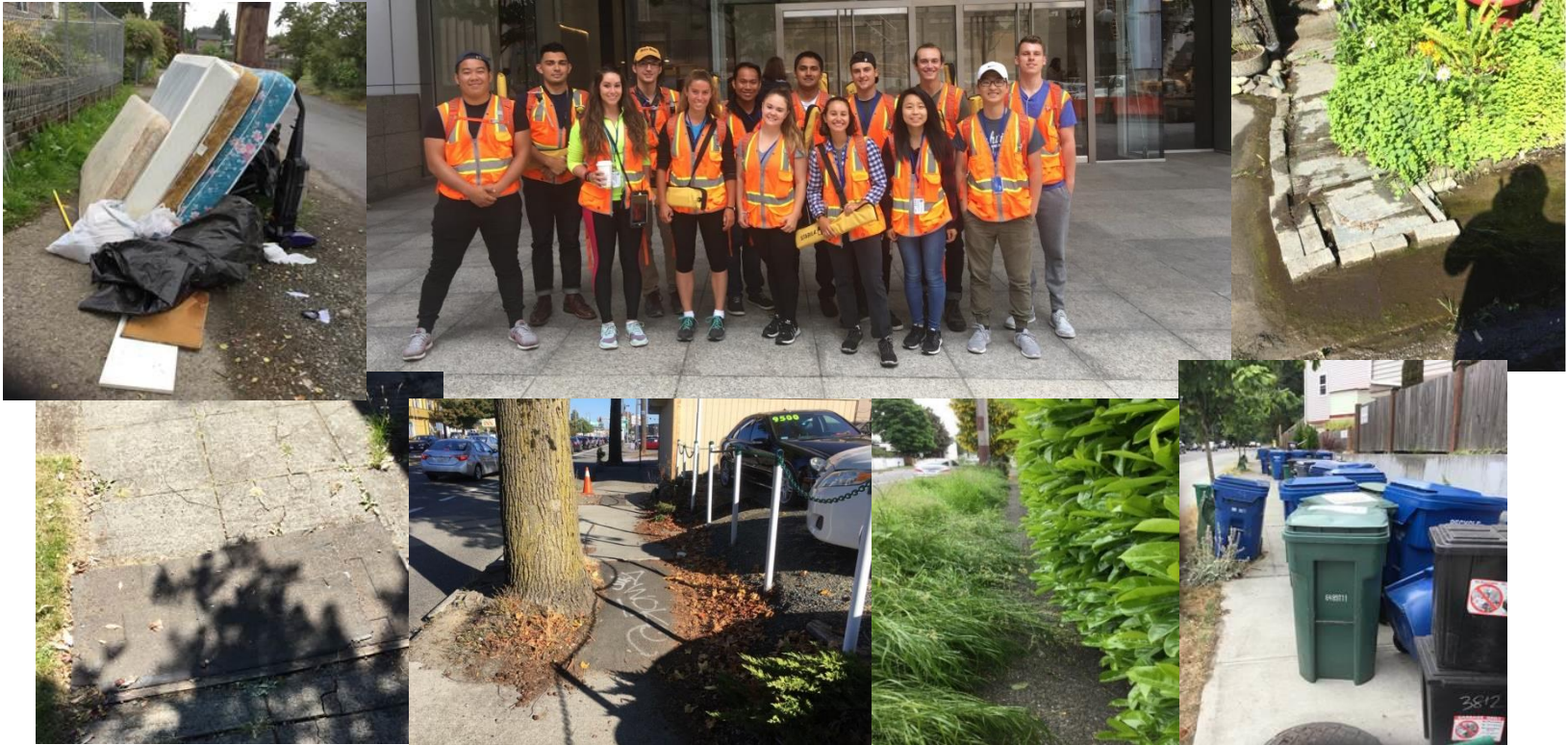# Seattle Department of Transportation
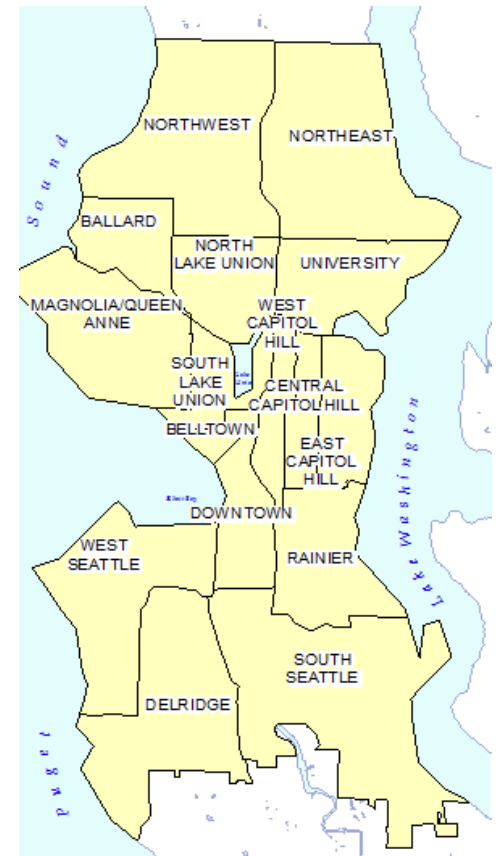## Sidewalk Repair Prioritization

