

Seattle Department of Transportation

# SEATTLE PEDESTRIAN MASTER PLAN IMPLEMENTATION PLAN AND PROGRESS REPORT



UPDATED FEBRUARY 2023



**Seattle**  
Department of  
Transportation





Dear Neighbors,

The safety of people using our streets is my highest priority, and on my first day on the job, I issued a call to action and initiated a top-to-bottom review of our Vision Zero efforts. We will be responsive, innovative, transparent and accountable by publishing what we learn, and using the findings to make our Vision Zero efforts more effective.

Since moving to Seattle last summer, I have experienced what it's like to walk, bike, roll, scoot, and take transit throughout the city. I have averaged 12,000 steps per day living without a car during my first five months in Seattle and have joined over 50 community-led listening tours with neighborhood groups across the city. These tours have allowed me to learn first-hand about what's working and what still needs improvement in our pedestrian environment.

The Seattle Pedestrian Master Plan (PMP) is the long-term blueprint to achieve our vision of Seattle as the most walkable and accessible city in the nation. To achieve this outcome, we must focus on the safety and well-being of our residents and the vibrancy of our neighborhoods. As part of that, I am pleased to share the 2023-2024 Pedestrian Master Plan Progress Report and Implementation Plan, and I want to call attention to a few recent accomplishments that advance this vision:

- **Delivering on commitments to voters:** We are on track to meet commitments made in the Levy to Move Seattle for improvements that support pedestrians.
- **Improving neighborhood safety through Reconnect West Seattle:** To address impacts the closure of the West Seattle Bridge, we implemented speed humps, neighborhood greenways, and walkways across South Park, Georgetown, and Highland Park to enhance safety, access, and walkability in these neighborhoods.
- **Updating safety policies:** We recently updated policies to center the safety of people walking and rolling, through enhanced pedestrian crossings and timing traffic signals to give people crossing a head start.

- **Building on the success of Healthy Streets:** During the pandemic, Healthy Streets created safe spaces for people to walk, roll, and bike in their neighborhoods. We have started engaging with neighbors and making some Healthy Streets permanent across the city.

There is still work to do, and in addition to the Vision Zero top-to-bottom review, we are also:

- **Focusing on equity:** We are continuing to evolve our approach to equity, and this year developed partnerships with community groups and held neighborhood walks, focus groups, and surveys to learn how we can more equitably prioritize projects that serve community needs. We are also preparing a racial equity assessment for the PMP program that will help us to better center equity in serving pedestrian needs throughout the city.
- **Investing in our most collision-prone streets:** With an urgent need to improve pedestrian safety, mobility, and accessibility along Aurora Ave N, we are undertaking a planning study for the corridor in partnership with King County Metro to reimagine this critical street. We are also aggressively investing in crossing improvements along the crash-prone Rainier Ave S corridor.

This update comes at an exciting time as we engage the Seattle community in developing the 20-year [Seattle Transportation Plan \(STP\)](#), which will update our existing plans to meet Seattle's current and future needs. This is a moment where you can make your voice heard to shape Seattle's transportation system, including improvements to ensure people walking and rolling can get around safely and efficiently, and I hope you'll take the opportunity to engage.

Sincerely,

Greg Spotts  
Director, Seattle  
Department of  
Transportation



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# 1. INTRODUCTION

## BACKGROUND

Most of us are pedestrians at one time or another during the course of a day. Whether it's a walk to school or the bus stop, a few steps to our car, or a few miles around Green Lake, we walk to get places and to get exercise. Whether we are 8 years old or 80 years old, in a stroller, or navigating streets in a wheelchair, supporting a walkable city that's safe, vibrant, equitable, and healthy is key to our collective quality of life. It's also a critical component of achieving Seattle's Vision Zero goal of ending traffic deaths and serious injuries on city streets by 2030. And a safe, complete pedestrian network will support Seattle's Age Friendly efforts to make our communities great places to grow up and grow old.

As Seattle continues to grow, how can we become an even more walkable, accessible city for all? That's the question our Pedestrian Master Plan (PMP) helps to answer, and it's the vision we work to achieve.

To turn that vision into a reality, the PMP calls for improving walkability and accessibility by completing and maintaining Seattle's pedestrian network, focusing investments on streets near schools and frequent transit. Not only does the PMP aim to increase access and safety for people walking, it also establishes strategies and actions that prioritize vibrant public spaces and complete streets to make walking a more comfortable and enjoyable experience. Additionally, the PMP acknowledges the critical role of awareness campaigns to promote health and safety.

The PMP Implementation Plan comprehensively addresses near-term improvements to the

pedestrian environment in Seattle. It recognizes that improvements are developed by both public and private stakeholders and identifies projects and programs that, combined with existing pedestrian infrastructure, will make considerable progress towards achieving the PMP vision within the next five years.

Since 2016, the Seattle Department of Transportation (SDOT) has advanced PMP implementation with the voter-approved [Levy to Move Seattle](#). Updated in 2017, the PMP is one of four modal master plans funded by the Levy to Move Seattle: pedestrian, bicycle, transit, and freight. Together, they provide a blueprint for guiding safety and mobility investments through a time of unprecedented growth.

## PURPOSE

With significant gaps in Seattle's pedestrian network, including 26% of blockfaces citywide missing sidewalks, this implementation plan describes the work that SDOT and our partners will undertake to implement the PMP over the next 5 years. We update the implementation plan each year to:

- Provide an annual list of projects we plan to build
- Serve as an accountability and reporting tool
- Guide future budget requests

## REPORTING REQUIREMENTS

Consistent with [Council Resolution 31743](#), the appendices of this implementation plan will be updated annually. Adjustments are made to the project lists and maps in the report appendices to reflect changes to project schedules and project types.

Also, consistent with Council Resolution 31743, the PMP Implementation Plan includes:

- A prioritized list of SDOT's pedestrian capital investments
- A cost and funding summary
- A summary of pedestrian-related initiatives
- Cost-sharing opportunities with utilities and private investment

In the appendices of this plan, we also submit an annual progress report with updated performance measures. The PMP Implementation Plan and progress report are developed with input from the Seattle Pedestrian Advisory Board (SPAB).



### Commonly Used Acronyms in this Report

Acronym	Definition
PMP	Pedestrian Master Plan
PIN	Priority Investment Network
SPAB	Seattle Pedestrian Advisory Board
BPSA	Bicycle and Pedestrian Safety Analysis
ATR	Along the Roadway
CTR	Crossing the Roadway

## 2. PROJECT DELIVERY

We rely on key tools and practices to develop and deliver our projects, including conducting a [Complete Streets](#) review, applying the [Race and Social Justice Initiative equity toolkit](#), engaging with the public, and evaluating alternatives. Our public engagement process focuses on soliciting community input to ensure projects achieve their goals while balancing community interests. We describe these tools here and combine them along with guidance in the PMP to direct the project delivery process.

### COMPLETE STREETS POLICY

Pedestrian facilities are an integral aspect of [Complete Streets](#). Established in 2007, the Complete Streets ordinance guides how we develop projects to provide for all users of the roadway. We use a checklist to help us review the needs of other modes, relationships to land use, and the future vision for streets so that we can reflect those needs in our project development. Complete Streets checklists also allow us to identify coordination opportunities with other capital projects and ensure that we are delivering pedestrian improvements efficiently.

### RACE AND SOCIAL JUSTICE INITIATIVE

The vision of the City of Seattle's [Race and Social Justice Initiative](#) is to eliminate racial inequity in the community. To do this requires ending individual racism, institutional racism, and structural racism. The [Racial Equity Toolkit \(RET\)](#) lays out a process and a set of questions to help evaluate and guide project and program development. The toolkit is used at the program level to evaluate and improve program delivery and to evaluate and guide project investments. The PMP programs are also currently undergoing a more extensive racial equity assessment (REA)

process to evaluate how they can better prioritize and serve traditionally underserved communities. More information about the REA is provided in the appendices to this report.

