency leadership and the Board of Commissioners. These presentations will encompass ridership trends across all modes of service.

KEY PERFORMANCE INDICATORS DASHBOARD

A key performance indicators dashboard is available on the Pierce Transit website at https://piercetransit.org/about-us/. The dashboard provides ridership, cost, and mileage data across all modes of service. Up to date on-time performance information for fixed route service is also available.

STRATEGIC PLAN DASHBOARD

To increase transparency regarding progress on the agency's adopted 2024-2029 Strategic Plan, a public dashboard is available at https://piercetransit.org/strategic- initiatives/. The dashboard tracks progress on the goals identified in Section 1.

APPENDIX B

Outreach and Public Engagement

DESTINATION 2045

LONG RANGE PLAN

PierceTransit

This appendix outlines the public engagement and outreach events undertaken by Pierce Transit to garner community feedback to Destination 2045 as well as responses received in two phases of surveying. Responses were received from all areas within the PTBA as well as jurisdictions outside.

Engagement events included in person and virtual events with our planning partners at various jurisdictions, city councils and planning commissions, open houses and town halls, community groups, as well as other events of note. The following tables outline the various coordination meetings, formal presentations, and other outreach events conducted in 2024. Further outreach events and presentations have been planned throughout the Long Range Plan drafting process in 2025 and will be added to the final version of this appendix.

Comprehensive Plan Update Coordination Meetings

Cities/Towns/Others	Day/Date – In Person (IP) or Virtual (V)
Pierce County Planners Collaborative Meeting - Comprehensive Plan Housing Element (focus)	Friday, May 24 (V)
Cities of Lakewood and Steilacoom – Fehr & Peers Tacoma Office	Friday, August 16 (IP)
City of Tacoma – Fehr & Peers Tacoma Office	Wednesday, August 21 (IP)
City of Milton - Teams	Wednesday, August 21 (V)
City of Puyallup – Fehr & Peers Tacoma Office	Thursday, August 22 (IP)
Cities of Fircrest and University Place - Fehr & Peers Tacoma Office	Thursday, August 22 (IP)
Cities of Fife and Edgewood - Fehr & Peers Tacoma Office	Friday, August 23 (IP)
City of Gig Harbor - Teams	Wednesday, August 28 (V)
Pierce County - Teams	Thursday, August 29 (V)
City of Ruston	Thursday, November 14 (V)

City/Town Councils and Planning Commissions Presentations First Draft

City/Town/Other	Day/Date – In Person (IP) or Virtual (V)
Edgewood	Tuesday, September 24 (IP)
Steilacoom	Tuesday, October 1 (IP)
Milton	Monday, October 7 (IP)
Fircrest	Tuesday, October 8 (IP)
Lakewood	Monday, October 14 (IP)
Auburn	Monday, October 14 (IP)
Pierce County	Tuesday, October 15 (IP)
Ruston	Tuesday, October 15 (IP)
Fife	Tuesday, October 22 (IP)
Gig Harbor	Thursday, November 21 (IP)
Puyallup	Tuesday, November 26 (IP)
Tacoma (Study Session)	Tuesday, December 17 (IP)
Tacoma Planning & Transportation Commissions	Wednesday, December 18 (IP)
University Place	Tuesday, January 21, 2025 (IP)

City/Town Councils and Planning Commissions Presentations Second Draft

City/Town/Other	Day/Date – In Person (IP) or Virtual (V)
Tacoma Transportation Commission	Wednesday, June 18 (IP)
Fircrest	Tuesday, June 24 (IP)
Pierce County Transportation Advisory Commission	Thursday, June 26 (IP)
Steilacoom	Tuesday, July 1 (IP)
Puyallup	Tuesday, July 1 (IP)

City/Town/Other	Day/Date – In Person (IP) or Virtual (V)
Fife	Tuesday, July 8 (IP)
Lakewood	Monday, July 21 (IP)
Milton	Monday, July 21 (IP)
Tacoma (Study Session)	Tuesday, July 22 (IP)
Auburn	Monday, July 28 (IP)
Gig Harbor	Monday, July 28 (IP)
Pierce County (Study Session)	Tuesday, July 29 (IP)

Open Houses and Virtual Town Hall

Event	Day/Date – In Person (IP) or Virtual (V)
Downtown Tacoma – Campfire Coffee Co. 1554 Market Street #101 (98402) - Open House #1	Saturday, September 14 (IP)
Pierce Transit – 3720 96th Street SW - Building 5 – Rainier Conference Room – Open House #2	Monday, September 16 (IP)
Virtual Town Hall (Online Open House)	Wednesday, September 18 (V)
Puyallup Main (Downtown) Library, 324 S. Meridian (98371) - Open House #3	Saturday, September 21 (IP)

Community Groups and Events

Event or Group	Day/Date – In Person (IP) or Virtual (V)
South Sound Sustainability Expo – UW-Tacoma Campus	Saturday, April 13 (IP)
Puyallup Avenue Corridor Improvements Open House – Tacoma Dome Meeting Hall	Wednesday, May 29 (IP)
One Tacoma Community Partner Visioning Workshop	Wednesday, June 5 (IP)
Puyallup Farmers' Market	Saturday, July 6 (IP)
West End (Tacoma) Neighborhood Council	Wednesday, July 10 (IP)
Tacoma Pride Festival (Downtown)	Saturday, July 13 (IP)
Cross District Association of Tacoma	Wednesday, July 17 (V)
Community Advisory Group Meeting #4 | Puyallup 2044	Thursday, July 18 (IP)
South Tacoma Projects - Internal Coordination Meeting	Wednesday, July 24 (V)
MOSAIC Arts & Culture Festival – Wright Park (Tacoma)	Saturday, July 27 & Sunday, July 28 (IP)
Port of Tacoma - Regional Access Mobility Partnership (RAMP) & MIC Meeting	Wednesday, August 7(IP)
Sixth Avenue Business District – Primo Grill (Tacoma)	Wednesday, August 14 (IP)
Affordable Housing Consortium (AHC)	Thursday, August 22 (V)
"Mojo" Lakewood Chamber of Commerce – Pierce Transit HQ Building 5 – Rainier Conference Room	Wednesday, August 28 (IP)
West Side Wake-up (Tacoma-Pierce County Chamber & University Place Businesses) – Boathouse 19 Bar & Grill (West Tacoma)	Friday, August 30 (IP)
Point Ruston Business District – Central Food Co-op Community Room (N. Pearl Street - Tacoma)	Thursday, September 5 (IP)
Lake City Neighborhood Association (Lakewood)	Thursday, September 12 (IP)
South Tacoma Neighborhood Council – STAR Center (South Tacoma)	Wednesday, September 18 (IP)
Hilltop Business Association – Hilltop a Go-Go (Tacoma)	Wednesday, September 18 (IP)
Gig Harbor Waterfront Alliance – Anthony's at Gig Harbor	Friday, September 19 (IP)
Safe Streets (Tacoma)	Monday, September 23 (IP)
Thriving Communities TOD Study Area/Four Corners Partnership Open House (Tacoma Community College)	Wednesday, September 25 (IP)
APIC Democratic Summit (Asia Pacific Cultural Center)	Friday, September 27 (IP)
Park(ing) Day	Tuesday, October 2 (IP)
Rotary Club of Clover Park (Carr's Restaurant – Lakewood)	Tuesday, October 2 (IP)
Tacoma Black Collective	Saturday, October 5 (IP)
Tacoma Area Commission on Disabilities	Friday, December 13 (IP)

Other Meetings or Special Presentations of Note

Audience	Day/Date – In Person (IP) or Virtual (V)
Initial Planning Partners & Stakeholders Consultation	Thursday, May 30 (V)
Pierce Transit CTAG #1	Thursday, June 27 (IP)
Pierce Transit CTAG #2	Thursday, August 22 (IP)
Pierce Transit Executive Team	Wednesday, September 11 (IP)
Pierce County Growth Management Coordinating Committee (GMCC)	Wednesday, September 11 (V)
Thurston Regional Planning Council - Transportation Leaders Visioning	Wednesday, October 23 (IP)
Pierce County Transportation Advisory Commission (Special Meeting)	Thursday, October 24 (V)
Pierce Transit CTAG #3	Thursday, November 21 (IP)

Phase 1 Outreach Survey Results

In July 2024, a survey powered by the Social Pinpoint platform was released to receive initial community feedback on their transit needs and aspirations. This survey involved dropping a pin at a desired location and selecting whether the respondent would like "Expanded" or "New" Service. Additionally, respondents could leave a detailed comment explaining their preference. Engagement was extensive and highly valuable comments were received. A table showing the number of responses for each location is shown below, as well as a list of key themes from written comments.

Location	Count of Responses
Tacoma	165
Puyallup	33
Lakewood	29
South Hill	21
Frederickson	20
Sumner	20
Graham	19
Bonney Lake	14
Tehaleh	13
University Place	13
Summit	10
Clover Creek	9
Parkland	9
Spanaway	8
Alderton	7
DuPont	7
Gig Harbor	7
Maplewood	7
Midland	7
Orting	7
Auburn	6
Fort Lewis	6
Elk Plain	5
Key Center	5
Longbranch	5
Waller	5

The following locations received four comments or less: Artondale, Buckley, Burley, Carbonado, Clear Lake, Des Moines, Edgewood, Enumclaw, Federal Way, Fife, Fife Heights, Fircrest, Fox Island, Home, JBLM, Lacey, Lakeland South, Lake Tapps, McChord AFB, Milton, North Fort Lewis, North Puyallup, Pacific, Prairie Ridge, Prarier Heights, Purdy, Rosedale, Roy, Ruston, South Creek, Stansberry Lake, Steilacoom, Summit View, Wauna, Wollochet, and Yelm.

