

September 2021 Public Transportation Service Changes

Title VI Service Analysis

February 2021



Introduction

The Federal Transit Administration (FTA) Circular 4702.1B, Chapter V, Section 7 requires transit agencies serving large urbanized areas to evaluate major service changes and to determine whether proposed changes would have a discriminatory impact as defined in the United States Department of Transportation's Title VI regulations.

In accordance with these FTA regulations, this report summarizes Metro's service analysis of changes proposed for the September 2021 service change submitted to the King County Council for approval. As part of the ordinance, Metro is proposing to revise routes that currently serve north Seattle and north King County. This report details the results of the Title VI analysis of these changes, known as the North Link Connections Mobility Project, which impact Seattle, Shoreline, Lake Forest Park, Kenmore, and Bothell.

Metro's 2020 System Evaluation Report identifies corridors that are currently below their target transit service levels and identifies and prioritizes the additional hours needed on routes in these corridors to meet the service level targets based on Metro Service Guidelines (also referred to as Priority 3 service investment needs). Replacing inefficient routes with poor reliability and ridership with a more frequent, more direct network of service, the project reallocates some existing resources to increase span of service, improve frequency and add important connectivity within the region, while also reducing the number of overall service hours in the network due to ongoing budget impacts from COVID-19.

Service Guidelines Overview

The 2015 update to King County Metro's *Strategic Plan for Public Transportation, 2011-2021* and related service guidelines outline the methodology Metro uses to evaluate service changes, consistent with FTA Title VI requirements (FTA Circular 4702.1B). The most relevant excerpts from the service guidelines are included below:

"Implementation

Metro revises service twice a year—in spring and fall. Major and minor service revisions occur during the spring and fall service changes. In rare cases of emergency or time-critical construction projects, Metro may make changes at times other than the two regularly scheduled service changes. However, such situations are kept to a minimum because of the high level of disruption and difficulty they create. Many alternative service projects can be implemented at any time and do not need to follow the same schedule as fixed-route service.

Proposed route changes are subject to approval by the Metropolitan King County Council except as follows (per King County code 28.94.020):

- Any single change or cumulative changes in a service schedule which affect the established weekly service hours for a route by 25 percent or less.
- Any change in route location which does not move the location of any route stop by more than one-half mile.
- Any changes in route numbers.

Each year, Metro publishes a System Evaluation report, based on Metro's Service Guidelines, that outlines the analysis of target service levels and route performance management. The annual report will include a comprehensive list of the prior years' service changes and will identify and discuss service changes that address performance-related issues. Metro works to provide transparency in Metro's process and help jurisdictions plan for the future by conducting regular outreach throughout the county about the results of the System Evaluation Report.

Adverse Effect of a Major Service Change

An adverse effect of a major service change is defined as a reduction of 25 percent or more of the transit trips serving a census tract, in accordance with King County code 28.94.020. Title VI of the Civil Rights Act of 1964 requires all transit agencies to evaluate major service change impacts on minority and low-income populations.

Disparate Impact Threshold

A disparate impact occurs when a major service change results in adverse effects that are significantly greater for minority populations than for non-minority populations. Metro's threshold for determining adverse effects is when the percentage of routes or tracts adversely affected by a major service change and classified as minority is 10 or more percentage points higher than the percentage of routes or tracts classified as minority in the system as a whole. Should Metro find a disparate impact, consideration will be given to modifying the proposed changes in order to avoid, minimize or mitigate the disparate impacts of the proposed changes.

Metro will measure disparate impacts by comparing changes in the number of trips serving minority or non-minority census tracts, or by comparing changes in the number of service hours on minority or non-minority routes. Metro defines a minority census tract as one in which the minority population percentage is greater than that of the county as a whole. For regular fixed-route service, Metro

defines a minority route as one for which the percentage of inbound weekday boardings in minority census tracts is greater than the average percentage of inbound weekday boardings in minority census tracts for all Metro routes.

Disproportionate Burden Threshold

A disproportionate burden occurs when a major service change results in adverse effects that are significantly greater for low-income populations than for non-low-income populations. Metro's threshold for determining adverse effects is when the percentage of routes or tracts adversely affected by a major service change and classified as low-income is 10 or more percentage points higher than the percentage of routes or tracts classified as low-income in the system as a whole. Should Metro find a disproportionate burden, consideration will be given to modifying the proposed changes in order to avoid, minimize or mitigate the disproportionate burden of the proposed changes.

Metro will measure disproportionate burden by comparing changes in the number of trips serving low-income or non-low-income census tracts, or by comparing changes in the number of service hours on low-income or non-low-income routes. Metro defines a low-income census tract as one in which the percentage of low-income population is greater than that of the county as a whole. For regular fixed-route service, Metro defines a low-income route as one for which the percentage of inbound weekday boardings in low-income census tracts is greater than the average percentage of inbound weekday boardings in low-income census tracts for all Metro routes."

