

Department of Transportation Services (DTS)

Public Transit Division Title VI Program

Service Equity Analysis Report

**Peak Express Routes: 85 Windward Express – Kaneohe
87 Windward Express – Kailua
PH4 Kaneohe – Kahaluu – Pearl Harbor Express
PH5 Windward (Kailua) – Pearl Harbor Express**

Introduction

Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin in programs and activities receiving Federal financial assistance. This analysis was conducted in compliance with Federal Transit Administration (FTA) Circular 4702.1B, which requires any FTA recipient providing 50 or more fixed route vehicles in peak service located in an urbanized area and serving a population of 200,000 or greater to evaluate any major service change at the planning stage to determine whether those changes have a disparate impact on minority populations and disproportionate burden on low-income populations.

The City and County of Honolulu (City) comprises the entire island of Oahu and includes the Honolulu urbanized area (UZA), 200K to 1M in population, and the Kailua-Kaneohe UZA, 50K to 199.9K in population. UZA Kailua-Kaneohe is located in the City's Windward region, northeast of Urban Honolulu and separated by the Koolau mountain range.

A future rail line is under construction to connect Leeward Oahu with Urban Honolulu and DTS is currently in the initial bus-rail integration planning phase for communities located along or adjacent to the rail line. Since the rail line will not directly benefit Windward Oahu communities; prior to the full commitment of time and resources to bus-rail integration planning, it was important for DTS to evaluate Windward bus service to address current ridership trends and provide connectivity to the future rail line.

In 2017, while conducting route analyses and public outreach for peak express Routes 85/87*, PH4, and PH5, the 2018 Windward TheBus Routes Redesign Project (WBRR) was initiated to evaluate and propose modifications to peak express and local routes that serve the Windward communities of Waimanalo, Kailua, Kaneohe, and Kahaluu. Although planning had already begun for Routes 85/87, PH4, and PH5 in 2017, these routes were also included in the WBRR. (*Two route variations using Pali and Likelike Highways comprised the original Route 85 - the variation that operated on Pali was renumbered to Route 87 in August 2017, while the Likelike segment retained the Route 85 designation.)

This report is the service equity analysis of the changes to the Windward segments of Peak Express Routes 85, 87, PH4, and PH5 that are scheduled for implementation in March 2019. With the exception of Route PH4, there are no changes to the Urban Honolulu route segments for these routes. Should the modifications for the other Windward routes proceed, service equity analyses will be conducted 6 months prior to scheduled implementation.

The results of this service equity analysis will also be included in the 2019 TVI Program.

Background

Windward bus service was established incrementally over the last 40 years and there has been relatively little change to current bus routing in the Windward region while the Kailua-Kaneohe communities have experienced major growth and development during this time, as evidenced by their UZA status.

The construction of the Pali, Likelike, and H-3 Interstate Highways and Tunnels is the contributing factor to the development of the Kailua-Kaneohe communities. Pali Highway directly connects Kailua to Urban Honolulu's Central Business District (CBD), Likelike Highway connects Kaneohe to Urban Honolulu's Kalihi District, and the H-3 Highway connects Joint Base Pearl Harbor-Hickam (JBPHH) located on the western fringe of Urban Honolulu in the Aiea District with Marine Corps Base Hawaii located in the Aikahi community, the boundary between Kailua and Kaneohe.

Pali Highway was the first highway that was constructed, which allowed the development of Kailua well before Kaneohe. As a result, Windward bus service began operating along Pali Highway and with the exception of a few peak period express routes, most Windward bus service currently operate on Pali Highway to connect to Urban Honolulu. As Kaneohe grew, these Kailua-centric routes were extended to include Kaneohe with different route variations for cost containment and to address new development.

The main goals of restructuring Windward bus service in the WBRR are:

- Evaluate current service and address service demand/productivity to maximize service delivery/quality based on the priority of need, operating efficiency, and resource allocation.
- Connect Windward communities more effectively and provide more connections to Windward Community College.
- Connect Windward districts with Honolulu, Kalihi Transit Center, and the future rail system.

Rider surveys/outreach for Routes PH4/PH5 and 85/87 were conducted as separate initiatives in 2017 and incorporated into the WBRR. Public outreach for the WBRR Phase 1 was conducted in early 2018 and is scheduled to begin in late 2018 for WBRR Phase 2.

Peak Express Route 85: Windward Express Kaneohe

Peak Express Route 87: Windward Express Kailua

Routes 85 and 87 provide service from their respective Windward districts, Kaneohe and Kailua, to Downtown Honolulu and University of Hawaii Manoa. Both routes are being restructured in the Windward service area to provide dedicated service for Kaneohe or Kailua by eliminating the route's cross over segment. Aikahi Shopping Center borders Kaneohe and Kailua and will be the starting/end points for both routes.

The current Route 85 is the Kaneohe peak express service operating on Likelike Highway; it starts its AM trips and ends its PM trips in Kailua. The current Route 87 is the Kailua peak express service operating on Pali Highway and ends its PM trips in Kaneohe. Ride checks were conducted and confirmed data that showed very low ridership on the Kailua and Kaneohe segments for Routes 85 and 87, respectively.

Peak Express Route PH4: Kaneohe/Kahaluu/Pearl Harbor Express

Peak Express Route PH5: Windward Kailua/Pearl Harbor Express

Joint Base Pearl Harbor Hickam (JBPHH) is one of the largest employers in the City, therefore, specialized peak express service was established specifically for JBPPH employees who reside in the various districts of Oahu. Currently there are 7 Pearl Harbor (PH) Routes providing peak express service between JBPHH and the Waianae Coast (PH1), Mililani (PH2), Wahiawa (PH3), Kaneohe/Kahaluu (PH4), Kailua (PH5), Hawaii Kai (PH6), and Ewa (PH7). The 2017 review of the ridership on PH routes found that PH4 and PH5 each carried less than half a seated load while the other PH routes carried more than half to full seated loads.

To address low ridership and preserve PH service to the maximum extent feasible, Routes PH4 and PH5 are being merged into one route (new PH4) since they serve the neighboring districts of Kaneohe and Kailua; and Route PH5 passes through Kaneohe on its way to JBPHH via the H-3 Interstate Highway. While the existing PH4 route operates on Likelike Highway, the new PH4 route will operate on the H-3 Highway.