### PUBLIC OUTREACH AND ENGAGEMENT

During the planning, design, and construction phases of all our projects, we plan for inclusive public outreach and engagement and strive to balance varying needs presented by comments that we receive at each step of our outreach processes.

We have developed an effective public engagement process built on gathering input from community members about their needs and concerns, presenting them with options that meet project goals and objectives, and incorporating their input along with our expertise and collected data in selecting a design for a particular project.

We use a wide variety of methods to reach stakeholders and community members, including mailers, drop-in events, online engagement, and taking information to regularly scheduled meetings and events of business and community-based organizations. Since early 2020, we have had to shift our engagement approaches away from large in-person events and rely more heavily on digital outreach methods, mailed materials, and small focus groups due to the health and safety concerns associated with COVID-19. Despite this shift, we will continue working with SPAB and the Department of Neighborhoods to strengthen our public outreach strategies and reach more people in engaging ways, including traditionally underserved communities and communities of color.



# 3. COST-EFFECTIVE WALKWAYS AND SIDEWALKS

## COST-EFFECTIVE WALKWAYS

Recognizing that approximately 26 percent of all blockfaces in Seattle lack sidewalks and that traditional concrete, curb and gutter sidewalks cost \$400,000 or more per block to construct, we work to maximize resources and provide sidewalks to more streets as quickly as possible by using lower-cost walkway improvements where feasible. Walkways can often be installed for less than one-half the cost of traditional sidewalks and allow us to use our available

resources for pedestrian facilities to provide improvements across a larger portion of the city. There are a variety of walkway treatments we can use, and selected treatments depend on the street, including the available right of way, drainage needs, impacts to parking, street slope, and the location and number of driveways. We continually explore new and innovative solutions to reduce the cost of sidewalks, and the walkway treatments currently in our toolbox include:



*Grade-separated asphalt walkways (can be stamped or stained)*



*Delineated, at-grade concrete walkways*



*Painted walkways*



*Delineated, at-grade asphalt walkways*



As we implement the PMP, we'll continue to use cost-effective walkways where appropriate. Non-arterial residential streets generally have the lowest traffic volumes and are the most ideal locations to provide these treatments while supporting comfortable and inviting spaces for pedestrians. For this reason, cost-effective options will be the most common treatment for non-arterial streets. There may be opportunities, however, for an incremental approach, where cost-effective walkway improvements are completed before full sidewalk, curb, and gutter can be installed. To ensure we're efficiently using PMP implementation and partner funding, we will evaluate all new sidewalk projects for their potential for cost-effective options while prioritizing pedestrian safety and comfort.

### **TRADITIONAL SIDEWALKS**

While we actively look for opportunities to stretch our investments further with lower-cost

pedestrian facilities, there are many streets where cost-effective walkways are not feasible. Arterial streets, for example, are generally a priority for installing grade-separated concrete sidewalks with curb, gutter, and a buffer from moving vehicle traffic due to their higher speeds and traffic volumes. Many non-arterial streets also have topographical and drainage constraints that make it difficult to construct cost-effective walkways.

Traditional concrete sidewalk investments also go through a more substantial scoping process to coordinate with other needs along corridors, including transit improvements and natural drainage infrastructure. As detailed in the chapter below, we use the scorings in the Priority Investment Network as well as potential leveraging opportunities to determine the locations of both new sidewalks and cost-effective walkways.



*Cost-effective asphalt walkway on S Byron St*



*New traditional sidewalk on Meridian Ave N*

# 4. CAPITAL PROJECT SELECTION FRAMEWORK

As discussed throughout this plan, pedestrian improvements in Seattle, including new sidewalks, crossing upgrades, and public space enhancements, are delivered by various public and private stakeholders, including utility providers, outside agencies, and private developers. Recognizing that our partners are contributing towards the PMP’s vision, we use a data-informed process to prioritize PMP implementation funding to leverage the contribution of partner projects and equitably deliver the highest value mobility and safety improvements for pedestrians. The following

chapter describes the process we are using to prioritize near-term investments that move Seattle toward being the most walkable city in the nation.

### PIN DEVELOPMENT AND SCORING

The PMP defines a “Priority Investment Network” (PIN) that identifies the locations most in need of pedestrian improvements and are the focus of our investments. The PIN is comprised of streets and pedestrian crossings that serve as key routes to K-12 public schools and frequent transit stops, as defined by the following walkshed analyses.

Factor	Source	Scoring
¼ mile walkshed to all K-12 Seattle Public Schools	SDOT GIS	Scoring is binary: either a segment is included or it is not. There is not a higher weighting for segments that fall within multiple walksheds. A street segment is included within the PIN if any portion of that segment lies within the prescribed walkshed distance to a K-12 Seattle Public School.

Factor	Source	Scoring
Frequent Transit Network arterials	Transit Master Plan	Scoring is binary: either a segment is included or it is not.
Walksheds to Frequent Transit Network stops ⅛ mile to frequent bus stops ¼ mile to all Bus Rapid Transit (BRT) and Streetcar stops ½ mile around all Light Rail Transit (LRT) stops ½ mile around all existing or planned transit hubs*	Transit Master Plan	Scoring is binary: either a segment is included or it is not. There is not a higher weighting for segments that fall within multiple walksheds. A street segment is included within the PIN if any portion of that segment lies within the prescribed walkshed distance to a frequent transit stop.

\*Transit hubs are where an existing or planned LRT, BRT or streetcar route, as identified in the Transit Master Plan, intersects with at least one other of these routes.

The PIN includes:

- "Crossing the Roadway" (CTR) locations: pedestrian crossing opportunities at arterial intersections—a total of 4,293 locations
- "Along the Roadway" (ATR) locations: opportunities to improve pedestrian safety and comfort along blockfaces—a total of 24,105 locations

We also assigned a base score to each street segment and intersection within the PIN that accounts for various health and equity factors (focusing on the City's [Race and Social Justice](#) goals), as well as safety factors for arterial streets and intersections. These scores provide the foundation for prioritizing projects for implementation.

## FILTERING THE PIN FOR IMPLEMENTATION

The number of potential projects in the PIN greatly outweighs the funding we expect to have available over the next 5 years. Additional criteria are needed to filter the PIN and create a data-informed process to select the highest-priority projects that align with the funding available. The PMP directs us to select near-term projects by building upon the quantitative scoring completed during PMP development and adding qualitative factors to the selection process, including leveraging opportunities, policy directives, community interest, and geographic balancing. These quantitative and qualitative

factors provided the basis for selecting projects for the work plan. Using this project list, we then field checked each project site and adjusted the final list based on the feasibility of constructing an improvement at each location.

## Leveraging Opportunities

There are several ways we can leverage funding and resources to reduce implementation costs for pedestrian improvements. The first way is through project coordination. Integrating sidewalks, lighting, and crossing improvements into the construction of adjoining capital projects results in significant cost savings and efficient delivery of improvements. The *Major Projects Update* chapter identifies pedestrian improvements that will be constructed with large capital projects planned throughout Seattle.

We have also developed a process for determining whether PMP funding should be dedicated to future coordinated projects. To evaluate these opportunities, we divided up streets and intersections within the PIN into 5 tiers based on their total scoring (detailed in the table below). During the scoping phase of new capital projects, we identify any crossings or streets in the top 2 tiers that are within the boundaries of the capital project. If these streets or intersections warrant pedestrian investments, we may dedicate PMP implementation funding to the project to build out these improvements and incorporate them into our project list.

Project Tiers and Total Scoring Ranges					
Project Type	Tier 5	Tier 4	Tier 3	Tier 2	Tier 1
CTR: Unsignalized Intersections	0-24	25-35	36-46	47-59	60-90 (max score)
CTR: Signalized Intersections	18-34	35-45	46-55	56-65	66-84 (max score)
ATR: Arterials	5-36	37-50	51-65	66-82	83-115 (max score)
ATR: Non-Arterials	0-12	13-22	23-33	34-47	48-69 (max score)



We also leverage our own investments by including “gap fillers” into our sidewalk projects. For example, if 2 blocks missing sidewalks prioritize in the PIN for new sidewalk funding, but are separated by a third block that is also missing sidewalks and does not prioritize, we still package all 3 blocks of sidewalk for construction. This helps us avoid creating a piecemeal sidewalk network and takes advantage of project coordination and cost-saving opportunities.

