

Fare Equity Analysis of Implementing a Fare on Sound Transit’s Tacoma Link Service

1. Introduction

The Tacoma Link expansion project will extend the current line north from downtown Tacoma to the Stadium district, then turn southwest, terminating in the Hilltop neighborhood. This 2.4-mile extension will add an additional 6 stations and is scheduled to open in the second or third quarter of 2022.

Pursuant to Resolution 2016-10, staff identified fare options for Tacoma Link and are proposing a fare structure to the Sound Transit Board for implementation with the opening of the Tacoma Link extension. This paper presents an equity analysis of these fare options pursuant to FTA requirements and Sound Transit Board policy.

2. Background

In 1999, the Sound Transit Board adopted Resolution 99-2, establishing fare free service on the initial segment of the Tacoma Link line. This initial segment runs 1.6 miles with six stations, from downtown Tacoma to the Tacoma Dome, and opened for service in 2003.

In 2013 the Board adopted Resolution 2013-24 establishing the following Tacoma Link fares:

Tacoma Link fares established by Resolution 2013-24			
Effective date	Adult Fare	Youth Fare	RRFP Fare
2014	\$1.00	\$0.75	\$0.50
2016	\$1.50	\$0.75	\$0.50

The Sound Transit Board adopted Motion 2014-36 in 2014 authorizing an agreement with the Tacoma Business and Industry Association to compensate Sound Transit for fare free service on Tacoma Link. This agreement provided \$29,000 per year to Sound Transit in lieu of fare revenue expected to be collected at the fare levels established for 2014.

In 2016 the Sound Transit Board adopted Resolution 2016-10 which: (1) maintained the \$1.00 Adult/\$0.75 Youth/\$0.50 Senior & Disabled fare structure; (2) authorized an agreement with the City of Tacoma or designee to continue to compensate Sound Transit \$29,000 per year for fare free service on Tacoma Link; and (3) directed staff to propose a new action “to the Sound Transit Board prior to opening of Tacoma Link Expansion service to establish fare levels.”

3. Authority

In accordance with Title VI of the Civil Rights Act of 1964, Federal Transit Administration (FTA) Circular 4702.1B (“Circular”) and Sound Transit’s Title VI Program, an equity analysis is

conducted any time fare changes are proposed to ensure that changes do not have a disparate impact on people of color or a disproportionate burden on low-income populations. The Civil Rights Act of 1964 states:

“No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

The FTA has provided specific implementing guidelines and regulations for complying with the Circular. Due to the interrelated nature of race/ethnicity and income, the Circular instructs transit agencies to also consider impacts on low-income populations as well as minority populations; the assessment of potential Title VI issues related to fare changes is completed through a fare equity analysis.

A proposal to implement fares on Tacoma Link streetcar service with the completion of the Tacoma Link Hilltop expansion calls for such an analysis prior to the Sound Transit Board of Directors taking action.

4. Fare Equity Analysis Policy

Sound Transit Board of Directors Resolution R2013-19 established policies for conducting equity analyses of fare changes impacting minority and low-income populations.

The policy directs Sound Transit to conduct a fare equity analysis prior to making any fare change to analyze potential adverse effects on minority and low-income populations and establishes the following thresholds for determining whether the proposed fare change would have a disparate impact on minority populations and/or a disproportionate burden on low-income populations:

A disparate impact occurs when the minority percentage of the population adversely affected by a fare change is greater than the average minority percentage of the population of Sound Transit’s service area.

A disproportionate burden occurs when the low-income percentage of the population adversely affected by a fare change is greater than the average low income percentage of the population of Sound Transit’s service area.

Per Sound Transit’s policy, if any disparate impact or disproportionate burden is found during the fare equity analysis, Sound Transit will consider steps to avoid, minimize, or mitigate the adverse impacts and reanalyze the modified changes to determine if the impacts are removed or lessened.