Seattle Pedestrian Advisory Board
Emily Burns & Michael Davis
Asset & Performance Management
October 11, 2017

Seattle
Department of
Transportation

Sidewalk Assessment Project Presentation Outline

1. Collection Stats / findings
2. Timeline and next steps
3. Communications
4. Prioritizing sidewalk repairs

Collection Stats and Findings

- 34,000+ Sidewalks

- 2,323 Miles

- 156,000+ Observations
  - 92,000 Uplifts
  - 38,000 Surface Conditions
  - 20,000 Obstructions
  - 3,500 Isolated Cross Slopes

Legend:
- Uplifts
- Surface Conditions
- Obstructions
- Cross slope

Chart values: 2%, 13%, 25%, 60%
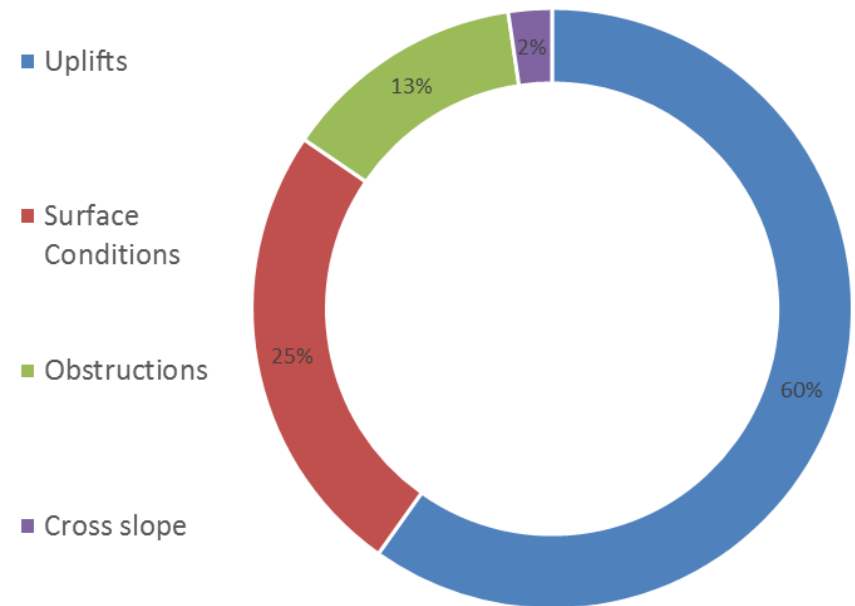
Along the way, our interns made a few friends and stayed safe…

- ✓ 358 Construction Zones
- ✓ 10 Encampments
- ✓ 3 Dogs
- ✓ 1 Cat
- ✓ 1 Hornets nest
- ✓ 1 Iron Giant
- ✓ 0 Bites or stings
- ✓ 1 Sprained ankle

Sidewalk Assessment – Timeline

May 2017	Aug 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2017	Dec 2018
-Field work started	-Field work complete	-Post process sidewalk data -condition weighting -asset data available in databases maps	-Run sidewalk prioritization model for proactive repairs (~$2M Sidewalk Safety Repair Budget)	Final report, evaluation and recommendations: -A proactive sidewalk program -Education and outreach to abutting property owners and occupants	- Database and map of observation updates -Publish external web maps w/ observations	-Update Status & Condition Report