Federal and state grants provide additional ways to help fund pedestrian infrastructure improvements prioritized in the PIN. As outlined in the PMP, both the State of Washington and the U.S. Department of Transportation offer grant programs designated for non-motorized transportation facilities, which can be used for new sidewalks and crossing improvements.

### Policy Directives

The Mayor and City Council frequently adopt plans, policies, and resolutions that direct us

to prioritize certain projects or criteria in our implementation strategy. These directives allow elected officials to respond to the needs of their constituents and accelerate top priority projects. We incorporate policy directives into our work plan and reprioritize projects as warranted by Mayor and City Council action.

An example of a policy directive that informed our PMP implementation strategy is the Age-Friendly Communities Resolution ([Resolution 31739](#)) adopted by the Mayor and City Council in March 2017. This policy directs us to incorporate age-friendly considerations into the PMP Implementation Plan. To respond to this measure, we’ve partnered with the Human Services Department (HSD) to develop an additional “age-friendly” scoring factor that accounts for older adult population density (first-mile network) and older adult-focused destinations (last-mile network) throughout Seattle to shift project prioritization based on these factors. This scoring was added to the base PMP scoring.

Age Friendly Scoring Framework			
Category	Factor	Source	Scoring
First-Mile Network	Percent population over 64 years old by census block group	US Census Bureau	0: 0-7% over 64 y/o 2: 7-13% over 64 y/o 4: 13-20% over 64 y/o 6: 20-32% over 64 y/o 8: 32-58% over 64 y/o
Last-Mile Network	¼ mi to Congregate Meal Program sites for older adults	HSD GIS	Scoring is binary: scoring is either 0 or 1 based on inclusion in the congregate meal sites walkshed.
	¼ mi to senior centers	HSD GIS	Scoring is binary: scoring is either 0 or 2 based on inclusion in the senior centers walkshed.
	¼ mi to health care facilities	US Department of Health and Human Services	Scoring is binary: scoring is either 0 or 2 based on inclusion in the health care facilities walkshed.

## Community Interest

Local community members and stakeholders often express interest in pedestrian improvements that are considered priority projects for their neighborhood. To determine which neighborhood priorities should be included in the PMP work plan, we monitor public requests for improvements and balance this with the project’s PIN scoring on a case-by-case basis. Projects with community backing that rank within the top two PIN tiers are reprioritized for implementation in the PMP project list as funding is available. We also look at neighborhood plans and transportation studies to determine which requested projects have been identified as community priorities.

To assist with community requested projects, we leverage partnerships with the City’s community grant programs, including Neighborhood Street Fund, Neighborhood Matching Fund, and Your Voice, Your Choice, to identify community priorities. We contribute PMP implementation funding to these projects where warranted by PIN scoring and where grant funding is unable to cover the full cost of the projects.

## Geographic Balancing

In addition to selecting projects based on health, equity, safety, and age-friendly factors, we ensure

that the project list achieves a sound geographic balance without undermining its focus on equity. The PIN map at the end of this chapter highlights the geographic discrepancies in the existing pedestrian network. For example, North Seattle has the greatest gaps in the arterial sidewalk network while South Seattle has a significant number of missing sidewalks on non-arterial streets. This data helps to inform our distribution of project types to ensure that we invest in projects where they are most needed.

After applying all scoring factors to the CTR and ATR locations on the PIN, including the equity/health score, the age-friendly score, and the urban village score (explained in detail below), we found that the distribution of projects were well-balanced citywide with most projects allocated to areas with less-developed pedestrian networks. No additional adjustments were made to redistribute projects geographically.

## PRIORITIZATION OF PROJECT TYPES

To develop the final project selection for the PMP work plan, we separated CTR and ATR projects into four project types (shown in the table below) that correspond to the type of improvement(s) that would be made at each location and the budget necessary to implement these projects:

Project Treatments and Assumed Costs*		
Project Types	Treatments	Assumed Cost
CTR: Unsignalized Intersections	New Signal (Full)	\$350,000 - \$500,000
	New Signal (Pedestrian)	\$250,000 - \$500,000
	Rectangular Rapid Flashing Beacons	\$50,000/pair
	New Crosswalk Striping with Signs	\$5,000 - \$10,000
	Pedestrian Refuge Island	\$10,000 - \$30,000
	Curb Bulb/Curb Extension	\$40,000 - \$150,000/corner
	Painted Curb Extension	\$10,000 - \$15,000/corner
	Curb Ramp	\$15,000 - \$20,000/ramp
CTR: Signalized Intersections	Signal Timing Revisions (e.g., Leading Pedestrian Intervals)	\$5,000 - \$50,000
	Turn Restrictions	\$3,000 - \$10,000
	Curb Bulb/Curb Extension	\$40,000 - \$150,000/corner

Project Types	Treatments	Total Estimated Cost
ATR: Arterials	Traditional Sidewalks	\$400,000 - \$800,000/blockface
ATR: Non-Arterials	Painted Walkways	\$15,000 - \$30,000/blockface
	At-Grade Concrete or Asphalt Walkways	\$100,000 - \$200,000/blockface

\*Estimated costs are for the current year and are not adjusted for inflation.

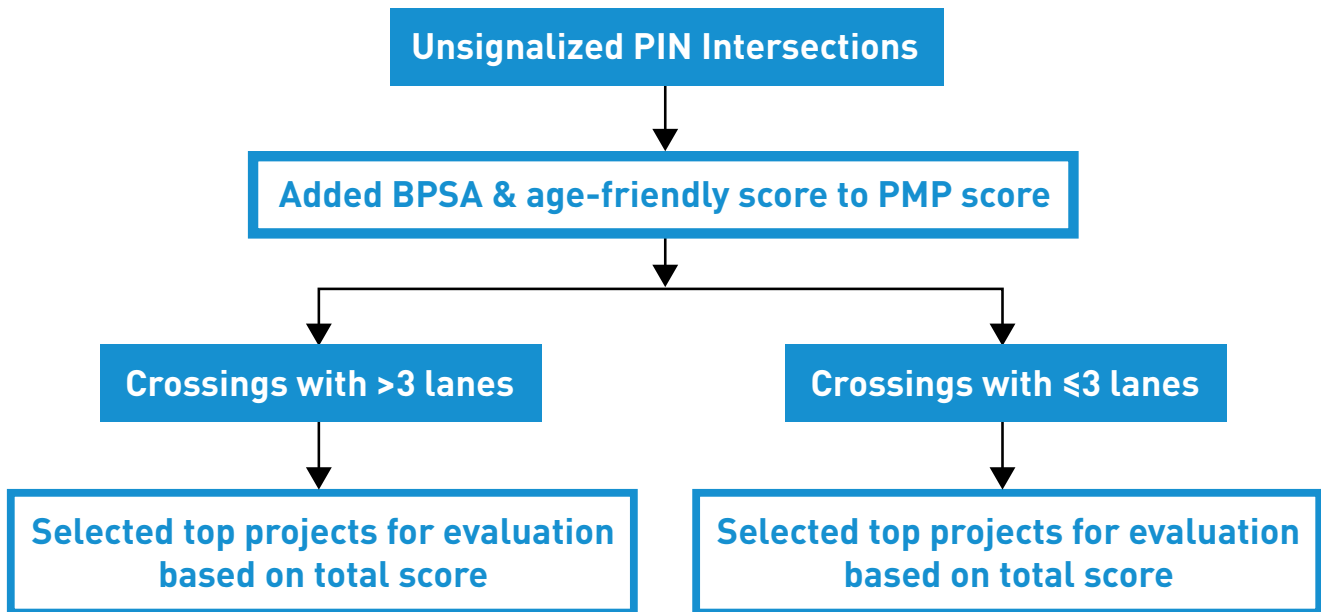
Other PMP-funded improvements, including new stairs and pathways, Safe Routes to School projects, pedestrian lighting, and sidewalk repair, use separate prioritization processes to meet specific program needs.