I. Service Change Area and Routes

Affected Areas

The proposed changes will affect 89 census tracts with a total population of about 442,628 residents.

Affected Routes

The affected routes in this project include routes 5X, 26, 31, 32, 43, 48, 63, 64, 71, 73, 74, 75, 76, 77, 78, 79, 301, 302, 303, 304, 308, 309, 312, 316, 320, 322, 355, and 373.

Affected routes 5X, 63, 76, 77, 78, 308, 316, 355, and 373 would be replaced with Routes 16X, 79, 320, and 322.

II. Threshold 1: Is this a Major Service Change? YES

For the purposes of complying with FTA Circular 4702.1B, Chapter IV, Metro defines any change in service as “major” if King County Council approval of the change is required pursuant to KCC 28.94.020.

The proposed changes meet all criteria for a major service change by Metro and FTA definitions. Appendix A lists the specific routes being changed in September 2021.

III. Threshold 2: Are Minority or Low-Income Census Tracts Affected? YES

Classifying minority and low-income census tracts

For the Title VI analysis, Metro classifies census tracts as minority tracts if the percentage of the population that is minority within a tract is greater than the percentage for King County as a whole. Based on the American Community Survey five-year average for 2014-2018 data, 40.1 percent of the population is classified as minority within the county as a whole.

The determination as to whether the proposed changes resulting in a reduction in service would have a disparate impact on minority populations was made by comparing changes in the number of Metro bus trips serving minority or non-minority census tracts. Similarly, the determination as to whether the proposed changes resulting in a reduction in service would have a disproportionate burden on low-income populations was made by comparing changes in the number of Metro bus trips serving low-income and non-low-income census tracts.

In line with recommendations made by the Service Guidelines Task Force, Metro recently changed the definition of “low-income” that is used to determine census tract designations from 100% to 200% of the federal poverty line, which aligns with the threshold of other programs, including ORCA LIFT. Based on the American Community Survey five-year average for 2014-2018, 20.7 percent of the population is classified as low-income within the county as a whole.

The proposed service changes addressed in this report will affect the level of service provided to 89 King County census tracts currently served by Metro. The low-income and minority characteristics of affected census tracts are provided in Table 1 below and figures 1 and 2 on the following pages.

Table 1. Low-Income and Minority Characteristics of Affected Census Tracts

Total Census Tracts Affected	Census Tract Classification			
	Minority & Low-income	Minority ONLY	Low-income ONLY	Neither Minority nor Low-income
89	19	2	29	39

IV. Threshold 3: Is there a Disproportionate Burden on Low-Income Populations? YES**Is there a Disparate Impact on Minority Populations? NO**

The March 2020 service change was used as the baseline for calculating the change in trips. Additional changes to route schedules occurred during the March 2020 service change due to the impacts of COVID-19, however the baseline used was the full March 2020 service change as initially scheduled.

The proposed changes together affect 89 census tracts, including two minority-only census tracts, 29 low-income only census tracts, and 19 tracts which are both minority and low-income. There are 11 tracts experiencing a reduction in trips greater than 25%, four are both low-income and minority, two are low-income only, and five are neither low-income nor minority tracts. The analysis indicates that the proposed changes would place a disproportionate burden on low-income populations but would not have a disparate impact on minority populations.

A detailed description of the impacts to residents in the four low-income and minority tracts and two low-income only tracts experiencing a disproportionate burden, is provided in Section V, along with the alternatives available to riders. The four minority tracts in Table 3 are also low-income and the same tracts low-income and minority tracts shown in Table 2. There is a total of six low-income and/or minority tracts with adverse effects.

Notes for Tables 2 and 3

1. An adverse effect is defined as a reduction of 25 percent or more in trips per week.
2. Tracts are classified as low-income or minority when the percentage of low-income or minority persons in the tract is greater than the percentage of low-income or minority persons in the county as a whole.
3. A disproportionate burden occurs when the percentage of low-income tracts with adverse effects is more than 10 percentage points greater than the county-wide percentage of low-income tracts.
4. A disparate impact occurs when the percentage of minority tracts with adverse effects is more than 10 percentage points greater than the county-wide percentage of minority tracts.

Title VI Analysis Results for Proposed Changes for September 2021

Table 2. September 2021 Service Change Title VI Analysis - Low-Income Populations