Communications

- Provided a Project Communications Plan to SPAB on 8/24
- Participated in the Sound Steps, Age Friendly, Vision Zero Pedestrian Potluck on 9/20 where attendees could:
  - Review the condition data from iPads
  - Learn more about property owner responsibilities for sidewalk repair and maintenance
- Updating our [web site](#) to educate property owners on responsibility
- Updating web maps with observations, trees and ownership

Communications (con't)

- Data provided for the AARP sponsored *A City For All Hackathon*, 9/22 – 9/24
    - Team SEASidewalks won in two categories: Best Use of Open Data and Best Data Visualization. The tool visualizes data from our sidewalk assessment, prioritizes issues, shows points of interest (hospitals, ,), and demographics.
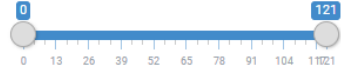   - See https://gngu.shinyapps.io/seattle_sidewalks
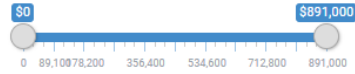
SEA Sidewalks   Main Map

Neighborhood

All ▼

Issue Number Range

0 ———————————— 121

0   13   26   39   52   65   78   91   104   117 121

Cost Estimate Range

$0 ———————————— $891,000

0   89,100 178,200   356,400   534,600   712,800   891,000

☑ Display Top Priority Issues
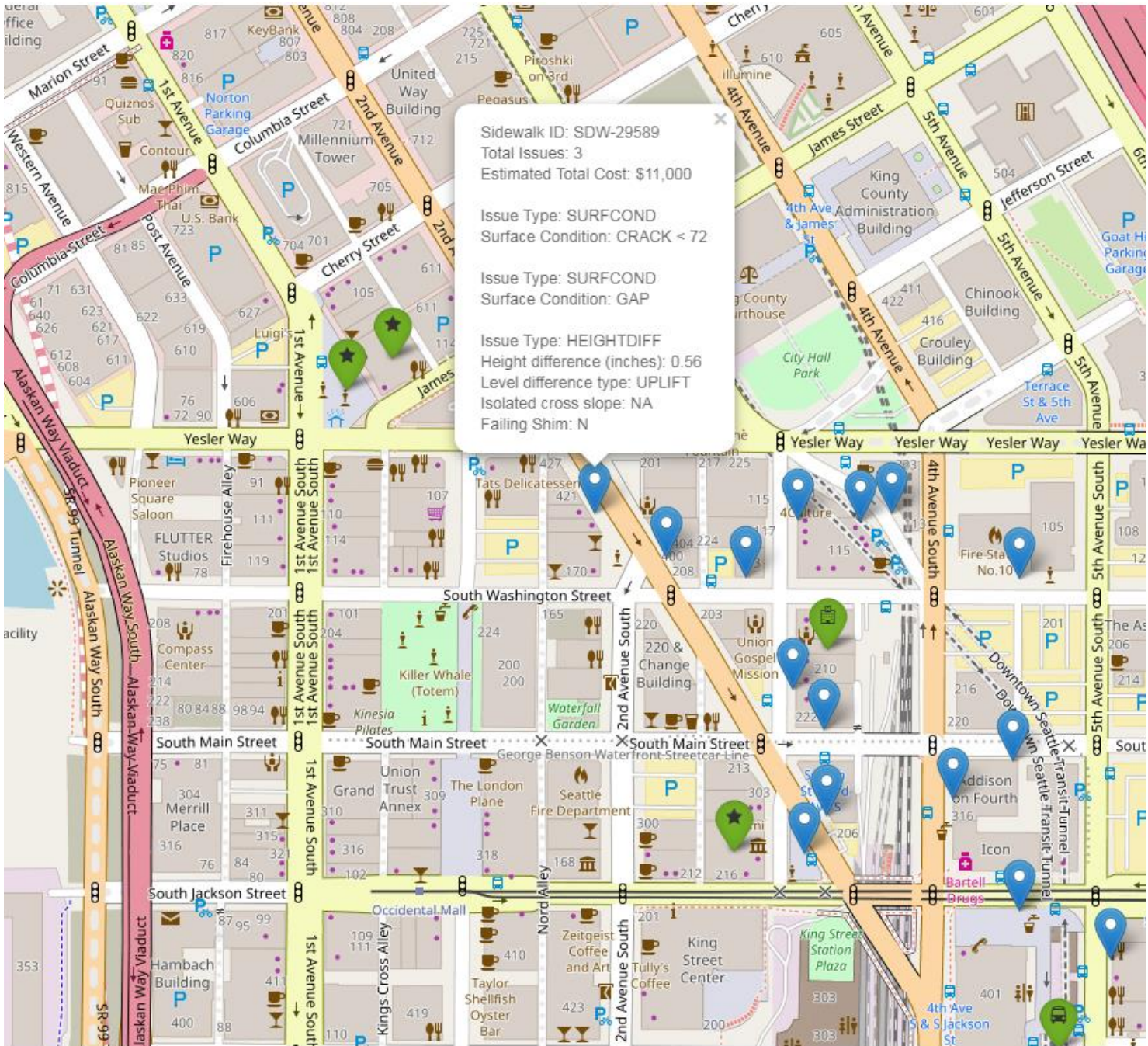
Number of Top Priority Issues