### Crossing the Roadway: Unsignalized Intersections

Intersections undergo extensive case-by-case evaluations to determine whether a pedestrian crossing is appropriate. If an intersection meets our guidelines for a crossing, we evaluate what treatments should be installed to best enhance safety for pedestrians. We look at factors such as traffic speeds and volumes, pedestrian volumes, the number of roadway lanes, and the distance to the nearest controlled crossing when identifying crossing improvements. For this reason, we are not able to scope every individual crossing treatment to be implemented over the next 5 years based on our existing data alone. Instead, we use the PMP scoring to select intersections to evaluate for crossings.

With existing unsignalized intersections, we know that providing crossings on streets with more than three lanes of vehicle traffic typically requires a new traffic signal due to the risk of a multiple threat collision—a situation on multi-lane streets where a driver in one lane stops for a pedestrian, obscuring the view between the driver in the adjacent lane and the pedestrian. The pedestrian continues to cross the street and a collision occurs as the driver in the second lane continues through the crosswalk. Streets with three or fewer lanes, however, may only need a simple marked crosswalk, curb extension, or flashing beacon, which are significantly less costly treatments. For this reason, we separated these 2 types of crossings when selecting intersections to evaluate.

In our prioritization process, we also included a binary scoring factor (score of either 0 or 5) based on whether the intersection was identified as a “higher priority intersection for pedestrians” in our Bicycle and Pedestrian Safety Analysis (BPSA). The BPSA examines collision patterns to

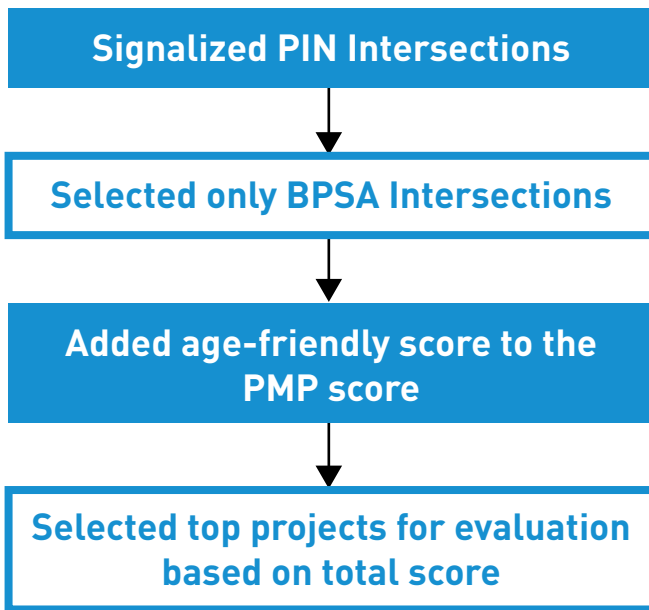




proactively identify locations and prioritize safety improvements with the goal of preventing future crashes. We added the BPSA score to the PMP base score and age-friendly score to produce a total score to use in selecting the intersections to evaluate.

### Crossing the Roadway: Signalized Intersections

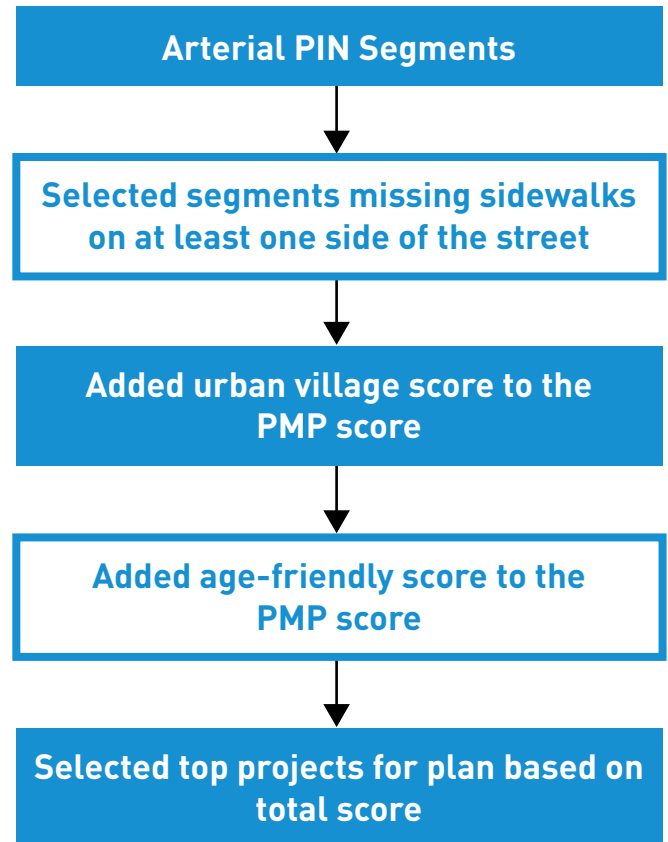
Most of the higher priority intersections in the BPSA are existing signalized intersections. Recognizing that these intersections have characteristics correlated with higher rates of pedestrian collisions, we're focusing our signalized intersection investments only at these locations. Using strategies such as leading pedestrian intervals, turn restrictions, protected turning movements, countdown signals, and curb extensions, we selected signalized intersections based on the total project scoring.



### Along the Roadway: Arterials

To complete the prioritization of arterial blocks for new sidewalk construction, we started with all arterial blocks within the PIN, then selected all blocks that were missing sidewalks on at least one side of the street, recognizing that arterials are high priority for full sidewalk construction on both sides of the street.

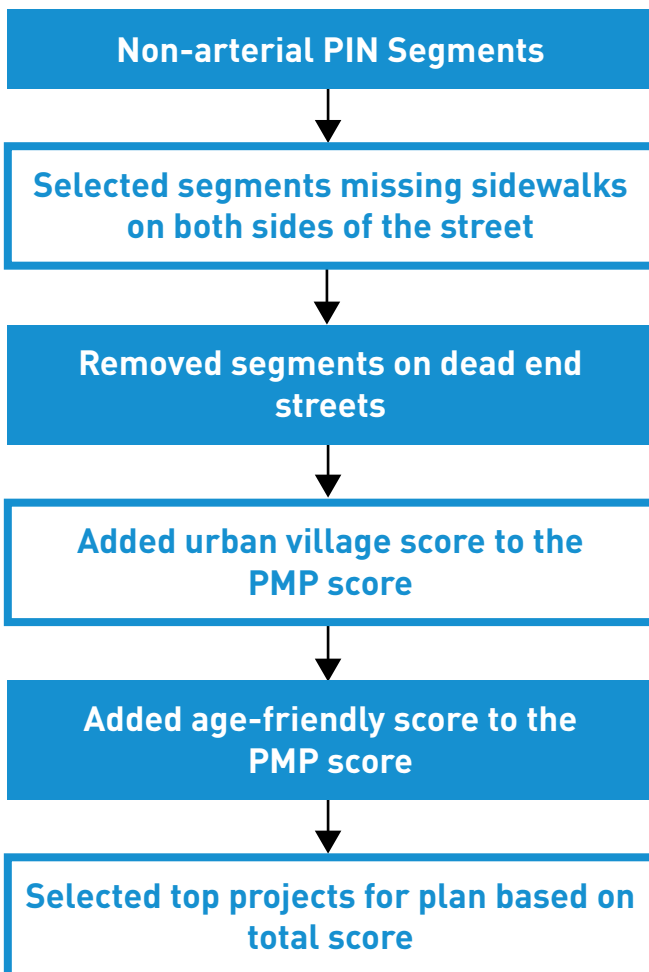
Consistent with [Seattle’s Comprehensive Plan, Seattle 2035](#), we further prioritized sidewalk development around urban centers and urban villages by adding a binary scoring factor (score of 0 or 15) to street segments within or adjacent to residential urban villages, hub urban villages, urban centers, or urban center villages. These are places with a higher density of people living and walking. These are also places where 80% of pedestrian collisions occur. The maps at the end of this chapter show the PIN overlaid on Seattle’s urban villages and urban centers.