Key Themes:

- Strong interest in more frequent service across multiple routes, especially during peak hours, evenings, and weekends.
- Desire for improved connections to Sounder, future light rail, and regional hubs like Lakewood, Puyallup, Federal Way, and the Tacoma Dome area.
- Requests for new or expanded service outside of the current service area, including Graham, Frederickson, Bonney Lake, Orting, and the Key Peninsula.
- Community interest in converting high-ridership corridors into BRT service.
- Support for local circulators in cities like Gig Harbor and express connections from outlying areas to major destinations.
- Feedback emphasized the need for better timetable coordination and more reliable connections, particularly at transit centers and near major rail stops.
- Suggestions included service to parks and recreational sites.

Phase 2 Outreach Survey Results

Following the development of the draft growth scenarios, several engagement events were undertaken to solicit community feedback on their preference. An online interactive ArcGIS Story Map detailing the process was also published along with a survey in September 2024. Highlights from the 34 survey responses are detailed below.

If you could pick a growth scenario to implement, which would it be?	
Scenario	**Count of Responses**
A	3
B	2
C	7
D	20
Blank	2

- Scenario D was most frequently mentioned and favored for its ambition and broad coverage.
- The need for services and amenities in low-income or minority areas at the same level as more affluent neighborhoods was emphasized.
- Respondents supported expanded span of service (especially later hours) and more frequent buses.
- Interest in Bus Rapid Transit (BRT), improved north/south corridors, and Sounder/Light Rail integration was repeated.
- Several respondents asked for connections to specific cities like DuPont, Sumner, Fife, Auburn, and Gig Harbor.
- Numerous comments stressed the need for aggressive transit investment, system-wide connectivity, and long-term vision.

Note: The questions and responses above refer to the first iteration of the Long Range Plan. The revised plan streamlines the scenarios into three options: one based on baseline funding and two growth scenarios that reflect what could realistically be achieved with additional sales tax revenue.

First Draft Comments

A total of 42 comments were received on the first draft of the Long Range Plan. Some comments addressed multiple topics. The breakdown of comments by topic is summarized below.

Topic	Count of Comments
General Service Expansion (Outside Current Service Area)	9
Service Suggestion (New Route/Stop)	8
General Service Expansion	5
Add Details to the Plan	6
Runner	4
Autonomous Vehicles	2
City Infrastructure	2
Sound Transit Service	2
Other	2
Electric Vehicles	2
Service Suggestion (Frequency/Span)	2
Outreach Suggestion	2
Bus Stop Improvements	1
Fares	1
Technology	1

The most frequent comments focused on expanding service outside the current service area, followed by suggestions for specific new routes or stops, and requests for increased frequency and span. Several comments requested more detailed information in the plan, particularly regarding which routes would receive additional service and how existing routes might be modified or expanded.

In addition to public input, four letters were submitted by local jurisdictions and one by the Puget Sound Regional Council. All feedback was reviewed to identify new themes or concerns not previously captured during earlier outreach.

Second Draft Comments

A total of 35 comments or letters were received on the second draft of the Long Range Plan. Some comments addressed multiple topics. The breakdown of comments by topic is summarized below.

Topic	Count of Comments
Support Baseline Scenario (No New Funding)	9
Support Scenario B	7
Other	6
Support Scenario A	4
Service Suggestion (Route/Stop)	3
Service Suggestion (Frequency/Span)	2
Outreach Suggestion	1
Sound Transit Service	1
General Service Expansion (Outside Current Service Area)	1

A total of 11 comments expressed support for Scenario A or B, while 9 comments favored the Baseline Scenario and maintaining current funding levels. Comments categorized as "Other" reflected a range of themes, including disappointment with the plan's fiscal constraints, support for Pierce Transit employees, and suggestions for alternative funding strategies. Several comments also advocated for specific service allocations, such as new routes and extended operating hours.

In addition to public comment, four letters were submitted by community organizations, jurisdictions, and the Puget Sound Regional Council. All feedback was reviewed to identify new themes or concerns not previously captured during earlier outreach.

APPENDIX C

Process to Expand PTBA Boundaries

DESTINATION 2045

LONG RANGE PLAN

PierceTransit

A **Public Transportation Benefit Area (PTBA)** is a special-purpose municipal corporation in Washington State, established to provide public transportation services within a designated region. PTBAs are authorized to plan, construct, and operate various transportation systems, including bus services, railways, and passenger terminals, to meet the mobility needs of their communities.

The legal framework for PTBAs is outlined in **Chapter 36.57A of the Revised Code of Washington (RCW)**. This chapter details the procedures for forming a PTBA, defining its boundaries, establishing its governing body, and enumerating its powers and responsibilities. It also provides guidelines for financing, including the authority to levy taxes subject to voter approval, and outlines processes for annexation of additional areas and potential dissolution.

Pierce Transit operates as a Public Transportation Benefit Area (PTBA) within Pierce County, Washington, serving approximately 292 square miles, including 13 cities and towns, as well as portions of unincorporated areas. This service area encompasses about 70% of the county's population.

The process for establishing or modifying PTBA boundaries involves several key steps:

- **Initiating a Public Transportation Improvement Conference (PTIC):** The PTIC can be convened by the county council, through a resolution by at least two cities within the county, or via a petition signed by at least 10% of registered voters in the proposed PTBA.
- **Defining Boundaries and Conducting Public Hearings:** The PTIC evaluates the need for a PTBA and proposes boundaries. Public hearings are held to gather input, with notices published in local newspapers for at least four consecutive weeks. Adjustments to boundaries may be made based on feedback, ensuring no "islands" of included or excluded areas are created.
- **Establishing the Governing Board:** After finalizing boundaries, a governing board composed of elected officials from the included cities and counties is formed. Single-county PTBAs may have up to nine board members, while multi-county PTBAs can have up to thirteen.
- **Developing a Comprehensive Transit Plan:** The PTBA is responsible for creating a comprehensive transit plan outlining service level, funding requirements, and potential impacts on adjacent transit systems.

Modifications to PTBA boundaries, such as annexations or contractions, follow a similar process, including public hearings and approvals from relevant governing bodies. Any expansion of the service area would require voter approval of the associated transit sales tax in the newly added area.

Pierce Transit's 2024-2029 Strategic Plan emphasizes the importance of engaging with the community and assessing the potential for expanding PTBA boundaries. The plan includes strategies to present a business case to the community regarding boundary expansion, ensuring that any changes are informed by thorough analysis and public input. Modifying PTBA boundaries is a complex process that requires careful planning, community engagement, and adherence to legal protocols to ensure that transit services effectively meet the needs of the population.

Pierce Transit Service Area Realignment of 2012

In November 2011, the Pierce Transit Board of Commissioners passed a resolution authorizing the convening of a Public Transportation Improvement Conference (PTIC) for the purpose of "Evaluating the Need for Desirability of Revision to the Pierce County Public Transportation Benefit Area" (i.e., evaluating whether to revise the boundaries of Pierce Transit's service area). Conference membership was comprised of one elected official from each governmental jurisdiction within Pierce County, including the Pierce County Council. Each jurisdiction's representative was given the opportunity to withdraw their community from the PTBA at that time.

On March 8, 2012, the PTIC held a public hearing on the preliminary delineation that was put forward on January 23, 2012. After hearing testimony from more than a dozen citizens, the Conference convened a special meeting to deliberate the map. At the meeting, the Conference unanimously passed a motion to approve the preliminary delineation (map) as put forward at the public hearing. The representatives from five cities – Bonney Lake, Buckley, DuPont, Orting, and Sumner – voted to remove their city from the PTBA. The Pierce County representative also voted to remove a large portion of Unincorporated Pierce County.

The Pierce County Council had 30 days from the passage of the approved delineation to object to the map as it passed the Conference. April 9, 2012, was the County Council's deadline for objection; the County took no action and thereby the County's portion of the map was solidified as it passed the Conference.

Each city remaining in the Pierce Transit service area had 60 days from the passage of said map as a final opportunity to withdraw. That deadline was May 7, 2012; none of the 13 remaining jurisdictions took action, and thus all remained in Pierce Transit's service area. The approved delineation and the new composition of the Board of Commissioners became effective on May 8, 2012.

Taxing authority in the areas that were removed ended in October 2012. The financial impact to Pierce Transit in 2010 dollars was a loss of approximately $7.5 million annually.

In 2016, Pierce Transit worked closely with state lawmakers on passage of a bill, HB 2427, requiring that any jurisdiction within a PTBA that would like to propose a change in participation (entering or leaving a transit district) advise the citizens of the county or city by means of an ordinance adopted by the legislative body of that city or county. This new process will increase transparency, encourage greater public participation, and diminish the negative impacts of sudden changes to transit service and ridership.

APPENDIX D

Pierce County Land Use Growth Targets

DESTINATION 2045

LONG RANGE PLAN

PierceTransit

This Appendix shows the Pierce County population, housing unit, and employment targets for cities, towns and unincorporated areas within its boundaries for comprehensive planning purposes for the horizon year 2044 as adopted in Ordinance No.2022-46s. Destination 2045 utilizes these targets to understand where growth will be distributed and occur in the planning horizon year. The three associated population, housing unit, and employment target tables are shown on the following three pages. Further information on the ordinance can be found on the Pierce County website at https://www.piercecountywa.gov/950/Comprehensive-Plan. **Note:** Pierce Transit acknowledges that the targets were updated in 2023 by the Pierce County Council through Ordinance No. 2023-22s (Exhibit A). A comparison of the updated targets with the 2022 version used in Destination 2045 planning showed that changes in growth percentages associated with the Pierce Transit service area were minimal and do not affect the overall service allocations considered in the plan.