10

☑ Weight Priority by Number of Issues

☐ Display Points of Interest (POIs)

⬇ DOWNLOAD TABLE

Map   Table

Sidewalk ID: SDW-39165
Total Issues: 121
Estimated Total Cost: $891,000
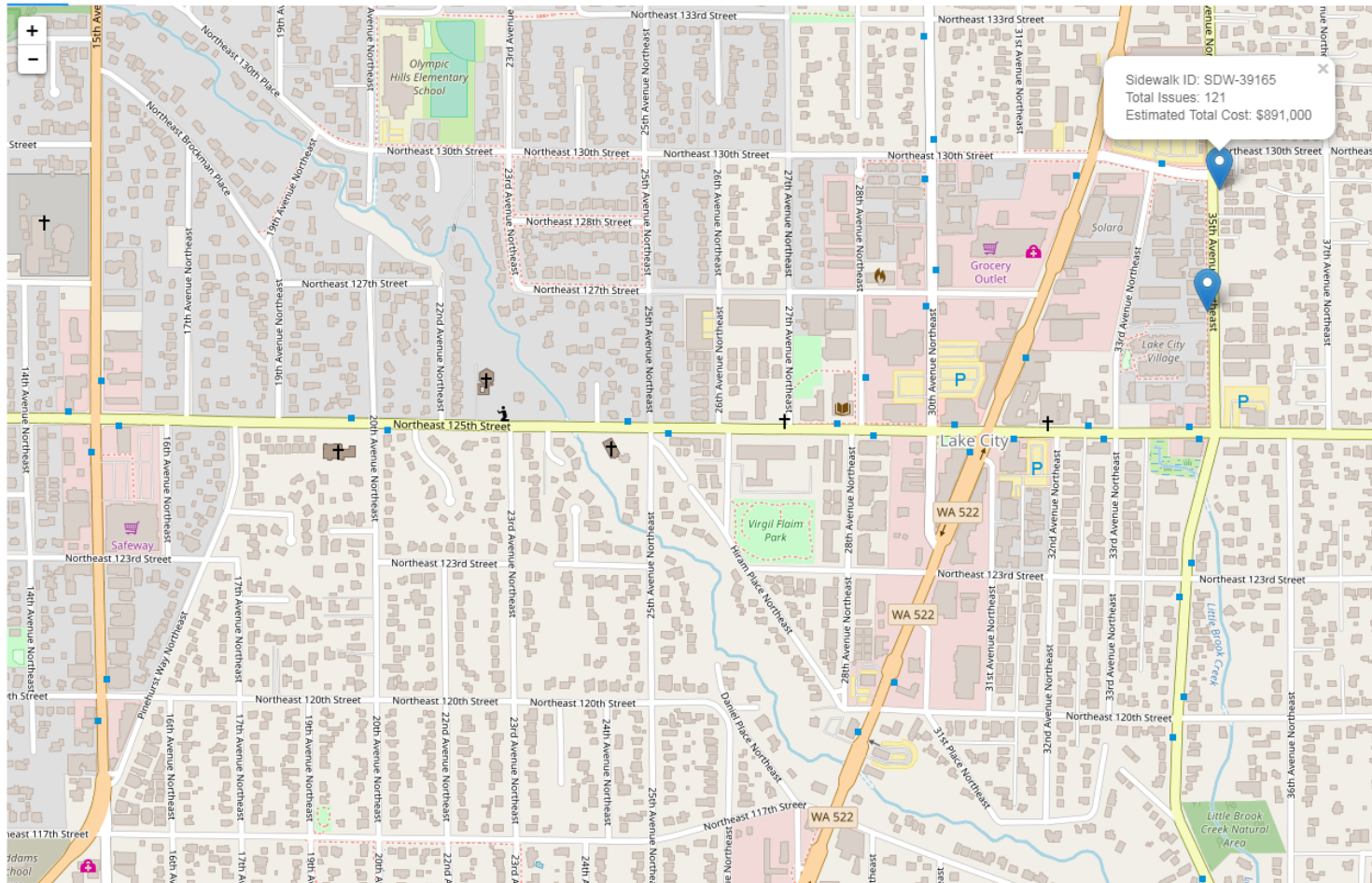
Sidewalk ID: SDW-29589
Total Issues: 3
Estimated Total Cost: $11,000