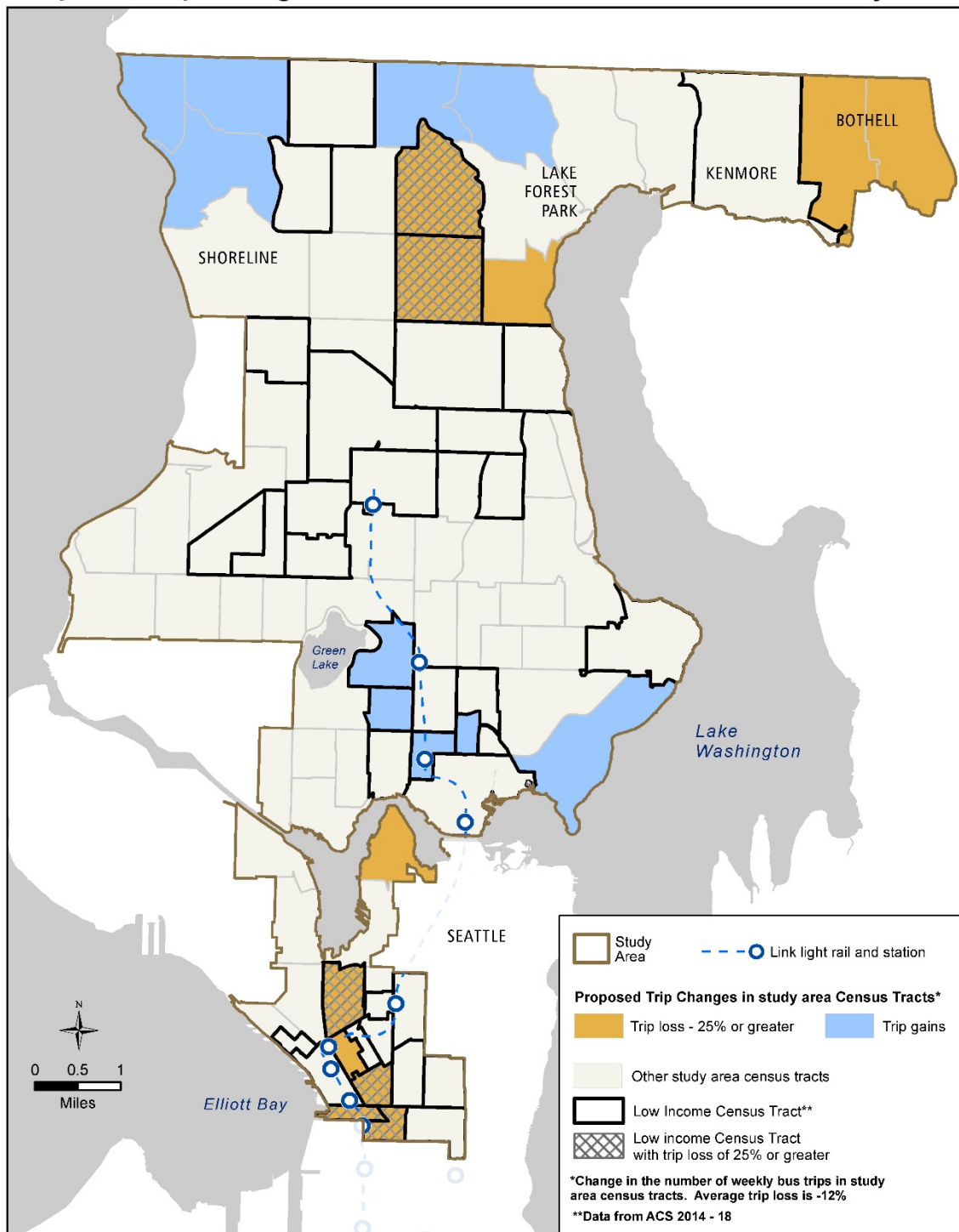
Category ²	Tracts with Adverse Effects ¹	% of tracts adversely affected	% of tracts system-wide	Difference	Disproportionate Burden ³ ?
Low-Income	6	55%	42%	13%	YES
Non-Low-Income	5	45%	58%		
Total	11	100%	100%		

Table 3. September 2021 Service Change Title VI Analysis - Minority Populations

Category ²	Tracts with Adverse Effects ¹	% of tracts adversely affected	% of tracts system-wide	Difference	Disparate Impact ⁴ ?
Minority	4	36%	45%	-9%	NO
Non-Minority	7	64%	55%		
Total	11	100%	100%		

Figure 1. Impact of proposed changes on low-income census tracts.