Pierce County Population Growth Targets: 2020 - 2044

Jurisdiction	2020 Census Population	2020-2044 Population Growth	2044 Total Population	Percent of Growth
Auburn	10,013	263	10,276	3%
Bonney Lake	22,487	3,591	26,078	16%
Buckley	5,114	3,121	8,235	61%
Carbonado	734	64	798	9%
DuPont	10,151	5,184	15,335	51%
Eatonville	2,845	794	3,639	28%
Edgewood	12,327	5,931	18,258	48%
Fife	10,999	4,402	15,401	40%
Fircrest	7,156	1,910	9,066	27%
Gig Harbor	12,029	2,200	14,229	18%
Lakewood	63,612	23,180	86,792	36%
Milton	7,057	600	7,657	9%
Orting	9,041	549	9,590	6%
Pacific	41	-	41	-
Puyallup	42,973	18,495	61,468	43%
Roy	816	253	1,069	31%
Ruston	1,055	453	1,508	43%
South Prairie	373	39	412	10%
Steilacoom	6,727	464	7,191	7%
Sumner	10,621	4,904	15,525	46%
Tacoma	219,346	105,977	325,323	48%
University Place	34,866	13,892	48,758	40%
Wilkeson	499	187	686	37%
Unincorporated Pierce County				
HCT Communities[1]	157,458	39,205	196,663	25%
Urban Unincorporated Areas[2]	79,517	32,066	111,583	40%
Rural	169,250	7,944	177,194	5%
Military Lands	24,023	-	24,023	-
Total	**921,130**	**275,668**	**1,196,798**	**30%**

[1] Urban area within the Mid-County, Parkland-Spanaway-Midland, South Hill community plan boundaries.
[2] All urban areas outside the HCT Communities geography.

Pierce County Employment Growth Targets: 2020 - 2044

Jurisdiction	Estimated 2020 Employment[1]	2020-2044 Employment Growth	2044 Total Employment	Percent of Growth
Auburn	1,247	-	1,247	-
Bonney Lake	6,365	1,717	8,082	27%
Buckley	2,241	1,080	3,321	48%
Carbonado	54	6	60	11%
DuPont	5,309	1,177	6,486	22%
Eatonville	969	152	1,121	16%
Edgewood	2,244	1,962	4,206	87%
Fife	17,587	5,077	22,664	29%
Fircrest	1,568	113	1,681	7%
Gig Harbor	12,855	2,747	15,602	21%
Lakewood	29,872	9,863	39,735	33%
Milton	2,203	441	2,644	20%
Orting	1,473	196	1,669	13%
Pacific	2,005	638	2,643	32%
Puyallup	30,559	14,715	45,274	48%
Roy	188	92	280	49%
Ruston	532	71	603	13%
South Prairie	80	10	90	13%
Steilacoom	840	10	850	1%
Sumner	18,106	5,313	23,419	29%
Tacoma	121,183	70,800	191,983	58%
University Place	7,145	2,943	10,088	41%
Wilkeson	85	11	96	13%
Unincorporated Pierce County				
HCT Communities[1]	31,515	10,445	41,960	33%
Urban Unincorporated Areas[2]	25,877	8,850	34,727	34%
Rural	24,153	2,950	27,103	12%
Total	**346,255**	**141,379**	**487,634**	**41%**

[1] Urban area within the Mid-County, Parkland-Spanaway-Midland, South Hill community plan boundaries.
[2] All urban areas outside the HCT Communities geography.

Pierce County Housing Unit Growth Targets: 2023 - 2044

Jurisdiction	2020 Census Housing Unit	2020-2044 Housing Unit Growth	2044 Total Housing Unit	Percent of Growth
Auburn	3,898	96	3,994	2%
Bonney Lake	7,605	2,850	10,455	37%
Buckley	1,956	1,374	3,330	70%
Carbonado	244	17	261	7%
DuPont	3,791	1,960	5,751	52%
Eatonville	1,127	277	1,404	25%
Edgewood	5,125	2,432	7,557	47%
Fife	4,326	1,873	6,199	43%
Fircrest	2,926	788	3,714	27%
Gig Harbor	5,642	1,000	6,642	18%
Lakewood	26,999	9,714	36,713	36%
Milton	2,963	259	3,222	9%
Orting	2,999	168	3,167	6%
Pacific	19	-	19	-
Puyallup	18,106	7,488	25,594	41%
Roy	315	95	410	30%
Ruston	517	169	686	33%
South Prairie	149	13	162	9%
Steilacoom	2,919	176	3,095	6%
Sumner	4,492	2,035	6,527	45%
Tacoma	92,309	42,390	134,699	46%
University Place	14,427	5,723	20,150	40%
Wilkeson	182	69	251	38%
Unincorporated Pierce County				
HCT Communities[1]	56,309	13,380	69,689	24%
Urban	27,891	10,870	38,761	39%
Rural	66,884	2,605	69,489	4%
Military Lands	5,369	-	5,369	-
Total	**359,489**	**107,821**	**467,310**	**30%**

[1] Urban area within the Mid-County, Parkland-Spanaway-Midland, South Hill community plan boundaries.
[2] All urban areas outside the HCT Communities geography.

APPENDIX E

Planning for Climate Change and Resiliency

DESTINATION 2045

LONG RANGE PLAN

PierceTransit

Planning for Climate Change and Resiliency

Pierce County has unique challenges and inherent vulnerabilities with a land area of more than 1,974 square miles, extending from sea level to 14,411 feet at the summit of Mount Rainier (a volcano) at the state's highest point. In fact, no other county in the United States stretches from sea level to more than 2.5 miles in elevation. There are 118 square miles of water in the County, excluding Puget Sound. In addition, several islands in the southern Sound are incorporated in the County. With a population of over 880,000 residents, Pierce County is the second most populous county in Washington State. Natural forests, 225 miles of saltwater shoreline, and the abundance of lakes and other recreational opportunities contribute to an excellent quality of life in Pierce County.

This Long Range Plan recognizes the need to continuously plan for potential climate change impacts to Pierce Transit services and its entire capital facilities portfolio, valued at $217 million, per a comprehensive property appraisal conducted in May 2024.

The first of these three processes are reacting to short-term impacts through a comprehensive approach to reducing the effects of natural disasters, based on the Region 5 All Hazard Mitigation Plan: 2020-2025 Edition[1], as prepared for the Pierce County Department of Emergency Management. Conducting Risk Assessments (in Section 4) include the following requirements:

- Identifying hazards, including a description of the type of hazard.
- Profiling hazards by identifying the location and extent of all natural hazards. The plan includes information on previous occurrences of hazard events and on the probability of future hazard events.
- Assessing vulnerability, including a description of the jurisdiction's vulnerability to certain hazards, as well as their potential impacts on the community.
- Assessing vulnerability by addressing repetitive loss properties. This risk assessment must address the National Flood Insurance program (NFIP) insured structures that have been repeatedly damaged by floods.
- Assessing vulnerability by identifying structures in terms of the types and numbers of existing and future buildings, structures, and critical facilities in the identified hazard areas.
- Assessing vulnerability by estimating potential losses in the dollar value, as well as the methodology used to prepare this cost estimate.
- Assessing vulnerability through an analysis of development trends. Specifically, describing vulnerability in terms of providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

The document also includes a detailed Risk Assessment which portrays the threats of natural hazards, related vulnerabilities, and the consequences of each hazard. Those are identified as avalanche, earthquake, landslide, tsunami, volcanic, drought flood, severe weather, and wildland/urban interface fire.

Under the Vulnerability and Hazard Impact Analysis, Pierce Transit identified four geological, four meteorological, and seven technological hazards that could affect its day-to-day operations, as well as capital facilities. The hazards listed on the following page were chosen based on multiple criteria, including high frequency and potential impact.

[1] Source: https://www.piercecountywa.gov/5864/About-Washington-State-Homeland-Security Pierce County is Region 5 for Homeland Security in Washington State.

Geological:

- Earthquake
- Deep and shallow landslide
- Volcanic eruption/lahar
- Tsunami

Meteorological (including Climate Change-related impacts):

- Flood
- Severe windstorm or winter storm
- Drought
- Wildland-Urban Interface (WUI) Wildfire

Technological or Human-caused:

- Civil disturbance and disobedience (e.g., strike/work stoppage)
- Cybersecurity threat and attack
- Energy emergencies (e.g., prolonged power failures, water supply interruptions)
- Epidemic/pandemic
- Hazardous materials
- Terrorism/active threats/attack tactics
- Transportation accidents (i.e., aviation, surface, marine)

From 2015 through 2019, Pierce Transit increased its focus on Safety and Emergency Management. This commitment included the completion and approval of eight new or revised emergency plans, including Executive Team concurrence. Since that time, all plans have been reviewed and updated annually, where merited. The eight plans in this portfolio include:

- Continuity of Operations Plan (COOP)
- Emergency Operations Center Overview (including a plan to update all files on a quarterly basis)
- Emergency Communication Plan
- Emergency Evacuation Plan
- Inclement Weather Response Plan
- Private Medication Center (established for onsite staff members in conjunction with the Tacoma-Pierce County Health Department)
- Pandemic Response Plan (incorporating lessons learned from the worldwide COVID-19 pandemic)
- Emergency Compressed Natural Gas (CNG) Refueling Plan

The Region 5 Hazard Mitigation Plan includes hazard maps and an overview of data source descriptions for the area immediately surrounding Pierce Transit's Lakewood, Washington, headquarters, depicting the flood hazard area, the liquefaction susceptibility hazard area, the shallow landslide hazard area, the hazardous material hazard area, and the transportation emergency hazard area.