Issue Type: SURFCOND
Surface Condition: CRACK < 72

Issue Type: SURFCOND
Surface Condition: GAP

Issue Type: HEIGHTDIFF
Height difference (inches): 0.56
Level difference type: UPLIFT
Isolated cross slope: NA
Failing Shim: N

Scoring Criteria

Goal: Allocate Limited Budget to Provide Best Value for Community

- Safety Risk Score
  - Lift, Settlement, Cracks, Gaps…
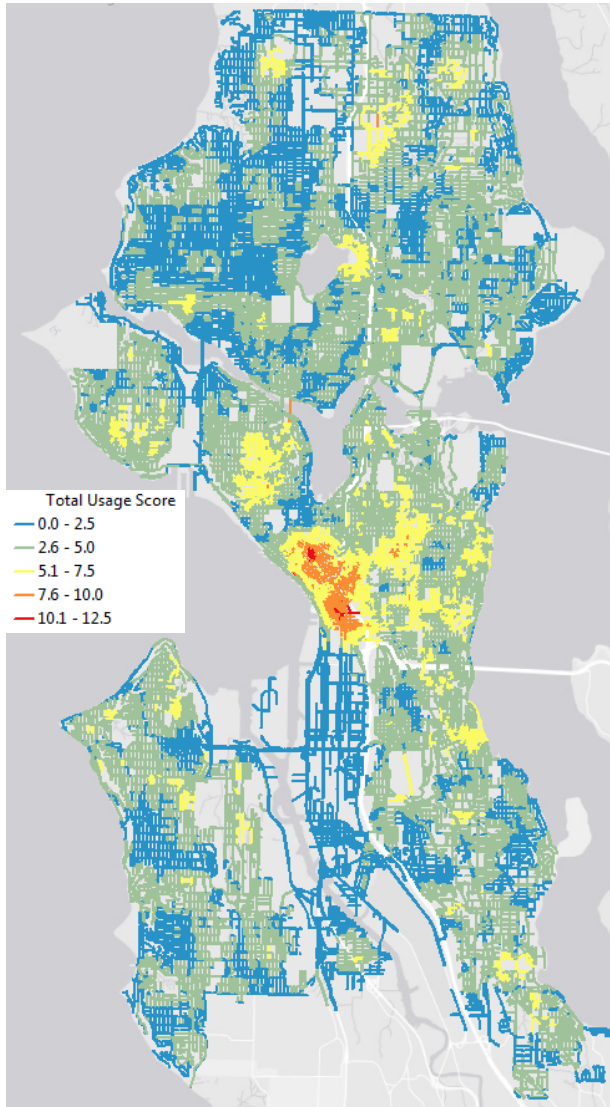

- Mobility Impairment Score
  - Obstruction, Minimum Passable Width & Height, Cross-slope…

Scoring Criteria

- Cost Score
  - Maintenance, Repair, Replacement…

Usage Score

Government Facilities   Hospitals
Transit Stops   Employment centers
Schools   Goods and Services
Senior/Disabled Housing