Proposed Trip Changes in Low Income Census Tracts in the Study Area



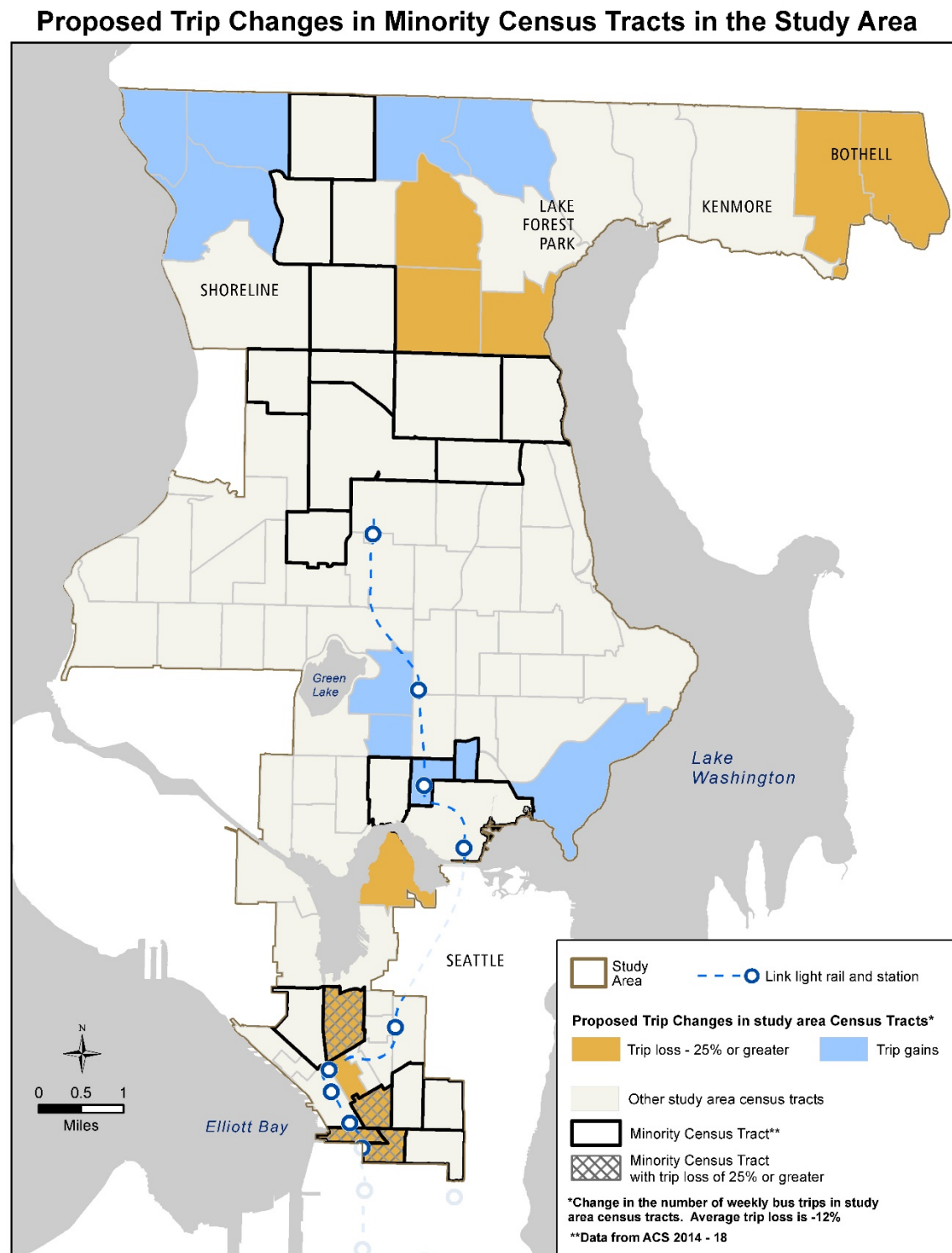
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January 14, 2021



Figure 2. Impact of proposed changes on minority census tracts.



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January 13, 2021



V. Threshold 4: Alternatives and Mitigation

As stated in Section IV, there are adverse effects as defined by the Title VI regulations in 11 census tracts, for the proposed service changes in north Seattle and north King County in September 2021. As shown in Figures 1 and 2, low-income and minority Tracts 73, 85, 91, and 92 are impacted, and low-income only Tracts 205 and 211 are impacted. All of these tracts are served by routes that were eligible to receive investments from the Seattle Transportation Benefit District (STBD), which expired in 2020 and was renewed by voters with significantly fewer resources. The proposed network includes no STBD resources, while the baseline network does result in a significant reduction in trips on routes across the system, including routes in the North Link project area.

Tracts 205 and 211, Shoreline – North City, Ridgecrest, Briarcrest

As shown in Figure 3, these tracts are currently served by all-day Routes 65, 330, 347, and 348 and peak-only Routes 301, 303, 308, and 373. With the proposed changes these tracts are served by all-day Routes 65, 330, 347, and 348 and revised peak-only Route 304. Trips in Tract 205 will be reduced by 29% and trips in Tract 211 will be reduced by 27%.

Routes 301 and 303 are proposed to be revised in September 2021, to streamline connections between the Aurora Village Transit Center, Northgate Station, and downtown Seattle. Route 303 is proposed to be revised to serve neighborhoods west of I-5, while Route 301 is proposed to no longer serve its single stop in Tract 211, a freeway station stop at NE 145th St, that is being consolidated due to speed and reliability concerns. Riders who used this stop at NE 145th St will no longer have direct service to downtown Seattle, however they will be able to connect to Route 347 and Route 304 on NE 145th St to Northgate Station, where they can transfer to Link light rail or another Metro bus route to continue to destinations further south.