With the urban village scoring included, we then added the age-friendly score and spot checked the top-scoring blocks to remove blocks that wouldn't provide the highest value for near-term investments. These include blocks that are not feasible or desirable to construct a sidewalk, such as freeway on/off-ramps, or blocks that don't provide connections to other existing sidewalks or destinations.

### Along the Roadway: Non-Arterials

We selected non-arterial sidewalk projects using largely the same process as arterials, but focused only on blocks missing sidewalks on both sides of the street. We also included an additional filtering factor that removed all dead end blocks from our prioritization. This is based on the assumption that dead end streets offer a more comfortable pedestrian environment due to lower vehicle volumes.



### Sidewalk Development on Aurora Ave N

There are currently about 30 blocks of missing sidewalk along the Aurora Ave N corridor. While this corridor scores highly in the PIN, supports frequent transit, and offers connections to housing and businesses, the costs to implement new sidewalks along Aurora Ave N exceed our available funding due to long blocks and available right of way. As a result, we are currently studying pedestrian and traffic safety alternatives along the corridor with the support of a grant from the Washington State Department of Transportation.

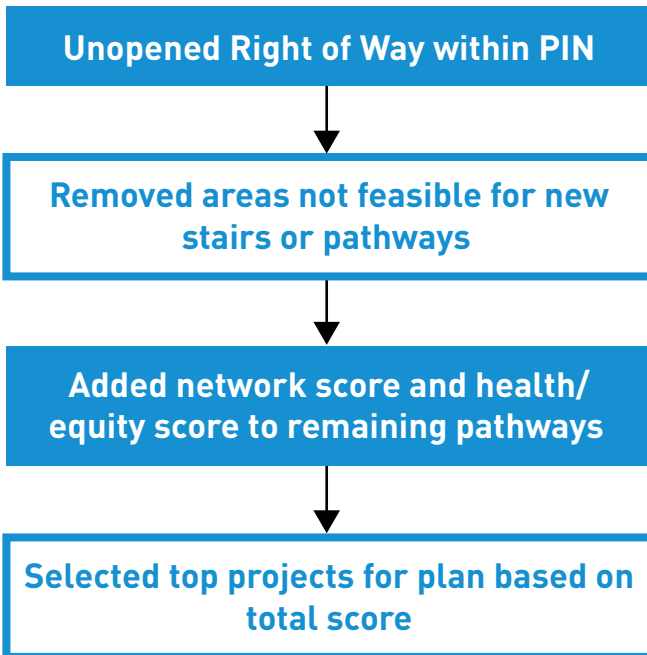
This study is intended to provide a comprehensive vision of the Aurora Ave N corridor, including recommendations for addressing safety upgrades, missing sidewalks, and long gaps in controlled pedestrian crossings. In the meantime, we are planning to address several near-term projects along the corridor to enhance mobility and safety for pedestrians.

### Off-Street Stairways and Pathways

Stairs and pathways in unimproved rights of way can provide people with access to key destinations in areas where the existing street network doesn't offer an easy or direct connection. While only a small portion of PMP implementation funding is used to open rights of way with new stairs and walkways, we have developed a prioritization framework for where these investments should occur.

Starting with all unimproved rights of way within the PIN, we removed all areas that would not provide a reasonable stair or walkway connection, such as areas of right of way that do not connect to existing streets. With a list of potential stair and walkway sites, we added the PMP's health/equity score to each site as well as a "network score" that measures the reduced walking distance

by adding a new stair or walkway connection versus using the existing street network. Based on this total scoring, we selected the top projects for implementation while ensuring geographic balance throughout Seattle. Although the scoring system differs for new stairways and pathways, the project list for these off-street connections has been added to the project list for non-arterial sidewalk projects. This allows us to more clearly show how these projects integrate with the implementation plan for new sidewalks.



## SAFE ROUTES TO SCHOOL PROJECTS

The Safe Routes to School program builds and improves infrastructure to support safe school environments. While the program focuses on pedestrian safety improvements near schools, it is funded separately from PMP implementation projects.

To make sure that we’re responsive to school safety needs, we use a school-based prioritization process for Safe Routes to School projects, rather than a project-based prioritization. This process, which we established in the [Safe Routes to School Action Plan](#), uses the average PMP score for street segments and intersections within a 600-foot walking radius around each school. It applies additional safety and equity criteria to identify the highest priority schools where Safe Routes to School infrastructure funding will be focused. This helps us direct investment to the schools with the greatest needs.

We prioritized schools separately for ATR and CTR projects due to the differing safety needs at schools across the city. With this prioritization, we created two separate lists of priority schools for the program. Schools with higher scores are higher priorities for improvements.

Along the Roadway Prioritization Criteria for Safe Routes to School Projects		
Category	Measure	Points
System completeness	Current network completeness, based on the average PMP score for all street segments within the school area	50
Equity	Percentage of students at the school within communities of color	40
Safety	Bicycle and pedestrian collisions from past three years within school area	10



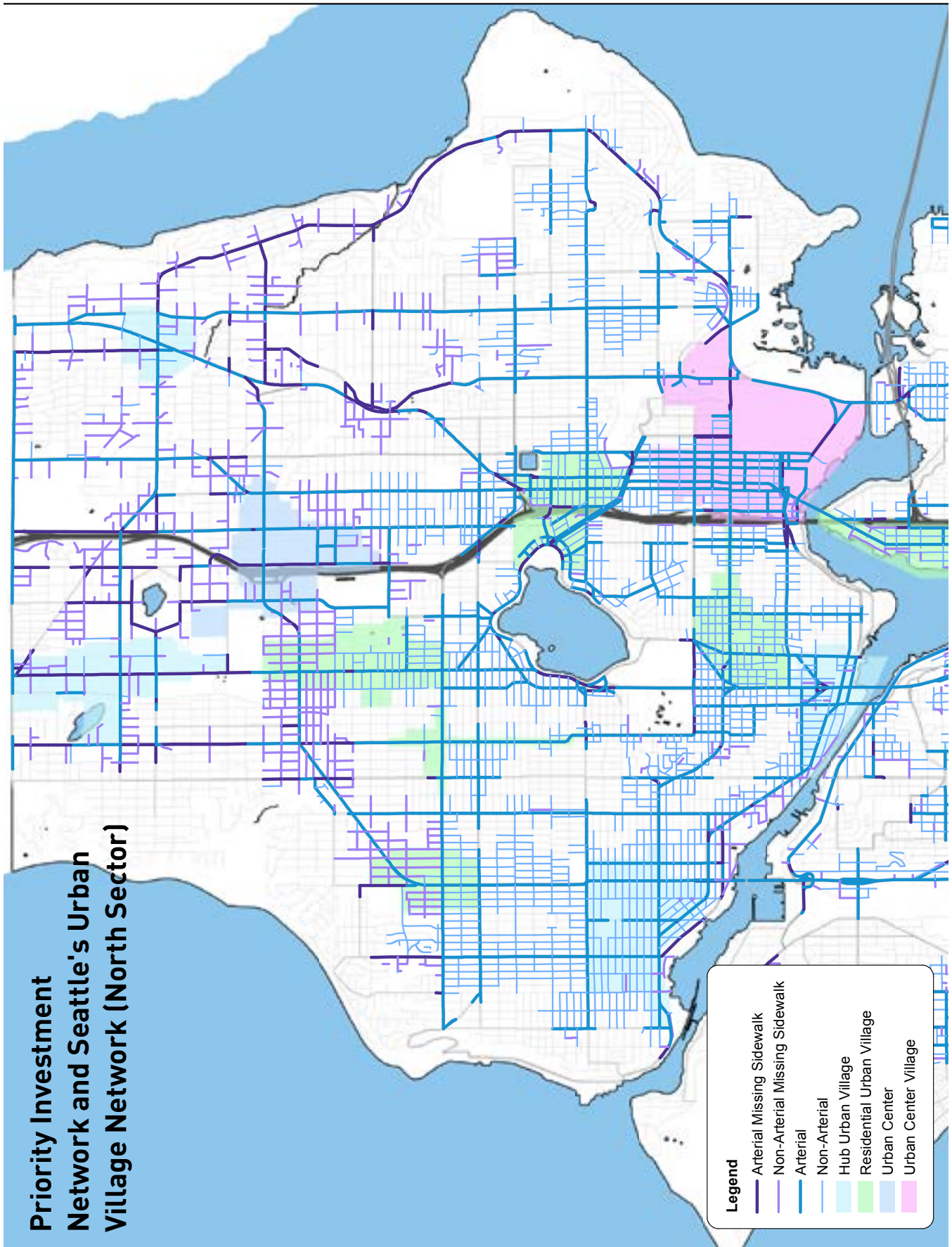
Crossing the Roadway Prioritization Criteria for Safe Routes to School Projects		
Category	Measure	Points
System completeness	Current network completeness, based on the average PMP score for all intersections within the school area	50
Equity	Percentage of students at the school within communities of color	40
Safety	Bicycle and pedestrian collisions from past three years within school area	10