Ongoing hazard mitigation coordination with Pierce County is done through the Pierce County Hazard Mitigation Forum, which meets every October. Specifically, it serves to coordinate mitigation planning efforts among all jurisdictions in Pierce County that have completed a mitigation plan. This ensures efficient use of resources and a more cooperative approach to making a disaster resistant country. Its goals include:

- Protect Life and Property
- Promoting a Sustainable Economy
- Ensure Continuity of Operations
- Increase Public Preparedness for Disasters
- Preserve or Restore Natural Resources
- Establish and Strengthen Partnerships for Implementation

As part of the first three goals listed above, Pierce Transit performs regular annual testing by a certified vendor (i.e., an outside third party) of all systems and in-house testing during the year, as well as drills, to ensure that all systems are performing as required. These include fire alarms, methane detection devices, and emergency warning systems. The agency also builds and maintains emergency rations and tools to continue critical business operations in emergencies and to provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities.

Another low cost but highly effective hazard mitigation strategy is the installation of GPS guidance systems installed in all Pierce Transit Service [2]and Support vehicles. This allows agency personnel to choose alternate courses rapidly and accurately to emergency locations by using satellite assistance. It also helps reduce response times to all collisions and service disruptions, plus re-establishing service delivery in mitigating time loss. It also redirects resources for continuing service, as well as routing around potentially long-term interruptions to normal routing.

The program includes hazmat training for supervisors and mechanics, which strives to advance the agency's adopted green strategies, establish, and follow spill prevention procedures, develop education opportunities to increase awareness of the risks associated with all hazards[3], and provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities.

Pierce Transit provides an integrated mobile communications center that allows continuous radio operation with field personnel during emergencies, or when the primary communication is inoperable. The agency also provides South Sound 911 and 9-1-1 certification training for fixed route interoperable communication with public safety entities throughout Pierce County, along with regional entities.

To withstand seismic activity and related impacts, Pierce Transit developed a program to assess and structurally retrofit any buildings or infrastructure that were not built to the current code. However, all new construction that commenced in 2020 and beyond were or will be built to code. More information is provided in the Infrastructure Section below.

Finally, but no less important, is the identification and removal of workplace hazards on all Pierce Transit properties. Routine inspections result in the reporting of potential safety issues, such as non-compliant space heaters and small kitchen appliances being utilized in offices and cubicles.

[2] Verify this as page 87 only lists Support vehicles.

[3] Specifically, seismic hazards, pandemic response, fire, hazardous material incidents, and other events listed in the agency's emergency response plans.

Continuity of Operations Plan (COOP) – Updated May 2022

Pierce Transit has grown increasingly aware of how all types of events can disrupt operations and jeopardize the safety of agency personnel and partners. Emergency planning, including COOP planning, has become a necessary and required process for the agency.

The all-hazards approach to COOP planning ensures that regardless of the event, essential functions and services will continue to operate and be provided in some capacity. This approach includes preparing for natural, man-made, or technological emergencies.

Pierce Transit is committed to the safety and protection of its customers, personnel, contractors, and visitors.

The purpose of the COOP is to provide the framework for Pierce Transit to restore essential functions in the event of an emergency that affects operations. This document establishes procedures for addressing three types of extended disruptions:

- Loss of access to a facility (as in fire);
- Loss of services due to a reduced workforce (as in pandemic); and
- Loss of services due to equipment or systems failure (as in Information Technology systems failure).

The plan details procedures for implementing actions to continue essential functions within the Recovery Time Objectives (RTOs) to maintain these essential functions for up to 30 days. However, the COOP does not apply to temporary disruptions of service, including minor IT systems, power outages, and any other scenarios where essential functions can be readily restored in the primary facility. The COOP outlines the actions that will be taken to activate a viable COOP capability within 12 hours of an emergency event and to sustain that capability for up to 30 days. The COOP can be activated during duty and non-duty hours, both with and without warning. The COOP covers facilities, systems, vehicles, and buildings operated or maintained by Pierce Transit. The COOP supports the performance of essential functions from alternate locations (due to the primary facility becoming unusable for a period that exceeds established RTOs) and provides continuity of management and decision-making at the agency if senior leadership or technical personnel are unavailable.

The following situations impact Pierce Transit's COOP:

- Pierce Transit's primary facility is in Lakewood, Washington, providing 292 square miles of service within Pierce County. There are approximately 950 total personnel, ten contractors, and twenty-five daily visitors.
- Pierce Transit operates contracted express bus services for Sound Transit. These services travel within and between Pierce and King County, which accounts for approximately 42% of our work.
- The agency's primary facility is located near Joint Base Lewis-McChord, an airfield, railroad tracks, a lahar hazard area, Clover Creek Flood plain, and highways that carry hazardous materials.

The following assumptions are taken into consideration:

- A disaster can occur with little or no warning, causing significant loss of life, injuries, and environmental and economic damage. In an emergency, it will be necessary to continue our essential functions to respond to day-to-day needs of our customers. However, continuity of operations may be challenging because of absenteeism within the response agencies and civil unrest due to community mitigation measures.
- Employees who have been assigned specific responsibilities within the COOP are willing and able to carry out these responsibilities.
- Staff will be provided adequate training on this COOP such that they will be able to perform their duties during a COOP event.
- As part of their commitment to this plan, Pierce Transit will annually review, update, and train on the procedures and resources as outlined in this plan.

A COOP must be maintained at a high level of preparedness and be ready to be implemented without warning. As such, Pierce Transit has developed a concept of operations, which describes the approach to implementing the COOP.

The plan can be fully implemented within 12 hours of activation and be capable of sustaining operations for up to 30 days. The broad objective of the COOP is to provide for the safety and well-being of Pierce Transit personnel, customers, contractors, and visitors, while enabling the agency's continued operations during any crisis or event. Specific COOP objectives include the following:

- Enable staff to perform essential functions.
- Identify essential personnel, back-up staff, and support staff for relocation or for performing essential functions.
- Ensure the alternate facility location can support essential functions.
- Protect and maintain vital records, systems, and equipment.

The document includes details on the following three scenarios and procedures when the COOP would be implemented:

1. Loss of access to an operating facility (with or without advance notice).
2. Loss of services due to a reduction in workforce (caused by an unexpected event, such as a pandemic, earthquake, civil unrest, or terrorist act).
3. Loss of services due to system or equipment failure (with or without advance notice)

House Bill 1181 – Updating the State's Planning Framework Relative to Climate Change and Resiliency (2023)

According to the Washington State Department of Commerce's website, "Legislation signed into law in 2023 (HB1181) added a climate goal to the Growth Management Act (GMA) and requires local comprehensive plans to have a climate element. Climate elements must maximize economic, environmental, and social co-benefits and prioritize environmental justice in order to avoid worsening environmental health disparities. A climate element can take the form of a single comprehensive plan chapter or be integrated into several chapters/elements such as housing, transportation, and land use."[4]

While transit agency plans are exempt from this guidance, "jurisdictions planning under the Growth Management Act must add a climate element to their comprehensive plans in a timeframe based on the periodic update schedule. A resilience sub-element is mandatory for all fully planning counties and cities under the GMA and is encouraged for all other counties and cities. A greenhouse gas emissions reduction sub-element is mandatory only for 11 counties, including Pierce County (and their cities with a population greater that 6,000 as of April 1, 2021)."

One area where Pierce Transit worked towards meeting the transportation goal within the GMA as this Destination 2045 Long Range Plan was being developed through direct coordination as the local level. Pierce Transit's service area includes 14 cities or towns, plus a large section of unincorporated Pierce County. Pierce Transit's Planning staff members therefore conducted one-on-one workshops with each of its jurisdictional planning partners to assure that the four proposed fixed route expansion scenarios closely align with the same areas targeted for growth in population, housing, and employment by 2044 within their individual Comprehensive Plan Updates.

HB 1181 makes the following change to other GMA goals and comprehensive plan elements:

- Amends the transportation goal to state: Encourage efficient multimodal transportation systems that "will reduce greenhouse gas emissions and per capita VMT, and" are based on regional priorities and coordinated with county or city comprehensive plans [Sec. 1(3). [5]
- Amends the transportation element to require the following: estimated "multimodal level of service" impacts on state-owned transportation facilities; an inventory of "active transportation facilities"; "multimodal level" of service standards for all locally owned arterials, "locally and regionally operated transit routes that serve urban growth areas, state-owned or operated transit routes that serve urban areas if the department of transportation has prepared such standards, and active transportation facilities" to serve as a gauge to judge performance of the system "and success in helping to achieve the goals of this chapter consistent with environmental justice"; forecasts of "multimodal transportation demand and needs within cities and urban growth areas, and forecasts of multimodal transportation demand and needs outside of cities and urban growth areas"; identification of state and local system needs to "equitably" meet current and future demands; and, other miscellaneous changes [3(6)]. [6]

The Department of Commerce's *Climate Element Planning Guidance* [7]includes a section with recommended actions for climate justice under 11 disparate categories. As cited in the Transportation section on page 85, "There should be reliable, accessible, and frequent public transportation that contemplates local use as well as cross- city and county use. Sidewalks, crosswalks, and bike paths should be commonplace and have a set quality standard that anyone can use without fear of injury or immobility.