Proposed Changes:

Attachment 1 contains the existing and proposed route maps for Routes 85, 87, PH4, and PH5. Route redesign will generally use the existing bus network to provide restructured service. With the exception of Route PH4, the proposed changes affect only the Windward route segments and are summarized and detailed below.

AM/PM Peak Express Routes		
Route #	Existing Routing	Proposed Routing
85 (AM) (PM)	Kailua, Aikahi, Kaneohe, CBD, UHM UHM, CBD, Kaneohe, Aikahi, Kailua	Aikahi, Kaneohe, CBD, UHM UHM, CBD, Kaneohe, Aikahi
87 (AM) (PM)	Kailua, CBD, UHM UHM, CBD, Kailua, Aikahi, Kaneohe	Aikahi, Kailua, CBD, UHM UHM, CBD, Kailua, Aikahi
PH4 (AM) (PM)	Kaneohe-Heeia Coast-Kahaluu-JBPPH JBPPH-Kaneohe-Heeia Coast-Kahaluu	Kailua-Kaneohe-Kahaluu-JBPHH JBPHH-Kailua-Kaneohe-Kahaluu
PH5 (AM) (PM)	Kailua - JBPHH JBPHH - Kailua	

UHM: University of Hawaii at Manoa
 CBD: Central Business District (Downtown Honolulu)
 JBPPH: Joint Base Pearl Harbor-Hickam

AM/PM Peak Express Route Changes		
Existing Route #	Proposed Route #	Proposed Changes
85	85	1) Transfers Kailua segments to Rte 87; 2) Extends routing to provide service to Mokulele/Namoku/Aumoku Sts. &

		discontinues service on Kaneohe Bay Dr. between Mokulele Dr./Aumoku St.
87	87	1) Extends AM routing to Aikahi to replace Rte 85 & discontinues a section of the Kailua Rd. segment; 2) PM routing to Kaneohe transfers to Rte 85; 3) Route extension to provide service to Hele/Kupau Sts.
PH5 PH4	PH4	1) Merges Rte PH5 into Rte PH4; 2) Discontinues a section of the Kamehameha Hwy (Heeia Coast) segment; 3) Uses H-3 instead of Likelike Hwy. & discontinues service at the Likelike Hwy./School St. bus stop.

UHM: University of Hawaii at Manoa

CBD: Central Business District (Downtown Honolulu)

Route 85

- 1) AM trips will not serve the Kailua via Kuulei Road and North Kalaheo Avenue segment and PM trips will not serve the Kailua via North Kalaheo Avenue, Kuulei Road, Kailua Road, Wanaao Road, Keolu Drive, and Kalaniana'ole Highway segment. Route 87 will serve these segments.
- 2) Route is extended to serve the Kaneohe community accessed by Mokulele, Namoku, and Aumoku Streets; this extension causes discontinuation of service on the Kaneohe Bay Drive segment between Mokulele Drive and Aumoku Streets.
- 3) No change to the amount of trips and headways.
- 4) Schedule revisions to account for new service areas.

Route 87

- 1) AM routing will be extended to new starting point at Aikahi to replace discontinued Route 85 service, this extension causes discontinuation of Route 87 on the Kailua Road segment between Kalaniana'ole Highway and Oneawa Street.
- 2) PM trips will end at Aikahi and not serve Kaneohe via Mokapu Boulevard and Kaneohe Bay Drive. Route 85 will serve this segment.
- 3) Route is extended to serve the Kailua community accessed by Hele and Kupau Streets.
- 4) No change to the amount of trips and headways.
- 5) Schedule revisions to account for new service areas.

Routes PH4 and PH5

- 1) PH4 and PH5 are being merged into one new Route PH4.
- 2) Existing PH4 segments on Kamehameha Highway (Heeia Coast) between Kahekili Highway/Haiku Road and on Kahekili Highway between Kamehameha Highway/Ahuimanu Road will be discontinued.
- 3) New Route PH4 will use the H-3 Highway instead of Likelike Highway, therefore, the bus stops on Likelike Highway at School Street will not be served.
- 4) The Kailua segment will be served first on the one AM and one PM trips. Kailua riders will have an earlier and longer ride in the AM, and a shorter ride in the PM (vice versa for Kaneohe riders). In the AM, trip duration for Route PH5 increases

by approximately 30 minutes and decreases by about 10 minutes for Route PH4. In the PM, trip duration for Route PH4 increases by approximately 15 minutes and decreases by about 5 minutes for Route PH5.

- 5) The existing arrival times at JBPHH will stay the same.

Public Engagement Process

DTS conducted public outreach in 2017 for Routes 85/87 and PH4/PH5, and again in early 2018 during Phase 1 of the WBRR, in accordance with DTS' Public Participation Standard Operating Procedures.

Riders of the affected routes, as well as the public were encouraged to provide comments and suggestions via email, phone call, voicemail, or online survey. Public outreach includes notifying affected Councilmember/Neighborhood Boards, distributing informational material, posting notices on the OTS TheBus website/on-board buses/at selected bus stops, conducting surveys, and on-board rider checks.

DTS' efforts to engage minority, low income, and Limited English Proficient (LEP) riders were facilitated by the commuter characteristics of these peak express routes that provide dedicated weekday service between suburban communities and central urban districts in the AM and PM peak periods and generally have regular riders. Due to the limited number of trips and service area coverage in Urban Honolulu, on-board distribution of notices, brochures, and surveys were made to the majority of riders. For Routes 85 and 87, distribution for AM trips were made at either the last Windward bus stop or the first Urban Honolulu bus stop. For the PM trips, distribution was made while riding the Urban Honolulu segment until the last bus stop. Since Routes PH4 and PH5 each have only 1 AM and 1 PM trip with regular riders, distribution was made on-board while conducting ride checks, at the last Windward bus stop in the AM, and at the first Windward bus stop in the PM.

To engage Limited English Proficient (LEP) persons, the informational brochures were translated into the languages identified in DTS' 2016 Public Transit Title VI program for printing, upon request. Informational material on the website was available in a format to use the translation feature.