Route 308 is a low performing, peak-only route that serves Lake Forest Park, the SR-522 corridor, and NE 145th St before heading to downtown Seattle via I-5; only the segment along NE 145th St serves a tract with adverse effects (Tract 211). Route 308 is proposed to be deleted in the changes for September 2021. Riders who used stops along NE 145th St will no longer have direct service to downtown Seattle, however they will be able to connect to Route 347 and Route 304 to Northgate Station, where Link light rail will continue to downtown Seattle.

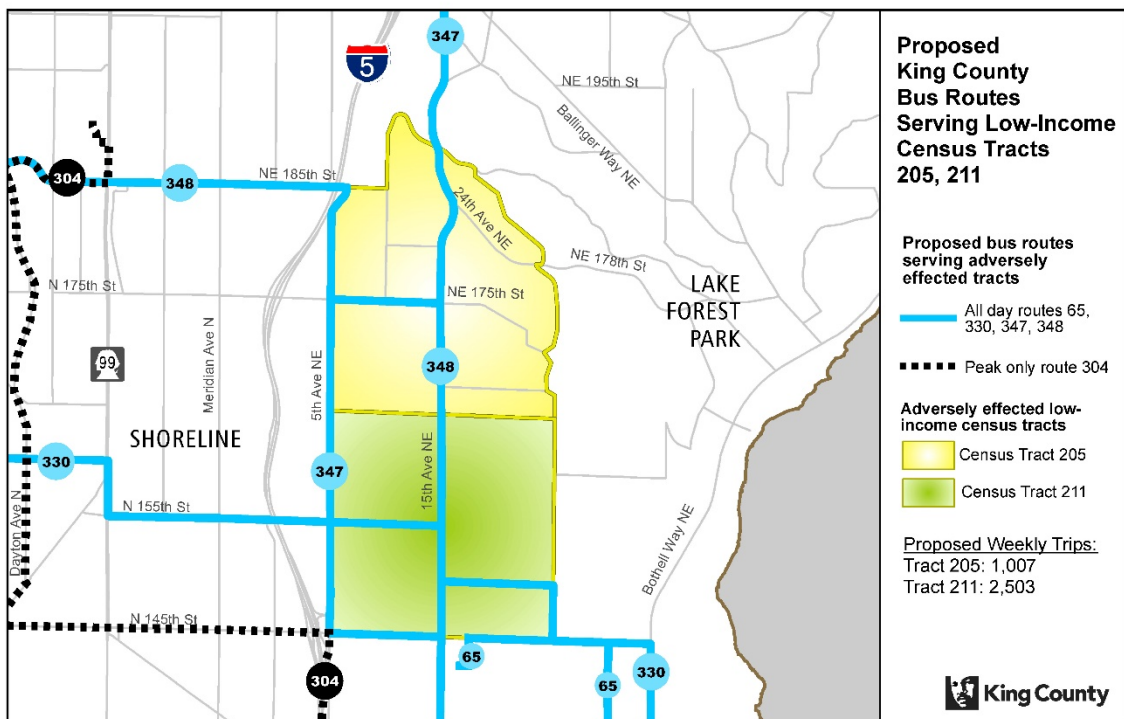
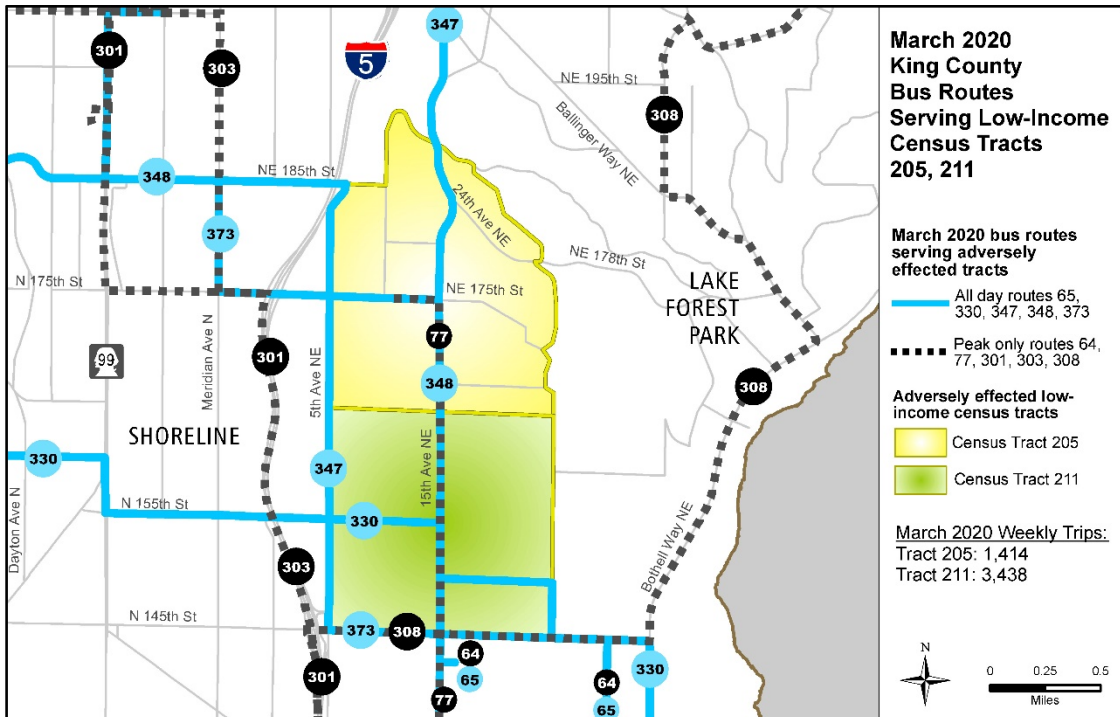
Route 373 is a limited span all-day route that connects Aurora Village Transit Center and the University District, that pairs with shorter midday-only Route 73 along 15th Ave NE. Route 373 is proposed to be deleted in September 2021 to simplify the network and reduce duplicative service. Peak riders traveling from Aurora Village Transit Center, or other parts north of NE 145th St that are not served by the increased span of service and frequency improvements on Route 73 can connect to Routes 301 or 302 to connect to Link light rail or another Metro bus route to continue their trip to the University District.

