CITY OF KIRKLAND
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MEMORANDUM

To: Transportation Commission

From: Blair Daly, Transportation Program Coordinator
David Gourlie, Transportation Engineering Analyst

Date: June 25, 2025

Subject: Pedestrian and Bicycle Count Data Collection

Staff Recommendation

It is recommended that the Transportation Commission receive a briefing on the City's pedestrian and bicycle count data collection methods.

Background

The Kirkland City Council states that Kirkland values an integrated multi-modal system of transportation choices. A City Council goals is to "reduce reliance on single occupancy vehicles and improve connectivity and multi-modal mobility in Kirkland in ways that maintain and enhance travel times, safety, health and transportation choices."[1]

Kirkland's Transportation Strategic Plan (TSP) and Active Transportation Plan (ATP) encourage and plan for increased utilization of 'walking and rolling' transportation modes (walking, biking, e-scooters, other micro-mobility devices). Goal T-2 in the TSP is to "create and maintain a high-quality network of complete and connected low-stress walking, rolling, and bicycling facilities, including sidewalks, trails, crosswalks, and bikeways making active transportation a first choice for many trips." Related to this goal is the following policy:

> *Policy T-2.6(a) Expand capabilities in gathering bicycle and pedestrian count data to better inform mode-split goals, effectiveness of projects and project identification, trip generators, and multimodal level-of-service evaluations.*[2]

Collection of pedestrian and bicycle count data

The City's current sources of pedestrian and bicycle count data fall into four categories:

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[1] https://www.kirklandwa.gov/files/sharedassets/public/v/2/city-managers-office/pdfs/2025-2026-council-goals.pdf

[2] https://www.kirklandwa.gov/files/sharedassets/public/v/1/public-works/transportation/plans-and-studies/kirkland-tsp-final.pdf

I. Ongoing counts at five locations along the Cross Kirkland Corridor

II. Ongoing counts at the intersection of Lake Washington Blvd NE and NE 59th St

III. Ongoing counts at the intersection of Kirkland Ave and 3rd St/State St

IV. Biannual counts at every intersection equipped with a traffic signal

I. Counts along the Cross Kirkland Corridor

Kirkland's most robust, multi-year collection of pedestrian and bicycle count data is comprised of counts taken at multiple locations along the Cross Kirkland Corridor.

The City utilizes two brands of counting devices on the CKC: Eco Counters and VivaCity Counters. The table below presents details about each device.

	Eco Counter	**VivaCity Counter**
Current Locations	1. CKC @ 128th Ln NE 2. CKC @ south of Totem Lake Connector bridge 3. CKC @ Kirkland Ave	1. CKC @ 7th Ave / NE 87th St 2. CKC @ 6th St S & 5th Pl S
Initial year of operation in Kirkland	2016	2025
Detection type	Infrared sensor	Camera
Power source	Internal battery (lasts up to 10 years)	Requires connection to A/C power
Modes counted	Peds, Bikes	Peds, Bikes, Vehicles, Buses, Trucks, Motorcycles
Mounting height	Between 2 and 3 feet	Between 15 and 25 feet
Easy to move to new counting location?	Yes	No
Online dashboard with robust data analysis tools?	Yes	Yes

Sample of queries answerable using available data

During the June 25 briefing staff will present a sample of questions that can be answered using available data, along with the answers. These are the sample queries:

- On the CKC at Kirkland Ave, what has been the change over time in the total ped + bike count in May of each year, going back as far as we have data?

- Comparing before and after the July 2023 opening of the Totem Lake Connector bridge, has there been an increase in people biking the CKC at 128th Ln NE, just northeast of the bridge?

- Since the City activated the counter on the CKC at 7th Ave / NE 87th St this past March, which five days have seen the highest ped + bike counts?

- On the CKC just south of the Totem Lake Connector, how large is the ped + bike count seasonal swing between winter and summer?

II. Counts at the intersection of Lake Washington Blvd NE and NE 59th St

A VivaCity counter is mounted on a pole at the northeast corner of Lake Washington Blvd NE and NE 59th St, next to the Ivar's restaurant and across the street from Houghton Beach Park. Since March 20, 2025 this camera sensor device has been collecting counts of pedestrians, bicyclists, and vehicles traveling through the intersection and using the crosswalk.

III. Counts at the intersection of Kirkland Ave and 3rd St/State St

The intersection of Kirkland Ave and 3rd St / State St (by the Kirkland Library, at the south end of the Transit Center) is the one signalized intersection in the city so far that is equipped with a Miovision camera setup. Since June 30, 2024 it has been counting pedestrians, bicyclists, and vehicles traveling through the intersection and using the crosswalks.

IV. Counts at every signalized intersection

Every two years transportation engineering staff contract with a vendor to carry out turning movement counts of vehicles, bicyclists, and pedestrians at every signalized intersection in the city. The company temporarily mounts cameras on signal poles. Video recordings are made in the spring or fall on one midweek day and one weekend day during the morning and afternoon peak travel times – 6:45 a.m. to 9:30 a.m. and 3:15 p.m. to 6:00 p.m. Humans or software then watch the recorded footage and perform the counts.

Next Steps

During the briefing staff will discuss additional planned locations for pedestrian and bicycle counting. With the completion of the initial implementation to create a baseline multimodal count program, staff will begin the discussion on which performance indicators the City should be tracking and how to best interpret the data to inform overall progress towards mode shift.