The timeline below outlines DTS and OTS public engagement activities for Routes 85, 87, PH4, and PH5.

February to

October 2017: Conducted public outreach/surveys and ride checks for Routes 85/87, PH4, and PH5.

In February, notices informing the riders of the upcoming survey regarding proposed changes were distributed to Windward area City Council Member (CM) and Neighborhood Boards (NB), on-board buses, signs at selected bus stops, and DTS/OTS websites.

In mid-April to early May, survey and ride checks were conducted and included onboard distribution of surveys and initiation of an online survey form. Ride checks were conducted to validate ridership data.

In June, survey results for Route 85 were distributed to CM and NBs and posted online, and between August and mid-September were distributed onboard to riders.

In August, implemented renumbering of the Route 85 trips that operated on Pali Highway to Route 87 and retained Route 85 numbering for the trips that operated on Likelike Highway. No changes were made to the routing.

During August to September, ride checks were conducted on Routes 85 and 87.

In October, distributed Routes PH4 and PH5 survey results to onboard to riders while conducting additional ride checks.

November 2017
to May 2018:

Conducted WBRR-Phase 1 public outreach/surveys and ride checks that included Routes 85, 87, PH4, and PH5.

In November 2017, notified and discussed the WBRR-Phase 1 with CM and City Council Transportation Committee (CTC). Phase 1 also included Routes 85, 87, PH4, and PH5.

In December 2017, notified affected NBs of the proposed redesign plans to Phase 1. Presentations to be made upon request by the NB. Brochures and notices were provided to affected NBs for distribution.

During January-April 2018, Phase 1 public outreach and comment period commenced. Detailed proposal information including route detail and maps were made available for public review and comment via online SurveyMonkey. Brochures and/or notices are distributed to riders on-board affected routes, at selected bus stops, on placards posted onboard all buses, and at public libraries, Satellite City Halls, and selected businesses and schools in affected districts. Affected riders and the public were encouraged to attend NB meetings, obtain information/provide feedback online at DTS and TheBus websites or through phone calls, emails, or in-person. Presentations made at the CTC meeting, and the

Koolauloa, Kahaluu, Kaneohe, Kailua, and Waimanalo NB meetings.

In January 2018, distributed WBRR-Phase 1 brochure and notice onboard Routes PH4 and PH5 to riders while conducting ride checks.

June to
August 2018:

Based on public input and current data, revised and finalized WBRR which included Routes 85, 87, PH4, and PH5. Public outreach and comment period for WBRR-Phase 2 is scheduled to begin in November 2018.

Implementation is scheduled for March 2019 for the service changes to Routes 85, 87, PH4, and PH5 with public/rider notification in January-February 2019.

January to
February 2019:

Inform Routes 85, 87, PH4, and PH5 ridership of March implementation for route service changes. Distribute notices onboard to riders and conduct ride checks for Routes PH4/PH5, distribute notices onboard to riders for Routes 85 and 87, and post notices at selected bus stops and on DTS/OTS website. Distributed notices to CM, CTC, and NBs. Presentations to be conducted upon request by NBs.

March 2019:

Scheduled implementation for Peak Express Routes 85, 87, and new PH4.

Survey and Ride Check Results

Routes 85 and 87: Results of the April 2017 survey for Route 85 were split; half of the riders favored the proposed route changes, while the other half opposed it. With no clear majority, no routing changes were made; instead, the Route 85 segment that operated on Pali Highway was renumbered to Route 87, while the Likelike Highway segment retained the Route 85 designation. The renumbering was implemented in August 2017.

The WBRR-Phase 1 consisted of dedicated Kaneohe service for Route 85 and dedicated Kailua service for Route 87 between Aikahi and Urban Honolulu. Results of the WBRR-Phase 1 survey: Route 85 (0 favored/5 opposed/7 comments), Route 87 (2 favored/2 opposed/2 comments).

Based on WBRR-Phase 1 public feedback, the redesign for Routes 85 and 87 were modified to include route extensions to other service areas.

Results of follow-up survey: Route 85 (29 favored/8 opposed/16 comments), Route 87 (30 favored/4 opposed/6 comments).

Ride checks conducted for the discontinued segments of Routes 85 and 87 provided the following information.

Route 85: AM trips averaged 3 daily boardings and no alightings - PM trips averaged 5 alightings and 1 boarding.

Route 87: AM trips averaged 6 daily boardings and no alightings

Routes PH4 and PH5: Results of the April 2017 survey found that most riders on both routes would continue to ride the merged route even though a significant number of riders opposed the merger. On the days that DTS or OTS staff conducted ride checks while distributing surveys or survey results, there were 0 to 5 riders that boarded in the PH4 segment DTS plans to discontinue.

The WBRR-Phase 1 included the consolidation of PH4 and PH5 into one route and the discontinuation of the PH4 route segment in the Heeia Coast area.

Results of the WBRR-Phase 1 survey: 0 favored/7 opposed.

Although WBRR-Phase 1 public feedback objected to the PH4/PH5 merger, the proposed changes remained the same.

Results of follow-up survey: PH4/PH5 (21 favored/15 opposed/15 comments).

Results of PH4 ride checks conducted along the discontinued Windward segment: 3 daily average boardings, no alightings, and of the 3 boardings, 1 went to JBPHH & 2 alighted in Kalihi at the bus stop on Likelike Highway at School Street.

Results of PH4 ride checks at the bus stop on Likelike Highway at School Street: 2 daily average alightings and 2 daily average boardings.

Title VI Policies and Definitions

DTS' Title VI Program contains the policies and procedures to determine if service changes are considered "major" and to evaluate the impact of major service changes to minority and low income populations.

Major Service Change Policy: Eliminating route segments or modifying span of service by more than 10% for a route is defined as major service change that requires DTS to perform a service equity analysis during the planning phase prior to implementation. Route segments are being eliminated from Routes 85, 87, and PH4; and trip duration for Routes PH4 and PH5 increases by more than 10%.

Disparate Impact Policy: DTS determines the occurrence of a disparate impact when adverse effects of a major service change disproportionately affects minority populations by more than 10% based on the difference between the proportion of the total minority and non-minority populations in the total service area and the proportion of the affected minority and non-minority populations within the affected service area, a ½ mile radius of the route.