Consider both cultural and practical implications of transportation projects. For example, electric vehicle (EV) chargers may signify displacement and harm to some communities or lack of chargers can mean exclusion for others — particularly in multifamily buildings. Measures that create limits or disincentives to driving or driving alone should require a diagnosis of who may be unfairly impacted by such plans. Telework may not be applicable or equitable based on other factors such as living space or internet access. Further, public transportation is not ideal for workers with night shifts or with families. These populations may be negatively impacted by plans and policies that over prioritize carbon minimal options such as telework.

[4] Source: https://www.commerce.wa.gov/growth-management/climate-planning/.
[5] Planning goals under RCW.36.70A.020(3).
[6] Comprehensive Plans – Mandatory elements under RCW 36.70A.070.
[7] Intermediate Version published December 2023.

Likewise, improving public transit service so that there is accessible transportation at all times of day would support non-drivers."

APPENDIX F

Understanding Title VI & Transit Propensity

DESTINATION 2045

LONG RANGE PLAN

PierceTransit

Transit systems provide vital connections and critical access to many within a community, but the need for the service may particularly impact those without other means of transportation. Lack of transportation options can impact individuals by limiting their ability to reach jobs, services, and other opportunities. Therefore, Pierce Transit recognizes the important role that transportation access plays and is committed to ensuring that it aligns with the principles of transportation equity. To make mobility and accessibility fair to all community members, Pierce Transit evaluates any fare change or any major service change at the planning and programming stages to determine whether there is a discriminatory impact. If Pierce Transit finds that protected populations are impacted by major service changes, the agency must avoid, minimize, or mitigate those impacts where practicable. This is pursuant to the Federal Transit Administration's (FTA) Circular 4702.1B which requires such an action for any FTA recipient serving a population of 200,000 or greater. This is based on 'Title VI' which states that – "No person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any Pierce Transit program or activity, as provided by Title VI of the Civil Rights Act of 1964 and as amended, and the Civil Rights Restoration Act of 1987 (P.L. 100.259)." Pierce Transit operates its programs without regard to race, color, or national origin. Disproportionate Burden, Disparate Impact and Major Service Change Policies are enacted by Pierce Transit to meet Title VI needs. For a detailed look at Pierce Transit's equity practice and prior work, please visit the Title VI section of the public documents' repository at https://piercetransit.org/public-documents/.

Transit Propensity Index

The Transit Propensity Index (TPI) is utilized to identify higher concentrations of people who rely on transit services. As opposed to a transit demand index which looks at population and employment growth, the TPI addresses the characteristics of the population to assess the likelihood of the demand based on the role that transit plays in connecting key populations to opportunities. This metric was used in the Bus System Recovery Plan finalized in December 2023. To align the analysis and data sources, the metric was used in Destination 2045 as well. Any future service change resulting as an outcome of the plan will need to be studied at the time of implementation.

Propensity to take transit is based on the density of three combined indicators:

- People with disabilities,
- People with low income (less than 200% of the federal poverty level), and
- Zero-vehicle households.

The TPI is developed by taking the relative densities for each of these three indicators and assigning each block group a score. The data are sourced from the 5-year American Community Survey, 2021. These scores then yield a single index that weighs each of these four indicators evenly. Pierce Transit's Title VI policy refers to low-income populations as under 100% of the federal poverty level – this definition is therefore more inclusive than the standard definition. The complete map of TPI scores for census block groups can be found on page 28 of the Destination 2045 draft.

The TPI is applied against tabulated population and employment growth associated with the census block group. A block group of high growth associated with a high current TPI value is identified as an area of high future need. The main constraint with utilizing the TPI for Destination 2045 is the basis on current conditions. It does not capture the future needs adequately as characteristics of a census block group may change in the next 20 years. For example, an area of current low need may have a high need in the future due to changing demographic characteristics. While this limitation will continue to persist, near-term service changes deployed by Pierce Transit in support of Destination 2045 implementation will review the most-current demographic data to ensure service is provided to address community needs.

APPENDIX G

Future Fixed Route Service Scenarios Methodology

DESTINATION 2045

LONG RANGE PLAN

PierceTransit

A key component of Destination 2045 is the development and analysis of two hypothetical fixed route transit service scenarios based on growth in service and increased funding availability. These scenarios are designed to showcase potential outcomes with different levels of transit growth and to set a conceptual framework for achieving targets. The actual implementation of any one of the growth scenarios would go through the standard service planning process currently used by Pierce Transit as part of its regular service change process.

The scenarios assumed the following annual Service Hour targets:

	Service Hour Target
Scenario A	600,000 Annual Service Hours
Scenario B	750,000 Annual Service Hours

The following sections discuss the service network development process and the modeling conducted to measure outcomes of the growth scenarios.

Factors in Developing Route Alignments

Pierce Transit service planning guidelines and national best practices in transit planning guided the development of future route alignments in the growth scenarios. The following factors were considered:

- Operate on the main arterial or collector streets. Transit routes on primary streets can support higher ridership and improve service reliability.
- Space routes half a mile or more in urban cores and every mile wherever possible for less dense areas. This ensures that services are within a reasonable walking distance for most residents while avoiding route redundancy.
- Make routes as direct as possible; travel distance should be no more than 20% longer when compared to car trips wherever possible. Direct routes reduce travel time, making transit more competitive with personal vehicles and thereby more attractive to potential riders.
- Operate no more than one route per arterial in the same direction for a significant portion of the road. This rule may differ especially if one route serves additional areas or operates at a higher frequency. This approach prevents service duplication, optimizes resource allocation, and ensures broader area coverage.
- One-way loops should not be used except for turning around buses. Avoiding one-way loops enhances route clarity and reduces travel time for passengers, improving overall service quality.
- Service hours should match demand. Aligning service hours with rider demand ensures that resources are utilized effectively, providing service when and where it is needed most.
- Based on geographies, ensure an increase in route cardinality. This means that a route serving an east-west connection will be prioritized if a north-south route already exists, and demand is present. Diversifying route directions improves network connectivity, allowing for more efficient and comprehensive coverage of the service area.

Factors in Developing and Analyzing the Growth Scenario Networks

Each of the growth scenarios underwent several drafts before arriving at the final version included in Destination 2045. Several metrics were considered for analyzing the value of a future new route or service improvement, such as more frequency or later service. These metrics are listed below and comprise of both qualitative and quantitative metrics. This allows for a more holistic evaluation and inclusion of subjective views on needs from stakeholders leading to balanced decision-making on new routes, route expansions and improvements. The following are the main subjects considered for evaluation:

HOW HAVE ROUTES BEEN PERFORMING HISTORICALLY?

Historical route performance is an important metric when considering span or frequency improvements. Higher performing routes are more likely to increase ridership with service improvements as they are serving areas with greater rider demand. Routes were analyzed based on several metrics which include:

- Ridership Ranking and Total Annual Boardings (2019 – 2023)
- Boardings per Service Hour
- Passengers per Revenue Mile
- On-Time Performance (%)

Is there projected growth in population, housing and employment as per PSRC VISION 2050 Estimates?

PSRC Vision 2050 shows estimated growth for the three pillars of housing, population, and employment for TAZs. Areas with higher density in population, housing, and employment, such as downtown Lakewood, are good candidates for High Capacity Transit (HCT) and more frequent service. VISION 2050 emphasizes concentrating development in Regional Growth Centers and areas served by High Capacity Transit. Gaps in service where future growth is projected were identified to allocate potential new service connections in the growth scenarios.

Does the route serve underserved communities? Do they serve critical connections?

The Transit Propensity Index (TPI) was utilized to understand areas of priority populations. More information on the same is provided in Appendix F – Understanding Title VI and Transit Propensity. For each route segment, an average TPI value is associated with the adjoining TAZs within a quarter mile. For the entire route, an average of the TPI's is considered. A route with a higher average is considered a high need route. Additionally, If the route connects locations with high TPI's, then it can also be considered a critical connection.

Does the community identify necessary improvements to the route?

Community input is integral to understanding where route improvements can occur based on feedback from customers. Survey responses from July 2024 were mapped to understand where users have identified the need for service improvements or new routes. Individual needs can vary based on characteristics. Therefore, Destination 2045 aims to identify individual needs concentrated around use of a specific route or at a location. These responses are captured in Appendix B – Outreach and Public Engagement. This provides valuable feedback for direction on analysis. Comments were considered and analyzed against growth targets and performance and equity needs, and a decision was arrived at. Additionally, Phase 2 of the surveys presented the public with the draft network for each scenario. Responses received were considered for revisions.

A GIS-based network analysis was undertaken for each of the growth scenario buildouts by associating the metrics discussed above with the route network. Each route was divided into the lengths corresponding to their intersection with Traffic Analysis Zone (TAZ) boundaries and the metrics were appended to these segments. This allows for a more granular analysis in denser areas like downtown Tacoma where TAZs correspond to lengths smaller than a quarter mile. Additionally, a route may serve areas of need or higher density of population / employment at critical points but remain low or constant across the rest of the route. This variable segment-based analysis will allow for the consideration of the route

connecting important nodes with as much value as one which is more uniformly distributed.