Routes 347 and 348 are proposed to have improved frequency in the peak periods, operating every 20-minutes. On the corridor they share, 15th Ave NE, there will be trips every 10-minutes connecting to high capacity, frequent Link light rail at Northgate Station.

All-day Routes 65 and 330 are not proposed to be revised in September 2021, however Route 65 frequencies were adjusted to reflect the loss of STBD partner funding

Figure 3. Impact of proposed changes on Tracts 205 and 211.

Metro Routes Serving Low Income Census Tracts with Adverse Effects



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Tracts 73, 85, 91, and 92, downtown Seattle – Cascade, First Hill, Occidental Square, and Chinatown-International neighborhoods

As shown in Figure 4, these tracts are currently served by all-day Routes 40, 41, 49, 62, 70, and 74 and peak-only Routes 5X, 43, 63, 64, 76, 77, 301, 303, 304, 308, 309, 312, 316, and 355.

With the proposed changes these tracts are served by all-day Routes 40 and 70 and peak-only Routes 64, 302, 303, 320, and 322. Route 302 replaces Route 304 and Routes 320 and 322 replace Routes 309 and 312, while other connections are replaced by Link light rail or non-project area Metro bus routes. Frequencies of routes 40, 49, 62, and 70 were adjusted to reflect the loss of STBD funding.

Trips in Tract 73 will be reduced by 26%, trips in Tract 85 will be reduced by 34%, trips in Tract 91 will be reduced by 36%, and trips in Tract 92 will be reduced by 25%.

The most significant impact is from routes either being deleted due to their duplication of Link light rail or truncated at a Link light rail station. Route 41 is deleted, as the connection between Northgate Station and downtown Seattle is directly duplicative of Link light rail. Route 63 is deleted and replaced by Route 320 and Link light rail. Routes 76 and 77 are deleted and replaced by Routes 64 and 322 and Link light rail from Roosevelt Station. Routes 74, 301, and 304 were truncated at Link light rail stations and still operate in neighborhoods north of downtown, which increases their reliability. Routes 5X, 316, and 355 are replaced by new Route 16X and Link light rail.