Disproportionate Burden Policy: DTS determines the occurrence of a disproportionate burden when adverse effects of a major service change disproportionately affects low income populations by more than 10% based on the

difference between the proportion of the total low income and non-low income populations in the total service area and the proportion of the affected low income and non-low income populations within the affected service area, a ½ mile radius of the route.

Analysis Framework

Methodology: Population data using Census block groups were used to determine:

- Minority and low income proportion of the total service area population in the Census block groups served by the existing Route 85, 87, PH4, or PH5.
- Minority and low income proportion of the affected service area population located within a ½ mile radius of the proposed Route 85, 87, or PH4.

The differences between the minority proportions and low income proportions were calculated to determine disparate impact on minority populations and disproportionate burden on low income populations. Differences exceeding 10% indicate that the major service change affected minority populations disparately and low income populations disproportionately.

Data Tables:

Table 1: Census Block Group Minority Populations

Route	Total Service Area			Affected Service Area			% Difference Total-Affected Service Areas	Disparate Impact >10%
	Total Population	Minority Population	% Minority	Affected Population	Minority Population	% Minority		
85	244,978	41,636	17%	146,626	28,437	19%	+2%	No
87	200,179	38,305	19%	136,279	30,419	22%	+3%	No
PH4	95,922	11,460	12%	65,157	1,665	3%	-9%	No
PH5	74,216	1,801	2%	65,157	1,665	3%	+1%	No

Table 2: Census Block Group Low Income Populations

Route	Total Service Area			Affected Service Area			% Difference Total-Affected Service Areas	Disproportionate Burden >10%
	Total Population	Low Income Population	% Low Income	Affected Population	Low Income Population	% Low Income		
85	244,978	53,311	22%	146,626	38,796	27%	+5%	No
87	200,179	18,644	9 %	136,279	16,193	12%	+4%	No
PH4	95,922	45,161	47%	65,157	18,889	29%	-18%	No
PH5	74,216	17,420	24%	65,157	18,889	29%	+5%	No

Required Maps: (see Attachment 1)

Affected census block groups with minority and low income area block groups.

Assessing Impacts

Disparate Impact: The minority Census block group populations for the Routes' total service and affected service areas are shown in Table 1 above.

The effects of the service changes to Routes 85, 87, PH4, and PH5 do not exceed the disparate impact policy threshold of 10%.

- The minority population for Route 85 in the affected service area is 2% more than the minority population in the total service area.
- The minority population for Route 87 in the affected service area is 3% more than the minority population in the total service area.
- The minority population for Route PH4 in the affected service area is 9% less than the minority population in the total service area.
- The minority population for Route PH5 in the affected service area is 1% more than the minority population in the total service area.

Disproportionate Burden: The low income Census block group populations for the Routes' total service and affected service areas are shown in Table 2 above.

The effects of the service changes to Routes 85, 87, PH4, and PH5 do not exceed the disproportionate burden policy threshold of 10%.

- The low income population for Route 85 in the affected service area is 5% more than the low income population in the total service area.
- The low income population for Route 87 in the affected service area is 4% more than the low income population in the total service area.
- The low income population for Route PH4 in the affected service area is 18% less than the low income population in the total service area. The 18% applies to the affected non-low income population, who is impacted more by the proposed changes than the affected low income population.
- The low income population for Route PH5 in the affected service area is 5% more than the low income population in the total service area.

Service Equity Analysis

Based on the thresholds established in the DTS Major Service & Fare Change Policy and Disparate Impact & Disproportionate Burden Policies, the proposed service changes to Routes 85, 87, PH4, and PH5 do not have a disparate impact on minority populations, do not place a disproportionate burden on low income populations, and can be implemented as planned.

Route 85: Loss of service affects the segment located on Kaneohe Bay Drive between Mokulele Drive and Aumoku Street, however, ridership data validated with ride checks, indicated that daily ridership in this segment averages 3 boarding riders in the AM and 5 alighting riders in the PM. There is no loss of service for the other discontinued segment since it will be served by Route 87. In addition, the discontinued segments are located in Census block groups identified as predominantly non-minority and non-low income. In response to public feedback, the route has been extended to serve a residential community with local service but no peak period express service.

Route 87: Loss of service affects a short AM only segment located on Kailua Road between Kalaniana'ole Highway and Oneawa Street, however, ridership data validated with ride checks, indicated that daily ridership in this segment averages 4 boarding riders, and of the 5 affected bus stops, only the 2 end stops at Kalaniana'ole Highway and Oneawa Street are used. Adjacent bus stops will allow riders who currently board

in the discontinued segment to continue to use this route. The other discontinued segments will be served by Route 85 and most discontinued segments are located in Census block groups identified as predominantly non-minority and non-low income. In response to public feedback, the route has been extended to serve a residential community with local service but no peak period express service.

Route PH4: Due to time, distance, and very low ridership, the segments located on Kamehameha Highway between Haiku Road and Kahekili Highway (Heeia Coast) and on Kahekili Highway between Kamehameha Highway and Ahuimanu Road are being discontinued. According to ridership data and confirmed by ride checks:

- 1) Total route ridership along this segment averages 2-5 riders per day. On some of the ride check days, there were no boardings or alightings in this segment.
- 2) On the days with 5 riders, 2 riders go the JBPHH (1 regularly, the other occasionally). The regular rider boards at the first bus stop in the discontinued segment and is able to use Route 55 to transfer to PH4 at the nearest bus stop approximately a half mile away from the discontinued bus stop.
- 3) On the days with 5 riders, 3 riders alight prior to JBPHH, 1 in Kahaluu and 2 in Kalihi.

The new Route PH4 will travel from the Windward district to JBPHH along the H-3 interstate instead of the Likelike Highway; while this routing change provides faster service to JBPHH, it eliminates AM and PM service to the bus stops on Likelike Highway at School Street. Riders boarding at this bus stop can access JBPHH by transferring from a local route, and Windward riders can use Routes 85, 85A, or 88 to reach this bus stop. The discontinued segment in the Windward service area is located in Census block groups identified as predominantly non-minority and non-low income. The Likelike Highway/School Street bus stop is located in Census block groups identified as predominantly minority and low income, however, the main purpose of PH4 is to provide service for JBPHH employees who reside in Kaneohe. The new merged route has minimal impact to the travel time for Route PH4 riders, the AM trip decreases by approximately 10 minutes, and the PM trip increases by about 15 minutes.