All the above subjects are discussed holistically to understand intersections and make decisions. For instance, routes may have high projected population and employment densities signaling the need for service improvements in the future. A route may have a lower average but may connect smaller areas of high projected employment and one or several priority areas. This route would serve as an essential employment-oriented connection. A route may also serve as a necessary crucial connection to integrate newer areas for more frequent service. Areas with high projected need or stakeholder comments that are not currently served may need to be considered for future inclusion. By considering such different statements, network drafts and revisions for each growth scenario were produced until the final iteration.

Scenario Outcomes Modeling

Destination 2045 focused on analyzing key outcomes for the growth scenarios. Community outreach and Pierce Transit's Mission and Vision statements provided three key priorities for consideration:

- Providing essential connections for those who rely on transit services the most
- Increasing ridership across the system
- Reducing traffic congestion and greenhouse gas emissions in the transportation network

Five factors used to measure the outcomes of each growth scenario were:

- **Priority Populations with access to 20-minute or better service**: High-frequency transit service is crucial for these populations as it enhances mobility, reduces waiting times, and improves access to essential services and employment opportunities.
- **Percentage increase in jobs accessible for high transit propensity areas:** This metric indicates a percentage growth in the number of jobs that residents in designated high transit propensity areas can reach within a reasonable transit travel time.
- **Percentage increase in annual riders by 2045:** This metric projects the expected percentage growth in the total number of transit riders annually by the year 2045.
- **Cost to Pierce Transit per rider served**: Understanding this cost helps in evaluating the financial efficiency of transit operations and in making informed decisions about resource allocation and fare structures.
- **Percentage reductions in vehicle-miles travelled (VMT) and greenhouse gas emissions (GHG):** Reducing VMT and GHG emissions is essential for environmental sustainability, as it indicates a shift from private vehicle usage to public transit, leading to improved air quality and contributing to climate change mitigation efforts throughout the region.

Analysis of frequent service access for priority populations and jobs access for high transit propensity areas used Remix[1] transit planning software. Ridership forecasts and VMT/GHG reductions were based on outputs from the Sound Transit Ridership Model. The ridership model utilizes the Puget Sound Regional Council land use forecasts and future transit service networks to estimate future ridership. The table below shows the scenarios compared across all the impact factors. We find that each growth scenario shows greater relative benefit.

	Priority Populations with access to 20- minute or better service	Percentage increase in jobs accessible for high transit propensity areas	Percentage increase in Annual Riders by 2045	Cost to Pierce Transit per Rider served	Percentage reductions in Vehicle-Miles Travelled and Greenhouse Gas Emissions
Scenario A	30%	40%	40%	$13-14	-25%
Scenario B	35%	50%	60%	$12-13	-35%

As the growth scenarios progress, there are consistent improvements in service accessibility for priority populations, job accessibility in high transit propensity areas, projected ridership increases, and environmental benefits.

[1] https://ridewithvia.com/solutions/remix

APPENDIX H

Frequency and Span of Service Tables for Each Growth Scenario

DESTINATION 2045

LONG RANGE PLAN

PierceTransit

In addition to new routes, each of the growth scenarios assume improvements to frequencies and service spans for specific routes. Details of the changes for each scenario by route are shown in the following tables. A distinction is made between Weekday, Saturday, and Sunday service. Baseline span end times reflect current service and are extended in the growth scenarios. Feedback requesting increased operating hours focused primarily on evening service; as a result, no changes were made to start times. For that reason, start times are not included in the following tables.

BASELINE SCENARIO

Route	Frequency Weekday	Frequency Saturday	Frequency Sunday	Weekday Span End	Sat Span End	Sun Span End	Weekday Frequency Service Additions	Weekend Frequency Service Additions	Weekday Span Service Additions	Weekend Span Service Additions	Based On
1	15	30	30	11:50:00 PM	1:30:00 AM	9:40:00 PM	X				System Recovery Plan
2	30	30	30	12:02:00 AM	11:20:00 PM	9:20:00 PM					
3	15	30	60	10:30:00 PM	10:50:00 PM	10:56:00 PM	X				System Recovery Plan
4	30	30	60	8:40:00 PM	11:00:00 PM	7:47:00 PM					
10	30	60	60	10:00:00 PM	7:45:00 PM	6:30:00 PM					
11	60	60	60	8:13:00 PM	7:00:00 PM	6:24:00 PM					
16	60	45	60	8:45:00 PM	7:30:00 PM	7:10:00 PM					
28	30	60	60	10:00:00 PM	8:30:00 PM	6:00:00 PM					
41	30	60	60	9:50:00 PM	9:00:00 PM	7:50:00 PM					
42	30	60	60	10:00:00 PM	6:40:00 PM	6:40:00 PM					
45	30	60	60	10:00:00 PM	6:10:00 PM	6:10:00 PM					
48	30	60	60	9:40:00 PM	8:45:00 PM	7:52:00 PM					
52	30	30	60	10:00:00 PM	8:20:00 PM	7:30:00 PM					
53	30	60	60	10:30:00 PM	6:30:00 PM	7:00:00 PM					
54	30	60	60	11:00:00 PM	8:40:00 PM	8:15:00 PM					
55	30	30	60	10:12:00 PM	8:50:00 PM	8:20:00 PM					
57	30	60	60	10:18:00 PM	7:45:00 PM	7:00:00 PM					
100	60	60	60	9:00:00 PM	6:30:00 PM	7:32:00 PM					
202	30	30	30	10:00:00 PM	9:30:00 PM	9:25:00 PM					

Route	Frequency Weekday	Frequency Saturday	Frequency Sunday	Weekday Span End	Sat Span End	Sun Span End	Weekday Frequency Service Additions	Weekend Frequency Service Additions	Weekday Span Service Additions	Weekend Span Service Additions	Based On
206	30	30	30	10:15:00 PM	9:00:00 PM	7:00:00 PM					
212	30	30	60	10:00:00 PM	9:30:00 PM	7:00:00 PM					
214	30	60	60	10:47:00 PM	8:30:00 PM	6:30:00 PM					
400	30	N/A	N/A	9:00:00 PM	N/A	N/A					
402	60	60	60	9:15:00 PM	8:20:00 PM	7:20:00 PM					
409	60	60	60	8:00:00 PM	6:30:00 PM	7:00:00 PM					
497	Dependent on Sounder	N/A	N/A	7:15:00 PM	N/A	N/A					
500	60	30	60	11:30:00 PM	10:30:00 PM	10:30:00 PM					
501	60	60	60	10:20:00 PM	8:00:00 PM	7:00:00 PM					
Stream Community Line	20	N/A	N/A	8:00:00 PM	N/A	N/A					

SCENARIO A

Route	Frequency Weekday	Frequency Saturday	Frequency Sunday	Weekday Span End	Sat Span End	Sun Span End	Weekday Frequency Service Additions	Weekend Frequency Service Additions	Weekday Span Service Additions	Weekend Span Service Additions	Based On
Stream Community Line (Replaces Segment of Route 1)	15	30	30	12:00:00 AM	1:30:00 AM	9:40:00 PM			X		System Recovery Plan; Transit Propensity; Outreach; Growth; Performance
2	15	30	30	12:02:00 AM	11:20:00 PM	9:20:00 PM	X				System Recovery Plan; Transit Propensity; Outreach; Growth; Performance

Route	Frequency Weekday	Frequency Saturday	Frequency Sunday	Weekday Span End	Sat Span End	Sun Span End	Weekday Frequency Service Additions	Weekend Frequency Service Additions	Weekday Span Service Additions	Weekend Span Service Additions	Based On
3	15	30	60	12:00:00 AM	12:00:00 AM	10:00:00 PM			X	X	System Recovery Plan; Transit Propensity; Growth; Performance
4	30*	30*	30	12:00:00 AM	12:00:00 AM	10:00:00 PM	X	X	X	X	System Recovery Plan; Transit Propensity; Outreach; Growth; Performance
5 (Replaces Routes 52 and 55)	30	30	30	10:00:00 PM	10:00:00 PM	8:00:00 PM		X	X	X	System Recovery Plan; Routing Efficiency
10	30	60	60	10:00:00 PM	7:45:00 PM	6:30:00 PM					
11	60	60	60	10:00:00 PM	8:00:00 PM	6:24:00 PM			X	X	Growth; Outreach
16	30	45	60	8:45:00 PM	7:30:00 PM	7:10:00 PM	X				Performance; Growth
25 (Replaces Segment of Route 1)	15	30	30	12:00:00 AM	1:30:00 AM	9:40:00 PM			X		
28	30	60	60	10:00:00 PM	8:30:00 PM	6:00:00 PM					
41	30*	30	60	10:00:00 PM	10:00:00 PM	8:00:00 PM	X	X	X	X	System Recovery Plan; Transit Propensity; Performance; Outreach
42	30	60	60	10:00:00 PM	9:00:00 PM	6:40:00 PM				X	Transit Propensity; Growth; Outreach
45	30	60	60	10:00:00 PM	8:30:00 PM	6:10:00 PM				X	Growth