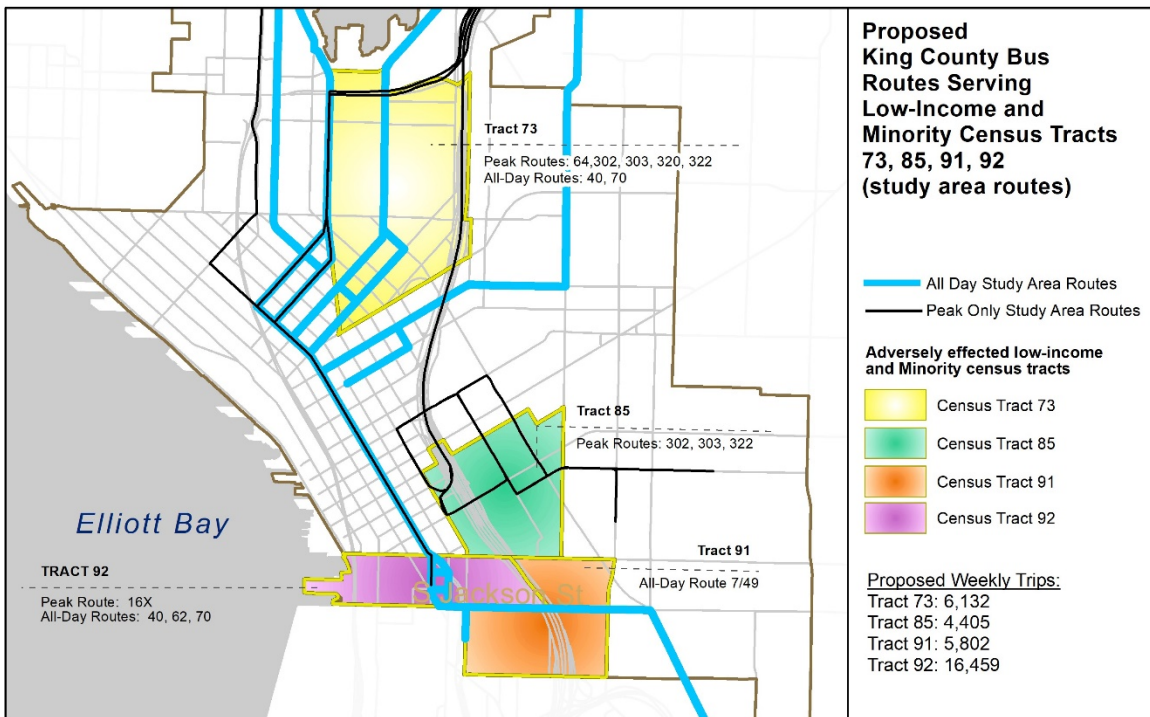
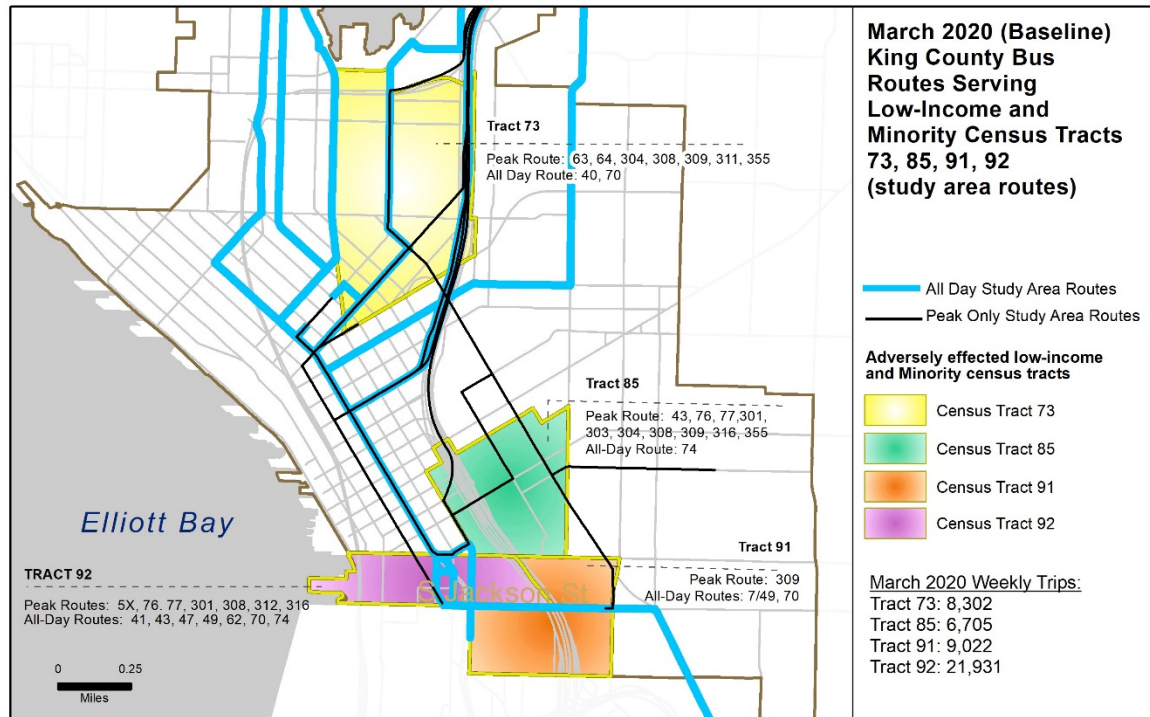
Benefits

Altogether, the recommended changes will better meet community-identified needs, including increased peak commuter service, improved connections to priority community destinations, improved east-west connectivity, and a more integrated regional transit network. On average, the project area is proposed to see a decrease of approximately 12% of its weekly trips on Metro services. Much of this is due to ongoing budget impacts from COVID-19, loss of partner funding from STBD and the continued integration with Link light rail, whose trips were not included in this analysis as those service levels are determined by Sound Transit. However, it is expected that Link light rail will provide improved reliability and additional capacity beyond the Metro routes being eliminated that currently provide service to the affected tracts.

The proposed transit service changes feature creation of Route 16X, 320, and 322 that simplify peak-only service, create new connections to Link light rail, and other regional bus routes at both Northgate Station and Roosevelt Station. The proposed improvements will connect north Seattle and north King County riders to high capacity frequent transit in Link light rail, as it expands its service area to three new stations in the University District, Roosevelt, and Northgate areas.

Figure 4. Impact of proposed changes on Tracts, W, X, Y, and Z.