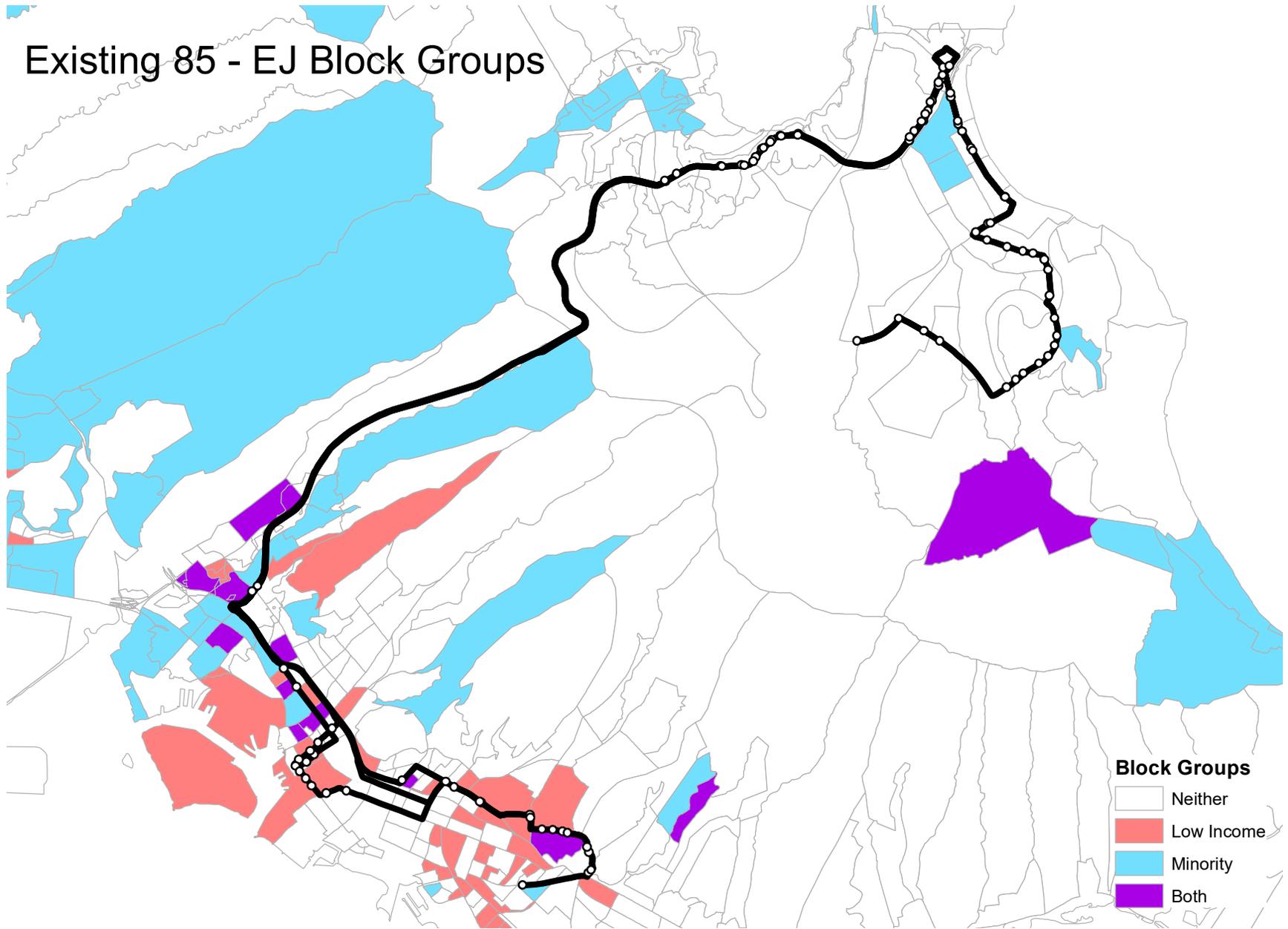
Route PH5: Riders will have an earlier and longer ride in the AM, and will have to alight on the other side of the street in the PM. The AM travel time of the new consolidated route has the most impact to Route PH5 riders as it increases by approximately 30 minutes, while the PM travel time decreases by about 5 minutes. While 30 minutes is a significant increase in travel time, the route consolidation was necessary to preserve the specialized peak express service for JBPHH employees who reside in the Windward communities of Kailua and Kaneohe. Most of the Kailua areas served by this route are located in Census block groups identified as predominantly non-minority and non-low income.