- Estimated usage based on proximity to 6 facility types (within ¼ mi radius)

1. Facility count

2. Normalize between 0 and 1

3. Multiply by facility score

4. Aggregate for sidewalk usage score

Draft Priority Screening Tool
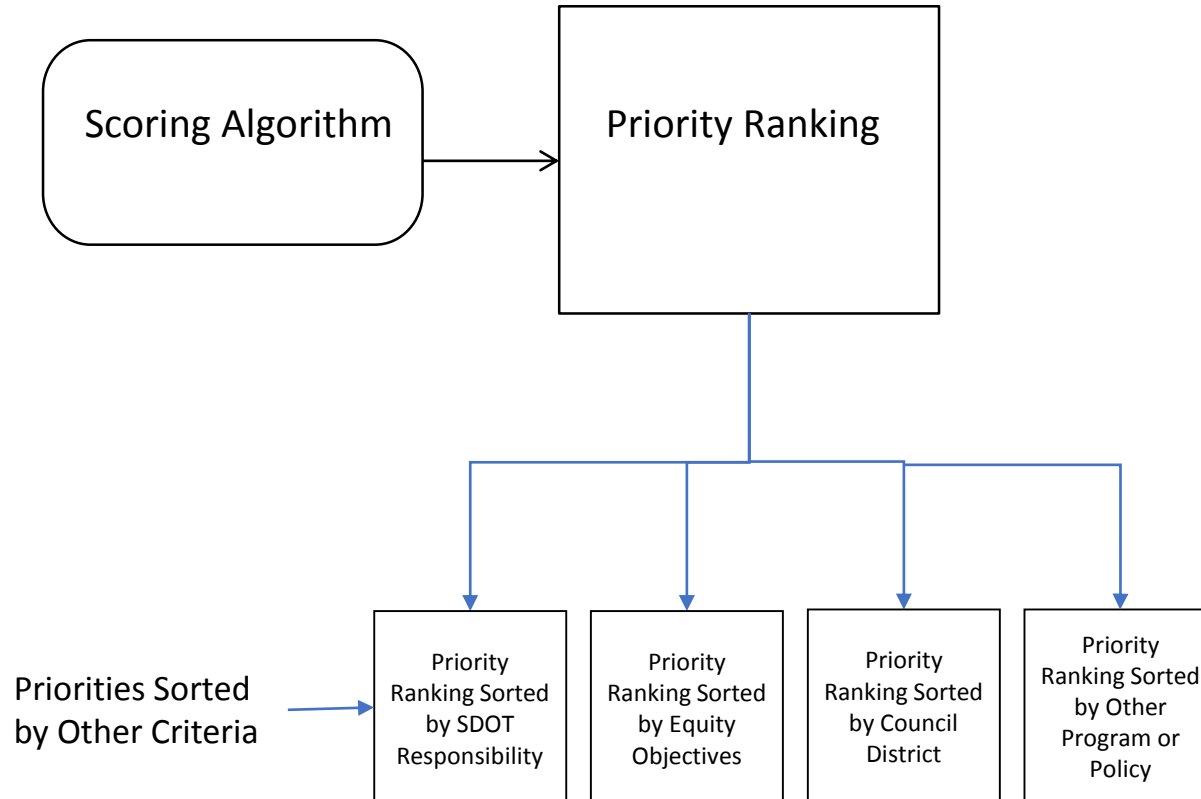
Purpose of Prioritization Tool

Focuses efforts on highest value maintenance, repair, and replacement

- Final Selection of Sidewalks for Treatment Will Consider:

  ✓ Specifics of Each Particular Problem and Solution

  ✓ Coordination with Other Programs / Funding Opportunities (Sidewalk Reactive Maintenance Program, Pedestrian Master Plan, Seattle Greenways, Safe Routes to School, Age-Friendly Initiative…)

  ✓ Economies of Scale, Program Efficiencies

  ✓ Race and Social Justice Objectives, Geographical Equity, Seattle 2035 Comp Plan, Other City Programs and Policies

Questions?

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http://www.seattle.gov/transportation/assetmanagement.htm

SDOT
Seattle Department of Transportation