Metro Routes Serving Low Income and Minority Census Tracts with Adverse Effects



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APPENDIX A: Affected Routes and Rider Alternatives

Route	Action	Alternatives
5X	Delete Route 5X and replace with new Route 16X.	Alternative service will be provided via Route 16X between downtown Seattle and north Greenwood.
16X	New Route 16X replaces Route 5X.	N/A
20	New Route 20 replaces Route 26 between Northgate Station and Greenlake, and provides a new east-west connection to U District Station and replaces revised Route 75 between Lake City and Northgate Station.	N/A
26	Delete Route 26 and replace with new Route 20 between Northgate Station and U District Station.	Alternative service will be provided between Northgate Station and Green Lake via new Route 20, and between Wallingford and downtown Seattle via Route 62, or Routes 31/32 and Link light rail.
31	Revise Route 31 to better serve U District Station and to create a new east-west corridor on NE 45 th St for improved service to University Village and Seattle Children's Hospital.	N/A
32	Revise Route 32 to better serve U District Station and to create a new east-west corridor on NE 45 th St for improved service to University Village and Seattle Children's Hospital.	N/A
43	Reduce service on Route 43 due to low performing trips.	Alternative service will be provided by Routes 8, 10, 48, 49, and Link light rail.
48	Revise Route 48 to extend further north in the University District to NE 50 th St.	N/A
63	Delete Route 63 due to low performance and duplicative service.	Alternative service will be provided by Routes 302, 303, and 320 between Northgate Station and downtown Seattle and on Routes 26 and 62 and

		Link light rail between Green Lake and downtown Seattle.
64	Revise Route 64 to terminate in Wedgwood rather than in Jackson Park.	Alternative service to downtown Seattle from Jackson Park will be provided by Routes 65, 73, 320, 322, 347, 348, and Link light rail.
71	Delete Route 71 due to low performance and duplicative service.	Alternative service will be provided by Routes 45, 62, 65, 73, and 79, and Link light rail.
73	Revise Route 73 to serve peak periods due to deletion of Route 373.	N/A
74	Delete Route 74 and replace with Route 79 between View Ridge and the University District.	Alternative service will be provided by new Route 79, and Link light rail between the University District and downtown Seattle.
75	Revise Route 75 to serve NE 125 th St between Lake City and Northgate Station.	Alternative service will be provided by Route 26 between Lake City and Northgate Station via SR-522 and NE Northgate Way.
76	Delete Route 76 due to low performance and duplicative service.	Alternative service will be provided by Routes 62, 65, and 79 and Link light rail.
77	Delete Route 77 due to duplicative service.	Alternative service will be provided by Route 67, Route 73, Route 322, and Link light rail.
78	Delete Route 78 due to low performance and duplicative service.	Alternative service will be provided by Routes 31, 32, 65, and 75.
79	New Route 79 replaces Route 74 to the University District, creates a new east-west pathway on NE 75 th St, and provides service to parts of View Ridge impacted by deletion of Route 71.	N/A

301	Revise Route 301 to serve Northgate Station and no longer connect directly to downtown Seattle.	Alternative service will be provided by Link light rail and Routes 302, 303, and 320 between Northgate Station and downtown Seattle.
302	New Route 302 provides peak period express service between Shoreline and downtown Seattle via Aurora Village Transit Center and Northgate Station.	N/A
303	Revise Route 303 to terminate at Aurora Village Transit Center and remove stop at NE 145 th St.	Alternative service will be provided by new Route 302 west of Aurora Village Transit Center and by revised Route 304 on NE 145 th St.
304	Revise Route 304 to serve Northgate Station and no longer connect directly to downtown Seattle.	Alternative service will be provided by Link light rail and Routes 302, 303, and 320 between Northgate Station and downtown Seattle.
308	Delete Route 308 due to low performance and duplicative service.	Alternative service will be provided by Routes 320, 322, and 372 on SR-522 and Link light rail between Lake Forest Park and downtown Seattle.
309	Delete Route 309 and replace with new Routes 320 and 322.	Alternative service will be provided by new Routes 320 and 322 between Kenmore, downtown Seattle, and First Hill.
312	Delete Route 312 and replace with new Routes 320 and 322.	Alternative service will be provided by new Routes 320 and 322 between Kenmore, downtown Seattle, and First Hill.
316	Delete Route 316 due to duplicative service.	Alternative service will be provided by Routes 26, 345, and 346, and Link light rail.
320	New Route 320 replaces Routes 309 and 312 between Kenmore and downtown Seattle by	N/A

	providing service to Northgate Station and South Lake Union.	
322	New Route 322 replaces Routes 309 and 312 between Kenmore and downtown Seattle by providing service to Roosevelt Station and First Hill.	N/A
355	Delete Route 355 due to duplicative service.	Alternative service will be provided by Routes 5, 16X, 44, 67, and 73, RapidRide E Line, and Link light rail.
373	Delete Route 373 and replace with revised Routes 73 and 301.	Alternative service will be provided by Routes 301, 302, 346 and Link light rail between Aurora Village Transit Center and the University District.