

CASE STUDY

SEATTLE'S EFFICIENT SOLUTION FOR CROSSWALK SAFETY

Western Systems partnered with the City of Seattle to create a unique, efficient solution for improving safety at a key mid-block crosswalk.

THE CHIEF SEALTH TRAIL IMPROVES MOBILITY ACROSS SOUTHEAST SEATTLE

The Chief Sealth Trail has been serving communities across the City of Seattle for more than a decade. Created at the community's request, the four-mile trail provides bicycle and pedestrian access to neighborhoods, businesses, shopping, and schools along the southeast side of the city.

The trail has been extremely popular since it opened in 2007, winning three awards in the first year and sustaining heavy traffic from casual pedestrians, commuters, school children, and runners. The agency has plans to eventually connect the Chief Sealth Trail to a local greenway, light rail stations, and downtown Seattle.



SURGING TRAIL TRAFFIC INCREASES RISK AT MID-BLOCK CROSSINGS

Seattle was already welcoming an increase in foot and bicycle traffic in 2019, reporting, for example, the highest pedestrian count ever recorded. All of those additional pedestrians and bicycles, of course, introduce new safety concerns. Collision rates including both pedestrians and cyclists had already started to rise again in recent years.

Then, like most of the country, Seattle also experienced changes in traffic due to the COVID-19 pandemic, including a dramatic increase in pedestrians and cyclists across the city. Pieces of the Chief Sealth Trail became early concerns, especially where the trail connects with and cuts across city streets, increasing foot traffic at intersections and along roadways.

Mid-block crossings were the first concern. Mid-block crossings are the most dangerous in any agency. Roughly 68% of fatal pedestrian and cyclist collisions happen at unmarked, non-intersections. Some of the mid-block crossings along the Chief Sealth Trail in Seattle are also located in areas of high priority in regard to equity and the City of Seattle's Race and Social Justice Initiative.

The agency needed a proven solution to improve pedestrian and cyclist safety at mid-block crossings along the trail.

A CREATIVE SOLUTION FOR MAXIMUM CROSSWALK SAFETY

Western Systems worked with the City of Seattle to provide a unique solution to improve safety at a mid-block crossing on the Chief Sealth Trail. The star of the project is a set of Carmanah RRFBs, which replaced Pedestrian Hybrid Beacons (PHBs, also referred to as HAWK beacons) at the crossing.

Tests continue to demonstrate the superior performance of RRFBs over other crosswalk safety devices. Bright LED lights on an irregular flash pattern are highly visible to drivers in any condition. RRFBs have proven to:

- Increase driver yields by up to 96%.
- Reduce pedestrian crashes by 47%.

The Chief Sealth Trail solution is especially unique, because RRFBs were mounted overhead as well as at the curb. RRFBs are generally mounted at the curb and on refuge islands, but making use of the existing hardware created an even safer and more efficient crossing.

The crossing was also upgraded with new signs featuring both pedestrians and cyclists, alerting drivers to the presence of faster-moving bicycles.



IMPROVED SAFETY, MOBILITY, AND EQUITY

Increased driver yields and pedestrian safety at the Chief Sealth Trail crossing has been immediately noticed by the community. The City of Seattle was able to transform one of the most dangerous parts of any roadway into another achievement for the trail.



“The city has worked hard, for decades, to demonstrate our commitment to equity,” said **Kadie Bell Sata, Senior Transportation Planner, City of Seattle**, “and improved safety and mobility is a key piece of that. The high visibility crossing improvements at this location, supplied by Western Systems, has improved pedestrian safety and by doing that, advanced the Race and Social Justice Initiative.”

Carmanah’s RRFBs are available in both AC and solar power applications and are MUTCD compliant. To learn more about their unmatched safety record and get a custom solution for your agency’s most important crosswalks, contact a Western Systems team member today.