Route	Frequency Weekday	Frequency Saturday	Frequency Sunday	Weekday Span End	Sat Span End	Sun Span End	Weekday Frequency Service Additions	Weekend Frequency Service Additions	Weekday Span Service Additions	Weekend Span Service Additions	Based On
48	30	30	60	10:00:00 PM	10:00:00 PM	8:00:00 PM		X	X	X	System Recovery Plan; Transit Propensity; Performance
53	30	60	60	10:30:00 PM	6:30:00 PM	7:00:00 PM					
54	30*	30	60	11:00:00 PM	10:00:00 PM	8:15:00 PM	X	X		X	System Recovery Plan; Transit Propensity; Performance; Growth
57	30*	30	60	10:18:00 PM	10:00:00 PM	8:00:00 PM	X	X		X	System Recovery Plan; Transit Propensity; Performance; Growth
100	30	60	60	9:00:00 PM	9:00:00 PM	7:32:00 PM	X			X	Outreach
202	30*	30*	30	10:00:00 PM	10:00:00 PM	9:25:00 PM	X	X		X	System Recovery Plan; Transit Propensity; Performance
206	30*	30*	30	10:15:00 PM	10:00:00 PM	8:00:00 PM	X	X		X	System Recovery Plan
212	30	30	60	10:00:00 PM	9:30:00 PM	7:00:00 PM					
214	30	60	60	10:47:00 PM	8:30:00 PM	6:30:00 PM					
400	30	60	60	10:00:00 PM	8:00:00 PM	6:00:00 PM		X	X	X	Growth
402	30	30	60	10:00:00 PM	10:00:00 PM	8:00:00 PM	X	X	X	X	System Recovery Plan; Transit Propensity; Growth; Outreach; Performance
409	60	60	60	8:00:00 PM	6:30:00 PM	7:00:00 PM					

Route	Frequency Weekday	Frequency Saturday	Frequency Sunday	Weekday Span End	Sat Span End	Sun Span End	Weekday Frequency Service Additions	Weekend Frequency Service Additions	Weekday Span Service Additions	Weekend Span Service Additions	Based On
497	Dependent on Sounder	N/A	N/A	7:15:00 PM	N/A	N/A					
500	30	30*	60	11:30:00 PM	10:30:00 PM	10:30:00 PM	X	X			System Recovery Plan
501	30	30	60	10:20:00 PM	8:00:00 PM	7:00:00 PM	X	X			Performance; Growth; Outreach

Listed frequencies reflect peak periods and may be reduced at other times.

*Route received additional trips to increase 30-minute frequency coverage.

SCENARIO B

Route	Frequency Weekday	Frequency Saturday	Frequency Sunday	Weekday Span End	Sat Span End	Sun Span End	Weekday Frequency Service Additions	Weekend Frequency Service Additions	Weekday Span Service Additions	Weekend Span Service Additions	Based On
Stream Community Line	15	20	20	12:00:00 AM	1:30:00 AM	10:00:00 PM		X		X	Transit Propensity; Outreach; Growth; Performance
2 (Stream Route)	15	20	20	12:02:00 AM	12:00:00 AM	10:00:00 PM		X		X	Transit Propensity; Outreach; Growth; Performance
3 (Stream Route)	15	20	20	12:00:00 AM	12:00:00 AM	10:00:00 PM		X			Transit Propensity; Growth; Performance
4	20	30	30	12:00:00 AM	12:00:00 AM	10:00:00 PM	X				Transit Propensity; Outreach; Growth; Performance

Route	Frequency Weekday	Frequency Saturday	Frequency Sunday	Weekday Span End	Sat Span End	Sun Span End	Weekday Frequency Service Additions	Weekend Frequency Service Additions	Weekday Span Service Additions	Weekend Span Service Additions	Based On
5	30	30	30	10:00:00 PM	10:00:00 PM	8:00:00 PM					
10	30	30	30	10:00:00 PM	10:00:00 PM	8:00:00 PM		X		X	
11	30	30	30	10:00:00 PM	10:00:00 PM	8:00:00 PM	X	X		X	Growth; Outreach
15 (New Route)	60	N/A	N/A	6:00:00 PM	N/A	N/A	X		X		Outreach
16	30	30	30	10:00:00 PM	10:00:00 PM	8:00:00 PM		X	X	X	Performance; Growth
25	15	30	30	12:00:00 AM	1:30:00 AM	9:40:00 PM					
28	30	30	30	10:00:00 PM	10:00:00 PM	8:00:00 PM		X		X	Transit Propensity; Performance; Outreach
40 (New Route)	30	30	30	10:00:00 PM	10:00:00 PM	8:00:00 PM	X	X	X	X	Transit Propensity; Growth; Outreach
41	20	30	30	10:00:00 PM	10:00:00 PM	8:00:00 PM	X	X			Transit Propensity; Performance; Outreach
42	30*	30	30	10:00:00 PM	10:00:00 PM	8:00:00 PM	X	X		X	Transit Propensity; Growth; Outreach
45	30	30	30	10:00:00 PM	10:00:00 PM	8:00:00 PM		X		X	Growth
48	20	30	30	10:00:00 PM	10:00:00 PM	8:00:00 PM	X	X			Transit Propensity; Performance
51 (New Route)	30	30	30	10:00:00 PM	10:00:00 PM	8:00:00 PM	X	X	X	X	Growth
53	30	30	30	10:30:00 PM	10:00:00 PM	8:00:00 PM		X		X	Transit Propensity; Outreach
54	20	30	30	11:00:00 PM	10:00:00 PM	8:15:00 PM	X	X			Transit Propensity;

Route	Frequency Weekday	Frequency Saturday	Frequency Sunday	Weekday Span End	Sat Span End	Sun Span End	Weekday Frequency Service Additions	Weekend Frequency Service Additions	Weekday Span Service Additions	Weekend Span Service Additions	Based On
											Performance; Growth
57	30	30	30	10:18:00 PM	10:00:00 PM	8:00:00 PM		X			Transit Propensity; Performance; Growth
100	30	30	30	10:00:00 PM	10:00:00 PM	8:00:00 PM		X	X	X	Outreach
202	20	30	30	10:00:00 PM	10:00:00 PM	9:25:00 PM	X				Transit Propensity; Performance
206	30	30	30	10:15:00 PM	10:00:00 PM	8:00:00 PM					
212	30	30*	30	10:00:00 PM	10:00:00 PM	8:00:00 PM		X		X	Outreach; Performance
214	30	30	30	10:47:00 PM	10:00:00 PM	8:00:00 PM		X		X	Transit Propensity
400	30*	30	30	10:00:00 PM	8:00:00 PM	6:00:00 PM	X	X			Growth
402	30	30	60	10:00:00 PM	10:00:00 PM	8:00:00 PM					
409	60	60	60	8:00:00 PM	6:30:00 PM	7:00:00 PM					
491 (New Route)	30	N/A	N/A	6:00:00 PM	N/A	N/A	X		X		Transit Propensity
497	Dependent on Sounder	N/A	N/A	7:15:00 PM	N/A	N/A					
500	30	30	30	11:30:00 PM	10:30:00 PM	10:30:00 PM		X			Performance; Growth; Outreach
501	30	30	30	10:20:00 PM	10:00:00 PM	8:00:00 PM		X		X	Performance; Growth; Outreach

Listed frequencies reflect peak periods and may be reduced at other times.

*Route received additional trips to increase 30-minute frequency coverage.

Span Increase Tables

The following graphics illustrate the increase in operating hours for Pierce Transit routes under each scenario. Current service hours are shown in blue, with additional hours represented in green. Each scenario builds upon the service allocations of the previous one.