## PEDESTRIAN LIGHTING

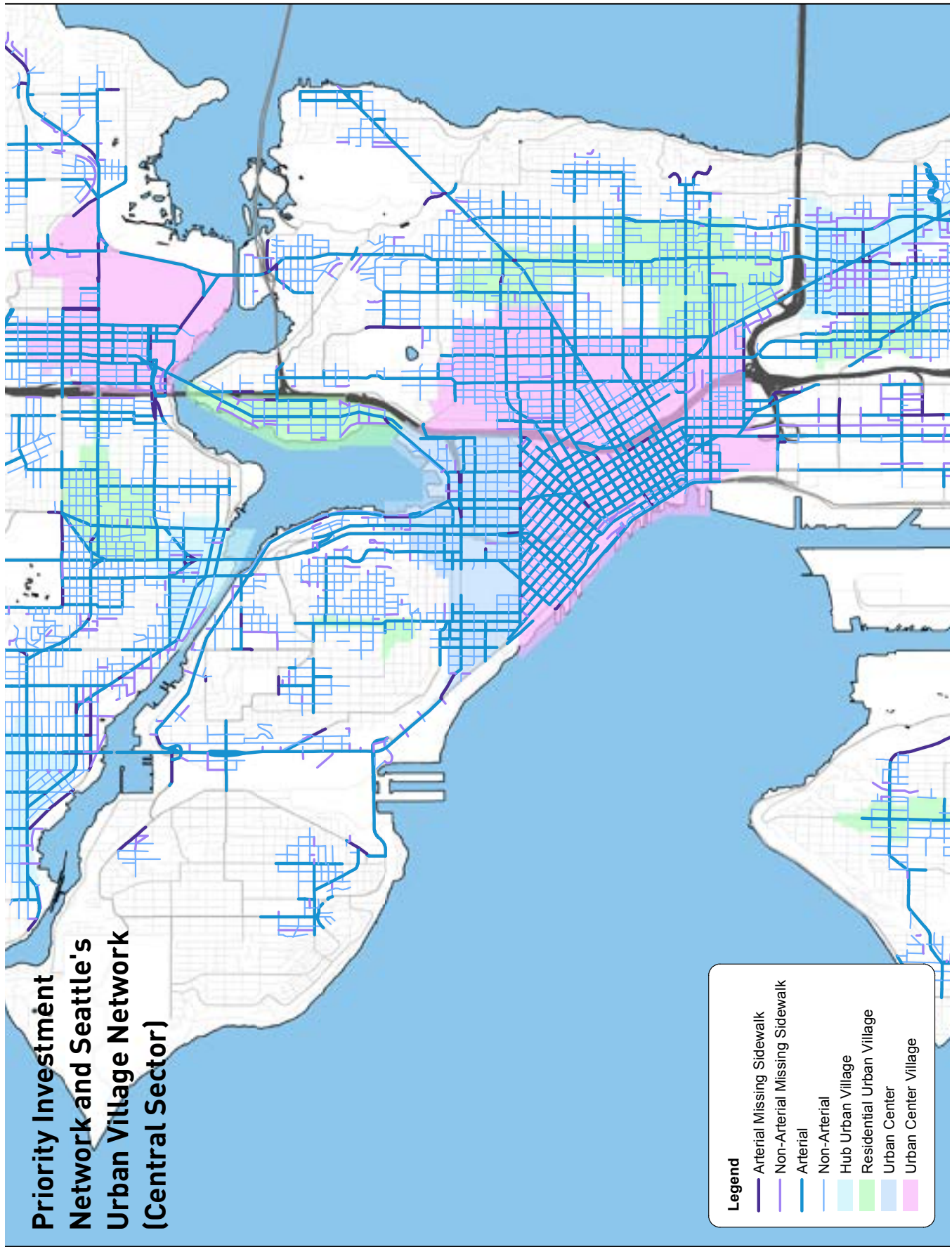
Pedestrian lighting is necessary for navigation and providing visibility and security in spaces where people walk. While we have a small budget to construct pedestrian-scale lighting in priority locations with capital projects, we are working to identify additional funding sources and programs that could be leveraged for more widespread installation of new pedestrian lighting. With a

similarly limited street lighting budget, Seattle City Light has also not been able to substantially increase resources for new pedestrian-scale lighting. Until new funding is secured, pedestrian lighting will continue to be integrated into projects where funding is available and will be based on project needs and the recommendations and priority areas outlined in the [2012 Pedestrian Lighting Citywide Plan](#).