5. Description of Fare Options

The fare options considered for Tacoma Link service are shown in the following table. Also shown for comparison purposes are the fares for Pierce Transit (PT) bus service and the base fare for Sound Transit's (ST) mainline link service. Each of the fare options would provide a flat fare for each customer category, in contrast to the adult fare on mainline Link service, which varies by distance. Both options would provide a fare discount for low-income adult riders through the ORCA LIFT program. Both options provide a free youth fare, and are aligned with the free youth fare on other ST and PT service. Finally, both options provide a fare discount for seniors and riders with disabilities aligned with the PT fare for these riders and which complies with the federal requirement that fares charged seniors or persons with disabilities during off peak hours be no more than half of the peak hour fares (49 U.S.C. Section 5307(d)(1)(D) of the Federal Transit Act).

	Option 1	Option 2	Link	PT
Adult	\$2.00	\$2.25	\$2.25 (base)	\$2.00
ORCA LIFT	\$1.50	\$1.50	\$1.50	NA
Youth	\$0	\$0	\$0	\$0
Sr & Disabled	\$1.00	\$1.00	\$1.00	\$1.00

The Adult fares for Option 1 align with the Adult fares on PT bus service, while the Adult fares for Option 2 align with the Adult base fare on ST Link.

6. Analysis of Disparate Impact/Disproportionate Burden

Either of these options will represent a fare increase for current riders who only ride on the fare free Tacoma Link service.

New riders on Tacoma Link because of the extension will fall into one of three groups:

- 1) New transit riders along both the existing line and the Hilltop extension drawn to the service because it provides new origins and destinations.
- 2) Riders who shift their trips from Pierce Transit bus service to Tacoma Link.
- 3) Riders who transfer from Pierce Transit bus service.

Riders in the first group will not experience a fare change since they do not currently ride transit.

Definitions and Data Analysis

The following sections describe the data definitions and methodologies used by Sound Transit to develop estimates for Title VI populations within the Sound Transit service area for Title VI analysis of service and fare changes.

Demographic Analysis Methodology and Title VI Data Definitions

Sound Transit uses census demographic data to identify Title VI communities (Minority, Low Income, & Limited English Proficiency) for Service and Fare Equity (SAFE) analyses and calculates the system-wide or mode specific average representation of these communities within the general population. Only Minority or Low-Income status are used to determine if a disparate impact or disproportionate burden must be mitigated or analyzed. However, identifying Limited English Proficiency (LEP) residents helps Sound Transit to ensure that outreach efforts reach diverse customers. Sound Transit uses the 2010 designated Census Tracts as the geographic basis for assessing the Title VI populations.

Sound Transit uses the most recent five-year demographic estimates available from American Community Survey (ACS). The ACS dataset identifies Minority, Low Income and LEP populations as follows:

- **Minority:** Persons who self-identify as being one or more of the following ethnic groups: American Indian and Alaska Native; Asian; Black or African American; Hispanic or Latino; Native Hawaiian; and Other Pacific Islander.
- **Low income:** Persons whose household income is below 150% of the federal poverty level.
- **Limited English Proficiency (LEP):** Persons who identify a language other than English as their primary language and are not fluent in English.

The following sections describe the methodology for identifying each of the Title VI populations for the purposes of the Tacoma Link SAFE analysis.

Service Area Methodology

Most transit agencies in the United States define their service area as a buffered distance around each of their transit routes. Given the unique service characteristics of Sound Transit service – limited stops connecting regional urban and employment centers – the agency defines its service area based on a radial distance from each transit stop, rather than the transit route alignment. The table below provides details on Sound Transit’s service area by stop type.

Table 1: Sound Transit Service Area Definitions

Stop Type	Service Area (Miles)
Bus stop without parking	0.5
Rail station without parking	1.0
Major bus facilities with parking	2.5
Rail station with parking	5.0

Sound Transit Title VI Population Estimates

The population representation for any census tract is calculated using the percentage of area that falls within the district or mode’s service area to estimate the specific number of people that fall within each of the Title VI categories. For example, if a census tract total is 10 acres and 3 acres are in the service area, based on the previously identified methodologies, then 30 percent of the tract’s total population, and in turn the respective Title VI populations, is considered to be within the service area. This methodology assumes an even distribution of population throughout the census tract.