ATTACHMENT 1

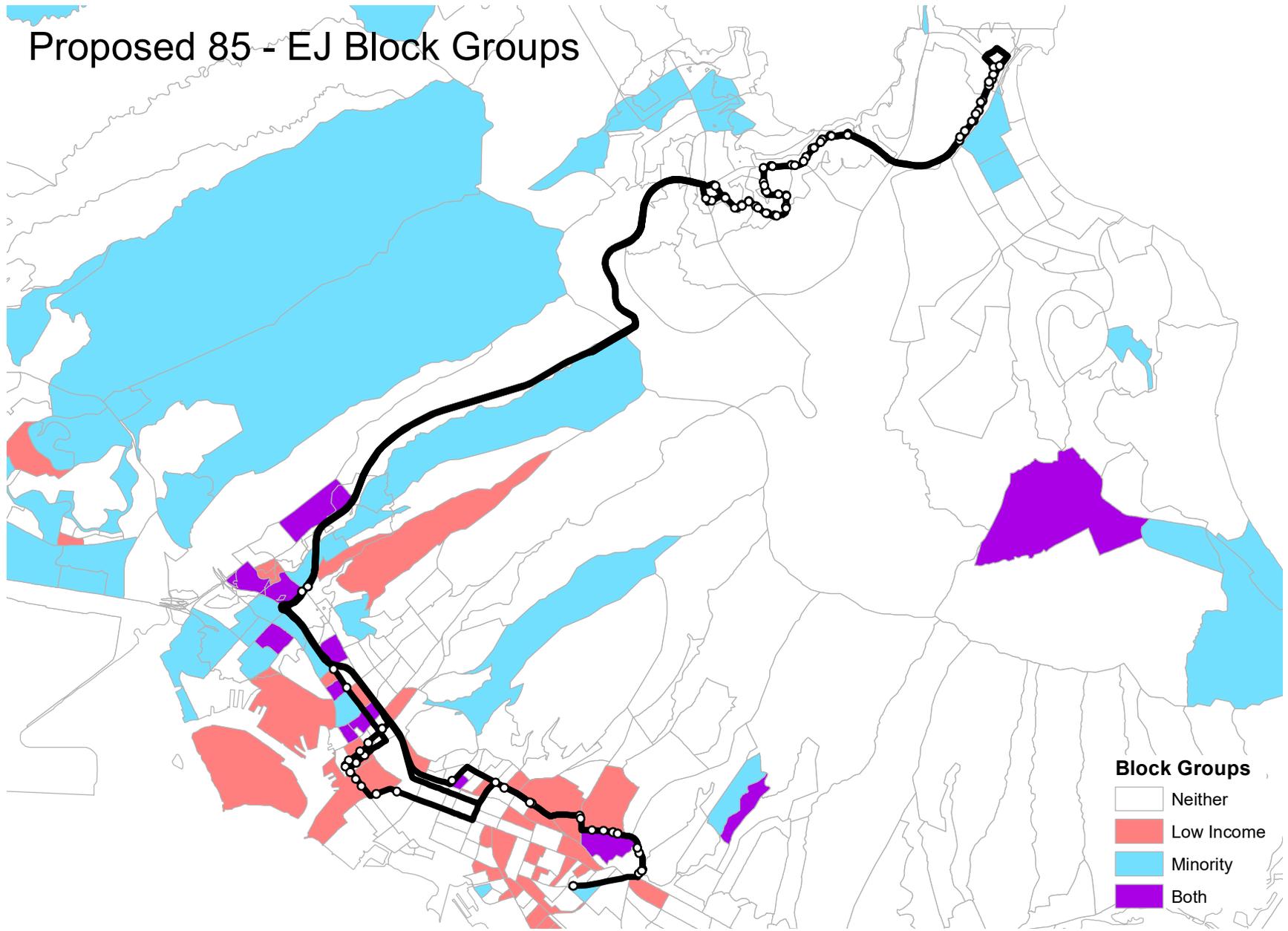
Individual Route Maps

85, 87, PH4, PH5

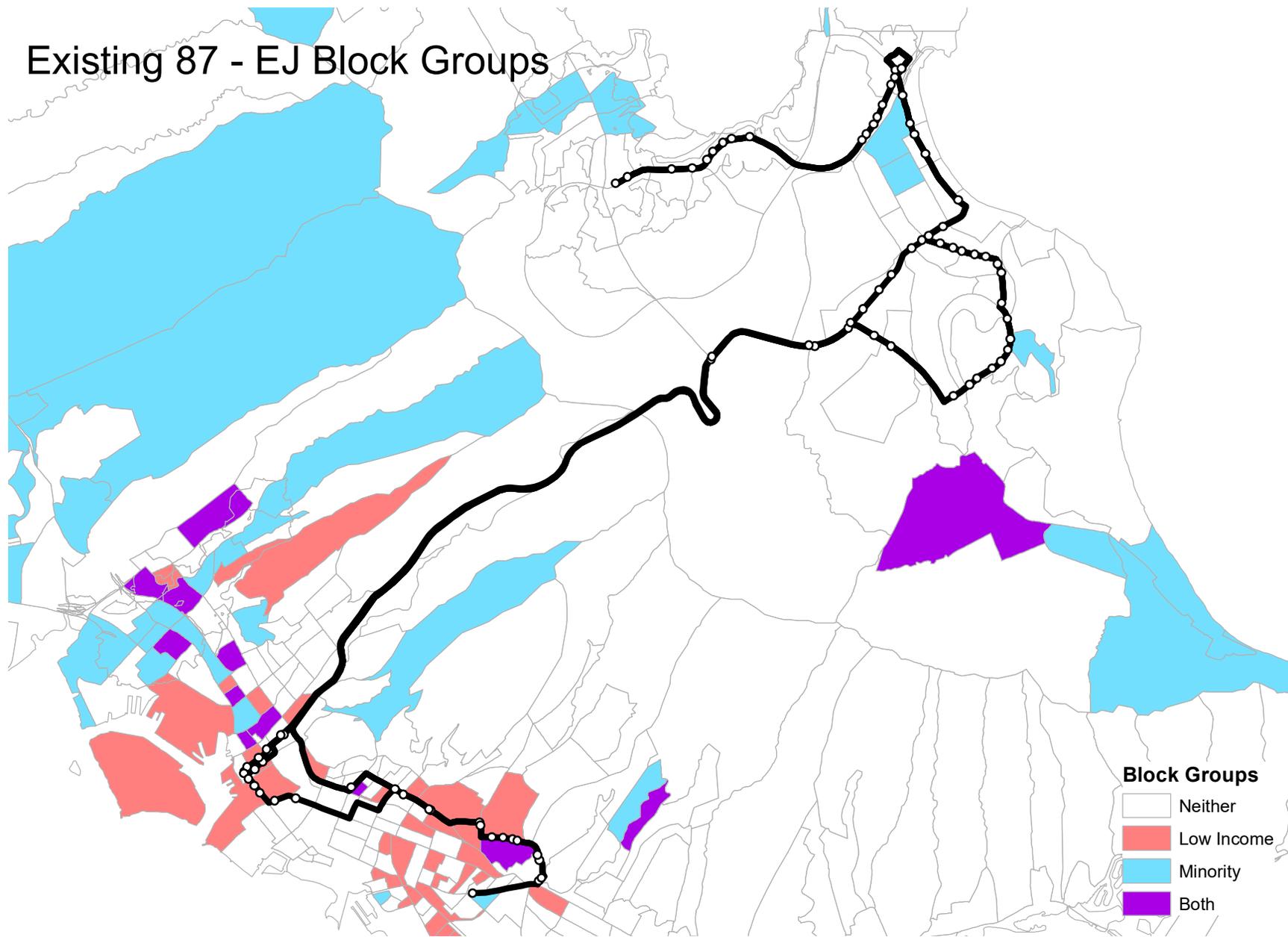
Existing 85 - EJ Block Groups