# Priority Investment Network and Seattle's Urban Village Network (North Sector)



# Priority Investment Network and Seattle's Urban Village Network (Central Sector)

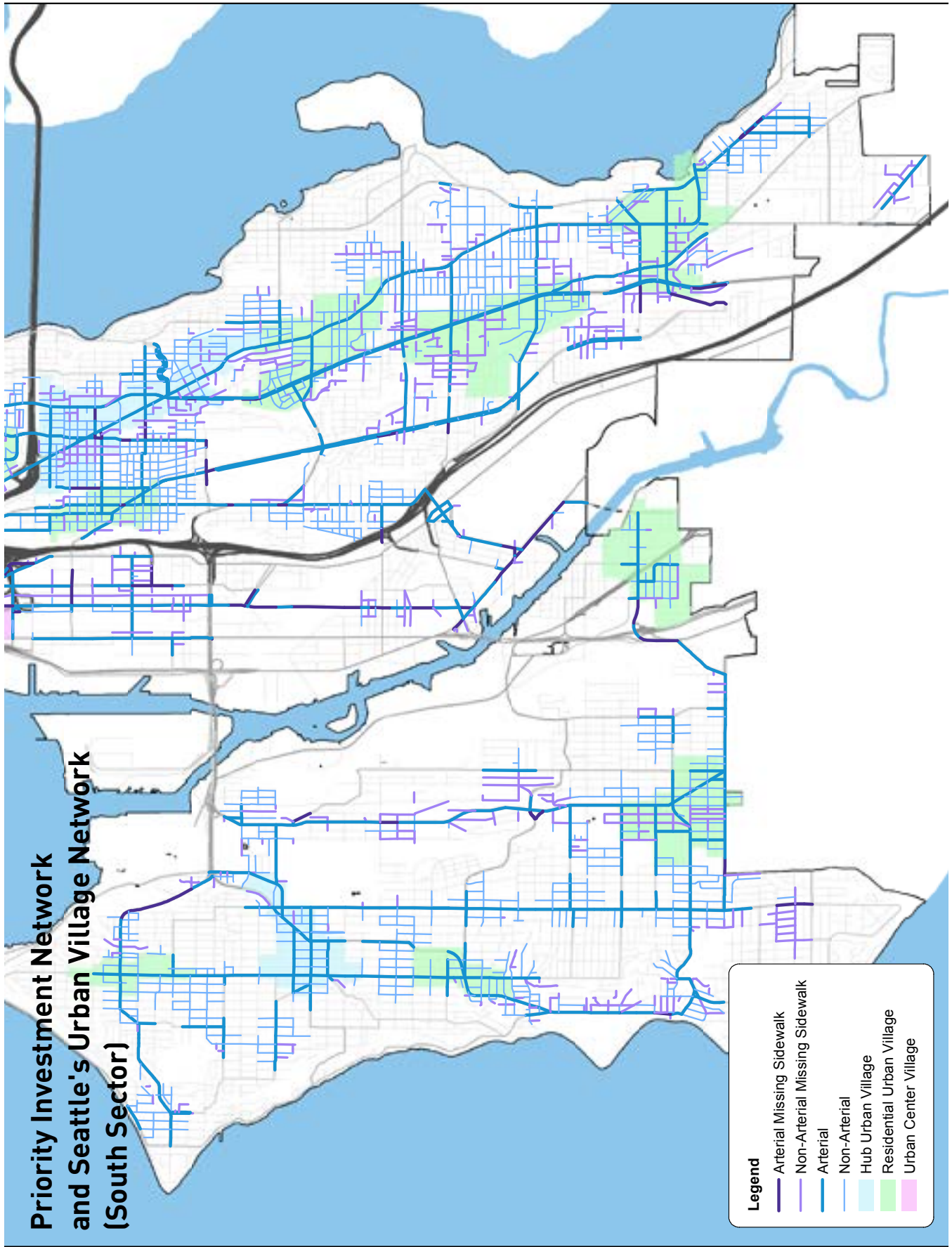


**Legend**

- Arterial Missing Sidewalk
- Non-Arterial Missing Sidewalk
- Arterial
- Non-Arterial
- Hub Urban Village
- Residential Urban Village
- Urban Center
- Urban Center Village



# Priority Investment Network and Seattle's Urban Village Network (South Sector)





# 5. SIDEWALK REPAIR PRIORITIZATION FRAMEWORK

Sidewalk repair is critical for making sure the pedestrian network is accessible for all pedestrians. After completing the citywide sidewalk condition assessment in 2017, we added a proactive approach to our existing repair and maintenance program. The following section describes the prioritization framework for sidewalk repairs using this new data source. The goal of the prioritization effort is to provide the highest value of safety and mobility improvements to the community, given a finite program budget.

Observations collected through the condition assessment included cracks, uplifts, cross-slopes, obstructions, and other safety risks and mobility impairments. In addition, our comprehensive sidewalk inventory data includes the proximity of the sidewalk to important destinations, such as health facilities, government services, schools, transit, and commercial centers. We will use this proximity


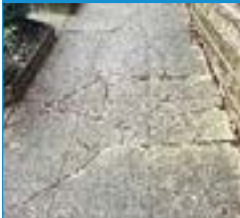
data to assess the usage value of each block of sidewalk.





## DETERMINING POTENTIAL SIDEWALK REPAIRS

The condition assessment data located and measured the height of uplifts, obstructions, cross-slopes, missing sections, and other information to help us determine potential cost for repair. With this data, we can assess which repairs would provide the highest value improvements in safety and mobility at the lowest cost. The lowest cost means to improve safety and mobility—which can be used on an interim basis—include asphalt shims (i.e., wedges) or beveling (i.e., sawcutting) an uplift. As described below, these mitigation measures are factored into our sidewalk repair prioritization process.

### Data Collected

The table below shows examples of the types of observations that have been collected.

Attribute & Image	Description
<p><b>Uplift</b></p> 	<p>A vertical change in height along a sidewalk that exceeds ½ inch at its highest point. This can either occur at areas where the different panels of the sidewalk meet, or at locations where the sidewalk has cracked.</p>
<p><b>Cracking</b></p> 	<p>Locations where the paved surface of the sidewalk has cracked and shows signs of crumbling and/or movement.</p>

Attribute & Image	Description
<b>Settling</b>	
	<p>The sinking of sidewalk panels that creates vertical height differences on either side of the panel.</p>
<b>Fixed Obstructions</b>	
	<p>Fixed obstructions are those objects that reduce sidewalk width to less than 36". These include transit shelters, utility poles, fencing, hydrants, and non-flush utility vault lids.</p>
<b>Vegetation Obstruction</b>	
	<p>Like fixed obstructions, these obstructions reduce the horizontal clearance of the sidewalk to below 36". In this case, this is caused by overgrowth of vegetation near the sidewalk.</p>
<b>Vertical Obstruction</b>	
	<p>Vertical obstructions are those objects that are between 27" and 80" in height, but extend more than 12" over the sidewalk. These can be fixed like awnings from businesses or cafes, or they can be vegetation such as tree branches.</p>

## Sidewalk Repair Prioritization Methodology

The goal of the prioritization model is to provide the best value to the community given a limited repair budget. We'll score each sidewalk on a scale of low, medium, and high in four categories:

1. Safety score
2. Mobility impairment score
3. Cost score
4. Usage

The safety risk score weighs the potential injury risk to someone traveling on a sidewalk. For example, an uplift greater than 2" would receive a "high" safety risk score.

The mobility impairment score captures the hindrance to people with limited walking abilities (e.g., those with wheelchairs or mobility devices). For example, a fixed utility pole that reduces the walking surface to less than 36 inches on either side of the pole would receive a "high" mobility impairment score.

The cost score indicates the relative expense to correct the sidewalk safety risk or mobility impairment condition. For example, an uplift greater than 2 inches that requires complete sidewalk reconstruction would receive a "low" cost score. A high cost repair gets a low priority cost score, while a low-cost repair gets a high priority cost score.

	High	Low
<b>Safety Risk Score</b> Lift, Settlement, cracks, gaps		
<b>Mobility Impairment Score</b> Obstruction, minimum passable width and height, cross-slope		
<b>Cost Score</b> Maintenance, repair, replacement		
<b>Usage Score</b> Proximity to ADA Title II identified facilities		

The usage score concerns the number and purpose of sidewalk users. Sidewalks that serve important and high demand facilities (identified in Title II of the ADA) are prioritized. These facilities include government facilities (community centers, libraries, parks, social services), healthcare services/hospitals, transit stations and corridors, employment centers, schools, and housing for older adults and people with disabilities. For example, a sidewalk near hospitals, schools, and transit will receive a “high” usage score.

After the sidewalks have been scored using this prioritization framework, a variety of additional factors are considered in the final selection process to meet other citywide and departmental policies and objectives, including race and social justice objectives and coordination with the PIN and other city programs.

## SIDEWALK SAFETY, ENFORCEMENT, AND REPAIR PRIORITIZATION

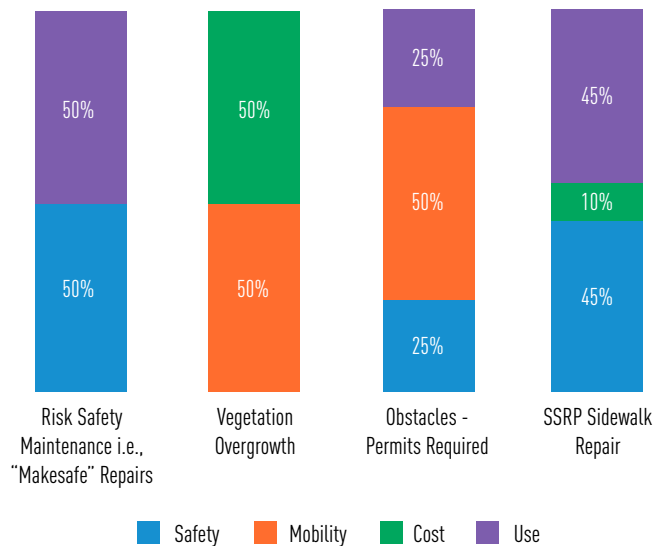
Building upon the sidewalk repair prioritization model, we developed several variations of the prioritization model described above to tailor to the specific needs of our Sidewalk Safety Repair Program. These are comprised of four task-specific prioritization models that serve as a basis for the proactive work managed by the program and were created using sidewalk condition assessment data, work order data, asset management data, and the dataset used to create the usage score described above.