PierceTransit | Weekdays

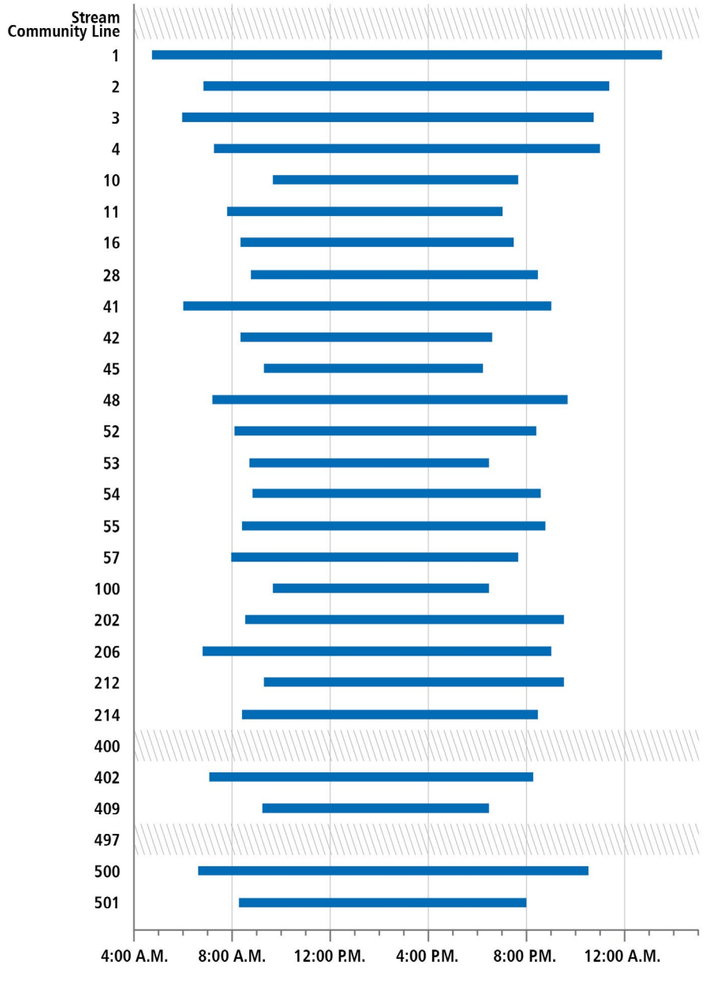
BASELINE

SCENARIO A

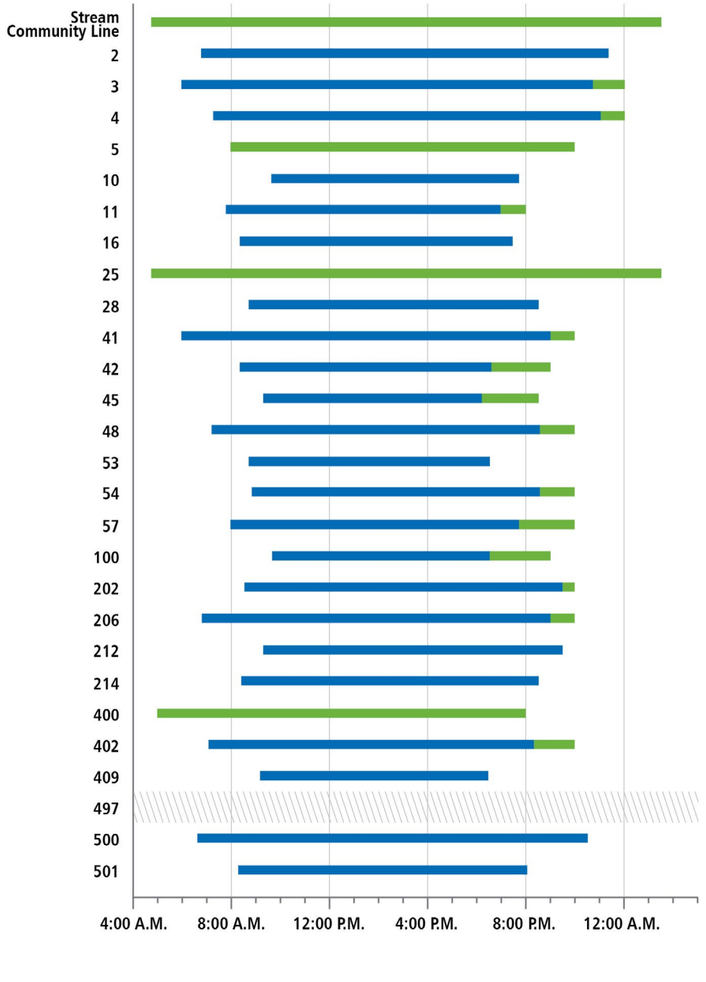
SCENARIO B

PierceTransit | Saturdays

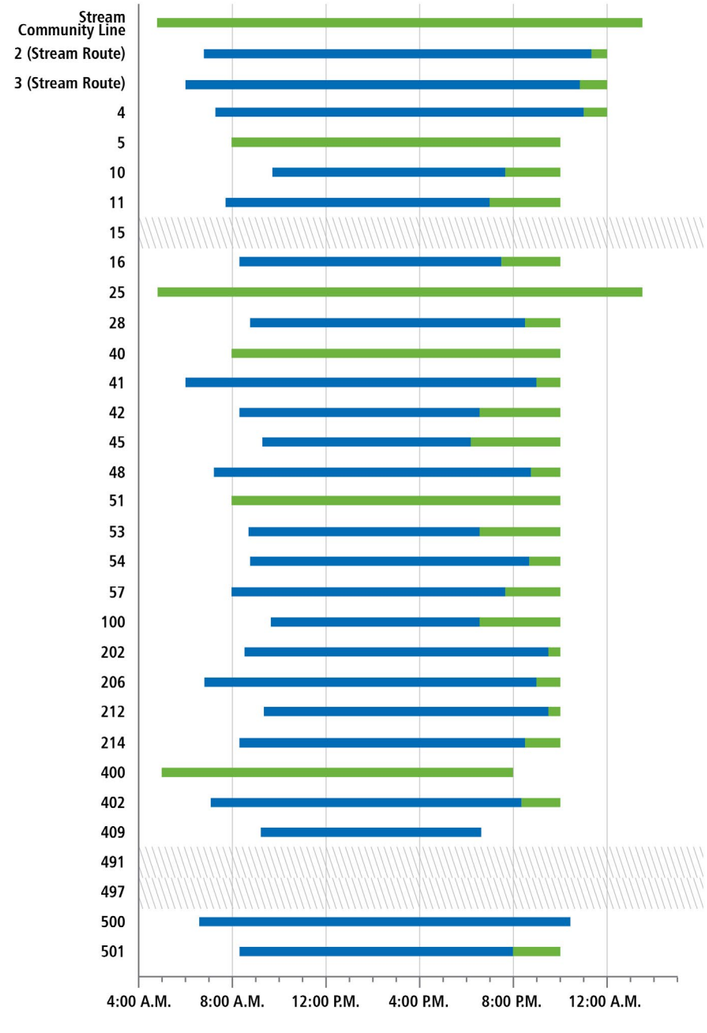
BASELINE



SCENARIO A



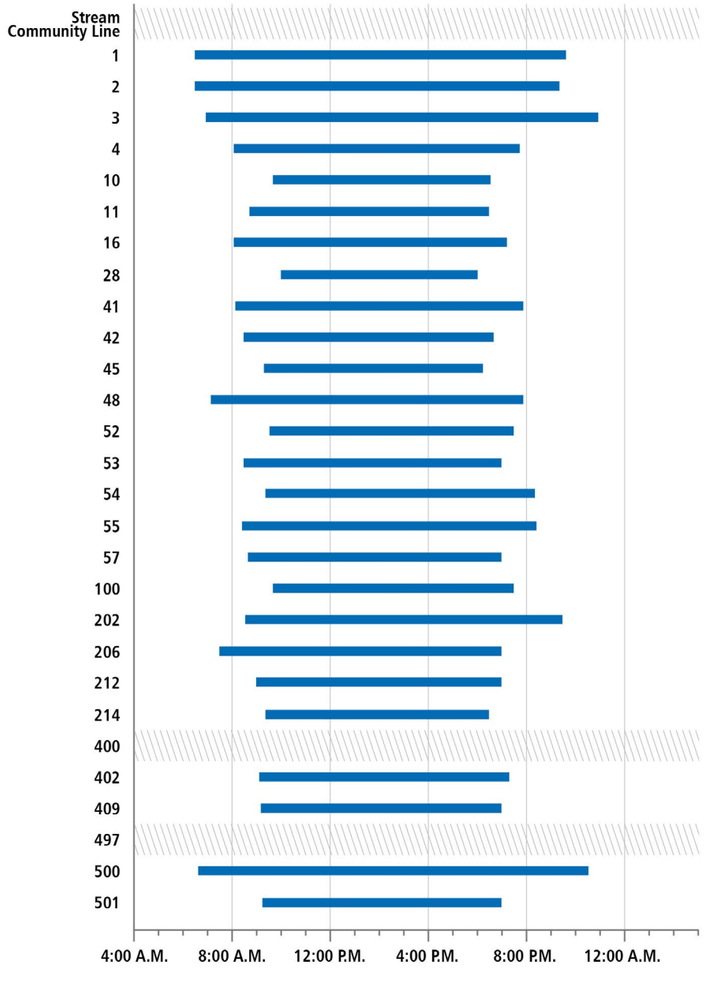
SCENARIO B



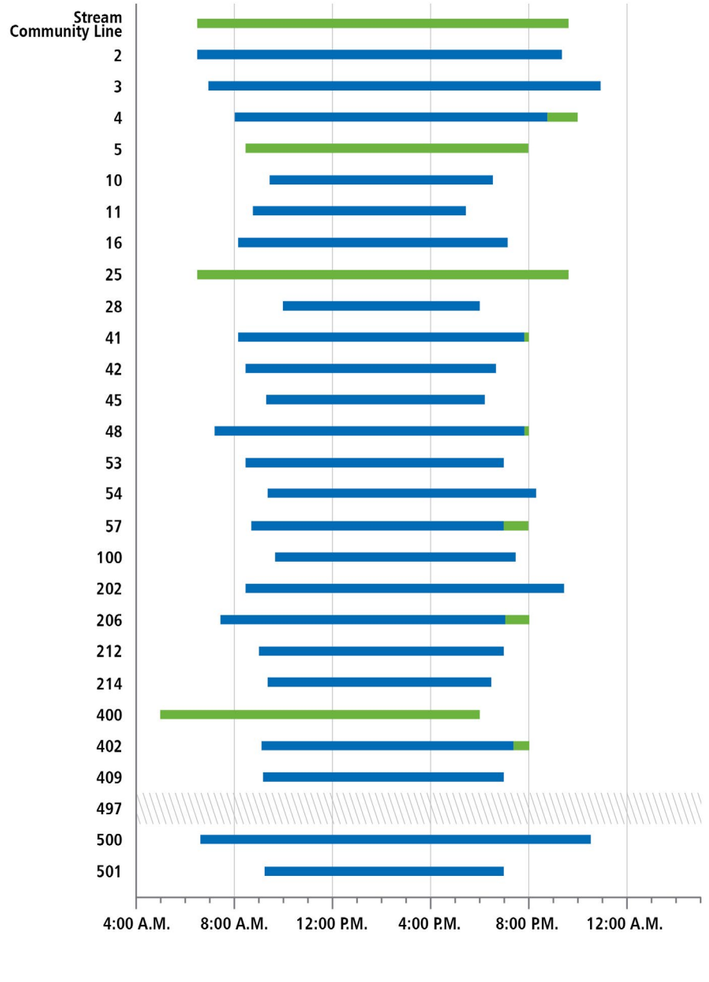
Current Service Increased Service No Service

PierceTransit | Sundays

BASELINE



SCENARIO A



SCENARIO B