Using the demographic analysis and Title VI definitions previously outlined in this section, percentages for the three Title VI populations for the Sound Transit service area are identified by census tract and the district overall.

Table 2: Sound Transit District Populations

Title VI Populations (2019)	Percentage of District Population
Minority	35.3%
Low Income (150% Poverty)	15.2%
Limited English Proficiency	10.1%

The table above shows the Title VI population averages for the Sound Transit service area using the American Community Survey 5-year estimates 2019 dataset. Minority and low-income averages serve as a comparison in the service change analysis to determine if mitigation must be considered, while LEP averages help to advise the outreach strategy.

Sound Transit Tacoma Link Title VI Population Estimates

Figure 1 shows the Tacoma Link service area defined by using both a 1-mile radius around Tacoma Link stations (“Rail Station without parking,”) and a 5-mile radius (“Rail station with parking”) as shown in Table 1.

The southern terminus of the Tacoma Link line is next to the Tacoma Dome Sounder Commuter Rail station, with a parking facility, while the line itself serves neighborhoods in or near

downtown Tacoma. As shown in Figure 1, use of the 5-mile radius around the Tacoma Dome station extends well beyond the neighborhoods served by the extended Tacoma Link line, but does reflect the fact that Tacoma Link riders may drive to the Tacoma Dome parking facility. For this reason, data reflecting both the 1-mile and 5-mile service area definitions for Tacoma Link are used (Figure 1) for determining the Tacoma Link service area for this analysis.

Figure 1: Tacoma Link Service Area



Using the Title VI methodology and definitions previously outlined in this section, percentages for the three Title VI populations for the two Tacoma Link service areas are identified by census tract and compared with the district overall in Table 3.

Table 3: Tacoma Link Service Area and ST District Populations

Title VI Populations (2019)	Service Area Option 1 - Percentage of Tacoma Link Service Area Population	Service Area Option 2 - Percentage of Tacoma Link Service Area Population	Percentage of District Population
Minority	31.4%	36.0%	35.3%
Low Income (150% Poverty)	27.7%	21.2%	15.3%
Limited English Proficiency	5.4%	8.7%	10.1%

For Service Area Option 1, using the smaller service area definition, the percentage of the Tacoma Link service area population that is minority is less than that of the ST District overall, while the minority percentage of the Tacoma Link service area is slightly greater than the ST District using the larger Tacoma Link service area definition of Service Area Option 2. Finally, the percentage of low-income residents for both of the Tacoma Link service area definitions is greater than the ST District as a whole.

Thus, implementing a fare for Tacoma Link would have a disproportionate burden on low-income riders, and, depending on the service area definition, may also have a disparate impact on minority riders.

Fare Changes and Adverse Impacts for Existing Riders from Tacoma Link Fare Options

There are three categories of existing transit riders who could see fare changes and potentially be adversely affected by the implementation of fares on the expanded Tacoma Link line.

1. Existing riders on fare-free Tacoma Link service
2. Pierce Transit bus riders who shift to Tacoma Link
3. Pierce Transit bus riders who continue to ride the bus, but who transfer to Tacoma Link to complete their trip.

Table 4 summarizes the fare changes that these groups would experience with each of the Tacoma Link fare options.

Existing riders on fare-free Tacoma Link service

Each of these options would increase fares for existing riders on fare-free Tacoma Link service who do not:

1. Already have an ORCA pass, and
2. Transfer from other transit service for their trip, or

Sound Transit’s 2019 on-board survey of riders on Tacoma Link service indicates that between 34 percent and 62 percent of existing Tacoma Link riders would not see a fare increase with the implementation of a fare for Tacoma Link service.