The work of the Sidewalk Safety Repair Program falls into three general categories (safety, enforcement, repair), and the task-specific variations of the prioritization model include:

- Safety: “Mitigation” repairs such as shimming and beveling
- Repair: Permanent repairs completed by the Sidewalk Safety Repair Program that involve removal and replacement of damaged sidewalk
- Enforcement: Privately-maintained vegetation overgrowth
- Enforcement: Obstacles in the right of way that generally require a Street Use permit

Safety	Enforcement (Accessibility)	Repair
Risk Safety Maintenance	Vegetation Overgrowth  Permitted Accessibility Issues	SSRP Sidewalk Priority Model (Renewal and Notification)

### Task Specific Priority Model Weighting



## Safety Model

### 50% Safety Score/50% Usage Score

This model is used to guide a proactive sidewalk shim and bevel program. The purpose of efforts associated with mitigation repairs is to cost effectively minimize sidewalk uplifts and other differences in grade to minimize trips and falls. The likelihood of a trip or fall occurring increases with use. Therefore, the model includes information on pedestrian generators to prioritize locations that are expected to have higher pedestrian traffic. This model equally weights safety factors and usage.



Factors considered include:

- Usage score dataset
- Vertical level changes (e.g., uplifted sidewalk, settling sidewalk)
- Sidewalk surface conditions (e.g., sidewalk cracking and gaps)
- Sidewalk obstructions from trees or transit stops

## **Enforcement Model**

Two models were developed to enforce accessibility issues in the pedestrian clear zone. One model considers private vegetation encroachments and the other considers obstructions requiring a permit, which are forwarded to our Street Use division.

## **Vegetation Overgrowth**

### **50% Mobility Score/50% Cost Score**

This model is used to guide the enforcement of accessibility issues originating from private property or from the planting strip that is generally the responsibility of the adjacent property owner. The model prioritizes low-cost, high-impact accessibility issues, which a property owner would be most likely to fix upon notice. For example, sweeping gravel or cutting vegetation would be a minimal cost to a property owner compared to moving a rockery or fence.

Factors considered include:

- Sidewalk obstruction from vegetation
- Gravel, debris, or moss on sidewalks

## **Accessibility/Sidewalk Obstructions**

### **25% Safety Score/50% Mobility Score/25%**

### **Usage Score**

This model is used to prioritize sidewalks with accessibility issues related to privately-owned obstructions that are or should be regulated by a Street Use permit.

Factors considered include:

- Usage score dataset
- Sidewalk obstructions from fixed encroachments (e.g., street furnishings, sidewalk cafés, signs)
- Vertical level changes from non-flush utility vaults
- Loose pavers and bricks

## **Repair Model**

### **45% Safety Score/10% Cost Score/45% Use Score**

This model is the foundation for renewal projects (i.e., removal and replacement of existing sidewalks) for the Sidewalk Safety Repair Program. In addition to data collected in the sidewalk condition assessment, we incorporated existing work management data.

During the 2017 Sidewalk Condition Assessment, vertical level changes were not collected if a sidewalk shim was already present. For the purposes of Sidewalk Safety Repair Program renewal projects, it is essential to know where shims have been installed. The data on sidewalk shim installation exists only in our work management system, which was merged with the sidewalk condition assessment data to provide a more complete dataset for the prioritization model.

Factors considered include:

- Usage score dataset
- Work management data (i.e., location of existing shims)
- Vertical level changes (e.g., uplifted sidewalk, settling sidewalk)
- Sidewalk surface conditions (e.g., sidewalk cracking and gaps)

# 6. ACCESSIBILITY

## ADA PROGRAM

Improving accessibility for all pedestrians, including older adults and people with disabilities, is a key strategy of the PMP—we want Seattle to be more walkable and accessible for people of all ages and abilities. As more of our population ages, PMP implementation plays a key role in supporting Seattle's [Age-Friendly initiative](#), which we know serves our youngest and oldest adults.

Title II of the Americans with Disabilities Act (ADA) requires that we prioritize accessibility improvements as we build new pedestrian facilities and develop a transition plan that identifies specific strategies and locations for new accessibility projects.

We are incorporating accessibility into all capital projects through the installation of new curb ramps, detectable warning strips, and accessible pedestrian signals (APS), which will be guided by our ADA Transition Plan. Using dedicated funding for accessibility improvements, our ADA program also prioritizes and constructs curb ramps, APS, and new accessibility technologies where they are most needed. Private developers and utility providers construct accessibility improvements on our streets whenever they are triggered by other paving and development work.

To more quickly improve accessibility on Seattle's streets, we are working to increase the number of curb ramps we construct each year. Ramps we install are primarily derived from three sources: customer service requests, ADA Title II priorities, and capital projects. Anyone with a mobility disability can submit a request for curb ramps that would assist them in their daily activities. We then verify these requests and build at least 150

customer service request ramps per year. Other curb ramps are prioritized and constructed based on ADA Title II identified facilities, in the following order:

- 1) Government offices, facilities, and schools
- 2) Transportation corridors
- 3) Hospitals, medical facilities, assisted living facilities and other similar facilities
- 4) Places of public accommodation such as commercial and business zones
- 5) Facilities containing employers
- 6) Residential neighborhoods

Our ADA Transition Plan will serve as the implementation plan for curb ramps and accessibility improvements. The document will include SDOT's self-evaluation of accessibility barriers, a progress report on curb ramps and other accessibility upgrades constructed, and a prioritization and delivery strategy for making future accessibility upgrades in the pedestrian network. The ADA Transition Plan is a living document that will be updated over time.

## INFRASTRUCTURE REPAIR & MAINTENANCE

Proper maintenance of infrastructure is critical for keeping Seattle's pedestrian network accessible for everyone. We operate three programs that focus on maintaining pedestrian assets, all of which are detailed in the PMP:

- Sidewalk Safety Repair Program
- Marked Crosswalk Maintenance Program
- Stairway Rehabilitation Program

Improved sidewalk maintenance is called out as a strategy in the PMP and is a high priority for many residents in Seattle. To address sidewalk maintenance more proactively, we conducted a citywide sidewalk condition assessment during summer 2017 that inventoried conditions on sidewalks that may impede pedestrian access. Maintaining and improving these sidewalks is essential for a healthy, growing city. It's key for us to know what the conditions are so that we can equitably manage and prioritize sidewalk work across the city, and not just where people report an issue.

With data available on the specific locations of sidewalk issues, we are also able to better educate private property owners on their maintenance responsibilities, enforce unpermitted private encroachments on sidewalks, and study new funding approaches to make necessary repairs. See the *Sidewalk Repair Prioritization Framework* on page 22 chapter for more details about how we are prioritizing sidewalk repairs to improve accessibility.



# 7. ART AND ENHANCEMENTS

## FUNDING AND PRIORITIZATION

The City's 1% for the Arts law requires 1% of all eligible capital improvement project funds be set aside for the commission, purchase, and installation of artworks across the city. This program includes all PMP-driven capital projects that are not federally funded.

With 1% for the Arts funding available for pedestrian projects on an annual basis, we look to determine which projects will make good candidates for public art and which areas with planned improvements could benefit most from artistic enhancements. We consider the following factors when deciding where to prioritize 1% for the Arts funding:

- **Level of pedestrian density and visibility:** Is the project in an area with a high level of pedestrian traffic?
- **Availability of right of way:** Is there sufficient area in the right of way to locate artwork?
- **Equity:** Is the project located in a community underserved by civic investment or artistic enhancements?
- **Level of community interest:** Is the surrounding community interested in new artwork with the project?
- **Artistic opportunity:** Is the project located in an area that could be an interesting or unusual opportunity for an artist?

Once a project is selected for 1% for the Arts funding, we contract with an artist who works with SDOT and the community to incorporate local ideas and perspective into the planned artwork. The art can then be added into the project engineering plans.

Although the 1% for the Arts program is the largest funding source for art integration with new pedestrian projects, not all artistic enhancements need to go through this program. Some minor artistic elements can be integrated with a sidewalk project using only the project's capital budget.







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