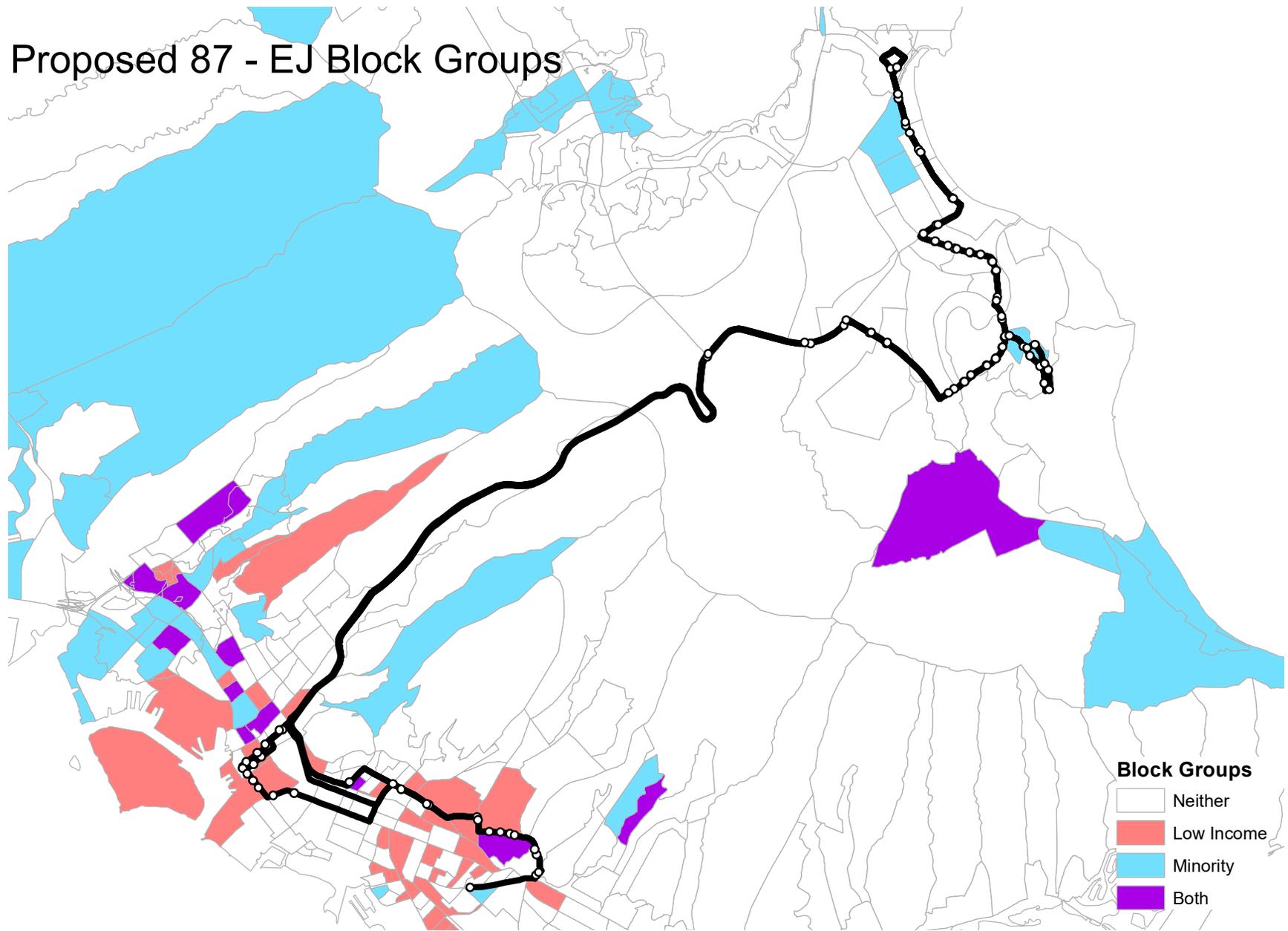
Proposed 85 - EJ Block Groups



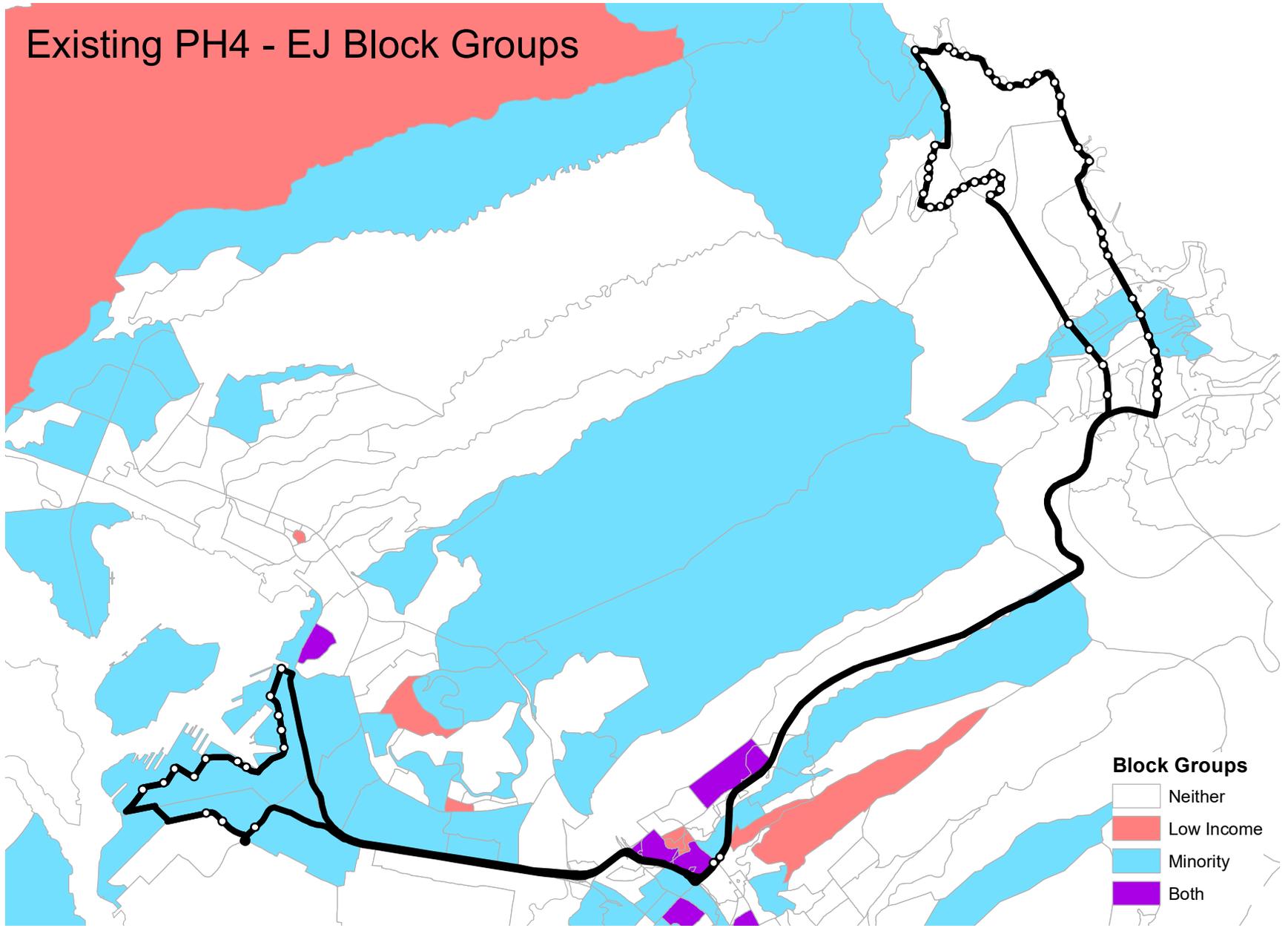
Existing 87 - EJ Block Groups



Proposed 87 - EJ Block Groups