Existing Riders who might not see a fare increase from Tacoma Link Fares	
Respondents who:	% of Respondents
Have ORCA cards	62%
- Have employer-provided passes	27%
Transfer from other service	10%
- Have employer-provided passes	3%
- Pay for trips on other services	7%
Would likely see no fare increase	34%
Could potentially see no fare increase	62%

A majority (62 percent) of existing riders indicated they had an ORCA card, and nearly half of these (27 percent of all riders) indicated they had an ORCA card provided by their employer. Riders with employee passes would not experience a fare change from implementing a fare on Tacoma Link. Similarly, riders who currently purchase passes on their ORCA cards would experience no little or no fare increase, depending on the fare option and the fare value of the pass purchased. The 2019 survey has no information on how many of these other ORCA card holders purchase passes, nor the face value of those passes.

The 2019 survey also indicated that 10 percent of Tacoma Link riders transfer to/from other transit services. Accounting for those riders with an employer provided pass, seven percent are already paying a fare for travel on other service, suggesting a minimum of 34 percent of existing riders would not see a fare increase from implementing a fare on Tacoma Link service.

Pierce Transit bus riders shifting to Tacoma Link

Since the \$2.00 Fare Option is aligned with current Pierce Transit bus fares, most categories of riders would experience no fare change from this option, with the exception that low-income adult riders who enrolled in the ORCA LIFT program would benefit from a \$0.50 fare decrease. Low-income adult riders paying with an ORCA LIFT card would also see a \$0.50 fare decrease with the \$2.25 fare option, while full-fare Adult riders would see a fare increase and Youth and Seniors and Riders with Disabilities would see no fare change.

Pierce Transit bus riders who transfer to/from Tacoma Link to complete their trip

Since the regional ORCA card payment system provides full value intersystem transfers, Tacoma Link riders paying with ORCA cards and transferring to/from Pierce Transit Bus service would see no fare change with Option 1. Full fare Adult riders would see a \$0.25 fare increase with Option 2, while Youth and Seniors and Riders with Disabilities would see no fare change. Since Pierce Transit does not provide a reduced ORCA LIFT fare, ORCA LIFT riders would see no fare decrease for any of these options.

Pierce Transit bus riders who pay cash and transfer to/from Tacoma Link will be faced with paying a second fare, and will face fare increases that correspond to the Tacoma Link fare for each option.

Table 4: Fare Changes for Existing Riders from Tacoma Link Fare Options

		FARE OPTIONS	
		\$2.00	\$2.25
Existing Tacoma Link Riders			
	Adult	\$2.00	\$2.25
	Low-income Adult	\$1.50	\$1.50
	Youth	0	0
	Sr/Disabled	\$1.00	\$1.00
Pierce Transit Riders Shifting to Tacoma Link			
	Adult	0	\$0.25
	Low-income Adult	(\$0.50)	(\$0.50)
	Youth	0	0
	Sr/Disabled	0	0
Pierce Transit Riders Transferring to Tacoma Link			
ORCA Card fare payment			
	Adult	0	\$0.25
	Low-income Adult	0	0
	Youth	0	0
	Sr/Disabled	0	0
Cash fare payment			
	Adult	\$2.00	\$2.25
	Low-income Adult	NA	NA
	Youth	0	0
	Sr/Disabled	\$1.00	\$1.00

3.5 Fare Impact Mitigation

The Title VI analysis in Section 3.4 above determined that any adverse effect resulting from implementation of a Tacoma Link fare may have a disparate impact on minority riders, but would represent a disproportionate burden on low-income riders.

Sound Transit will mitigate adverse effects on low-income riders by working with human service agencies in the Tacoma area to identify these riders and enroll them in the ORCA LIFT program. In addition to the lower fare that ORCA LIFT will provide these riders on all Sound Transit services, Sound Transit will provide these riders with a financial incentive on their ORCA LIFT card that can be redeemed for transit fare payment on any transit agency participating in the ORCA fare payment system.

Sound Transit will also work to mitigate potential adverse impacts on other riders by providing free ORCA cards to new and existing cash riders to enable them to use ORCA cards to pay their fares and take advantage of the inter-agency transfer benefits provided by ORCA fare payment. Sound Transit will distribute these cards through outreach events in the Tacoma Link area and through street teams during the first weeks of expanded Tacoma Link service as the new fare is implemented.