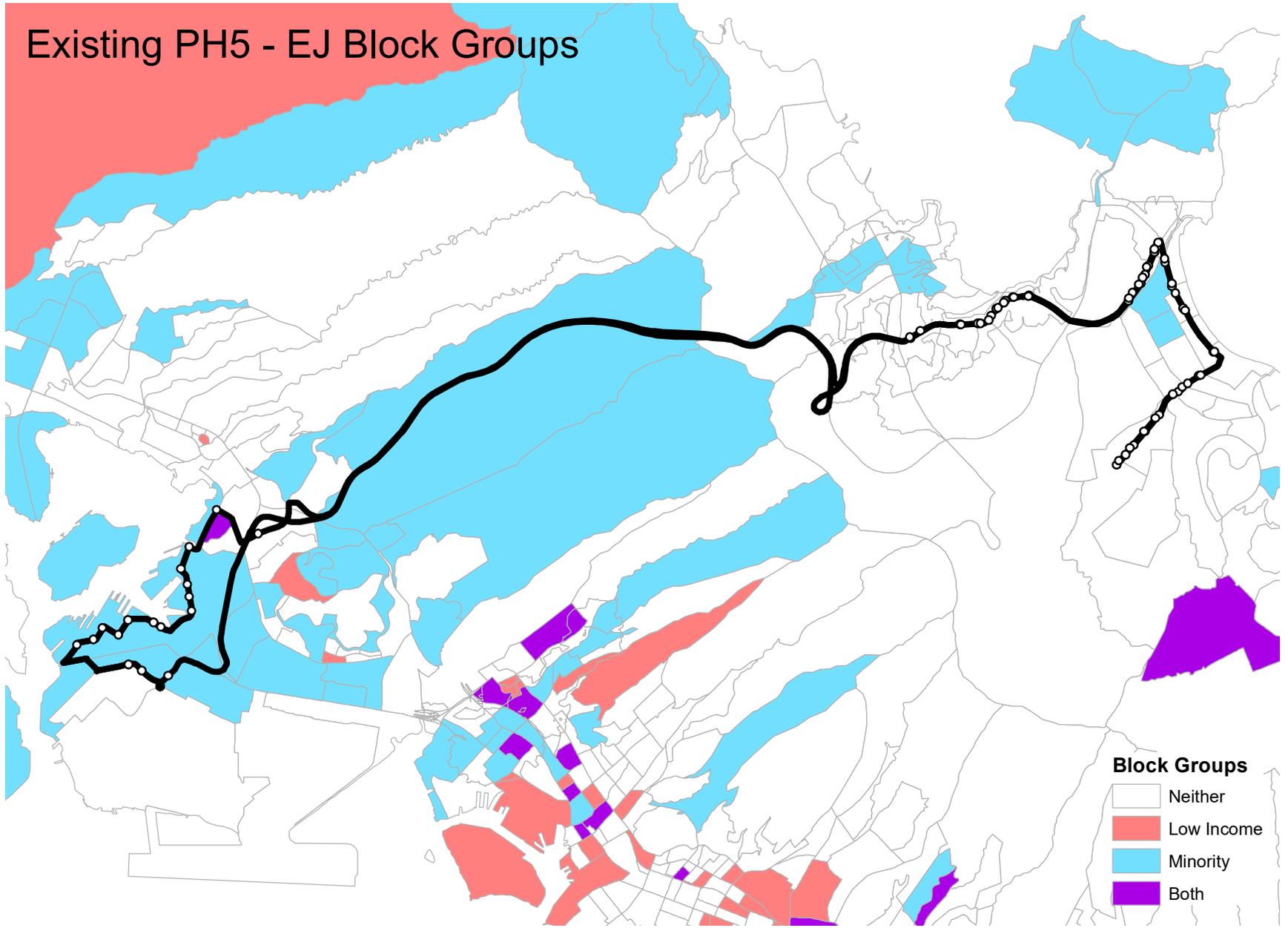
Existing PH4 - EJ Block Groups



Block Groups

- Neither
- Low Income
- Minority
- Both

Existing PH5 - EJ Block Groups



Proposed PH4 - EJ Block Groups

