Pedestrian Master Plan Technical Update

SPAB Workshop #2: Prioritization

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SDOT
Seattle Department of Transportation

Overview

- Review
  - Existing PMP purpose / structure
  - Updated prioritization structure
- Recommended datasets and draft maps
  - Equity / health
  - Safety
  - Vibrancy / demand
  - Along / across the roadway
- Next steps

Pedestrian Master Plan Update

Updated "High Priority Areas"

- To guide walkability investments

Updated Walkability "Toolbox"

- New sidewalks
- Alternative / low-cost sidewalks
- Crossing improvements
- Sidewalk maintenance
- Neighborhood greenways
- Traffic calming
- Speed limit reductions
- No turn on red
- Other, new, innovative treatments (tbd)

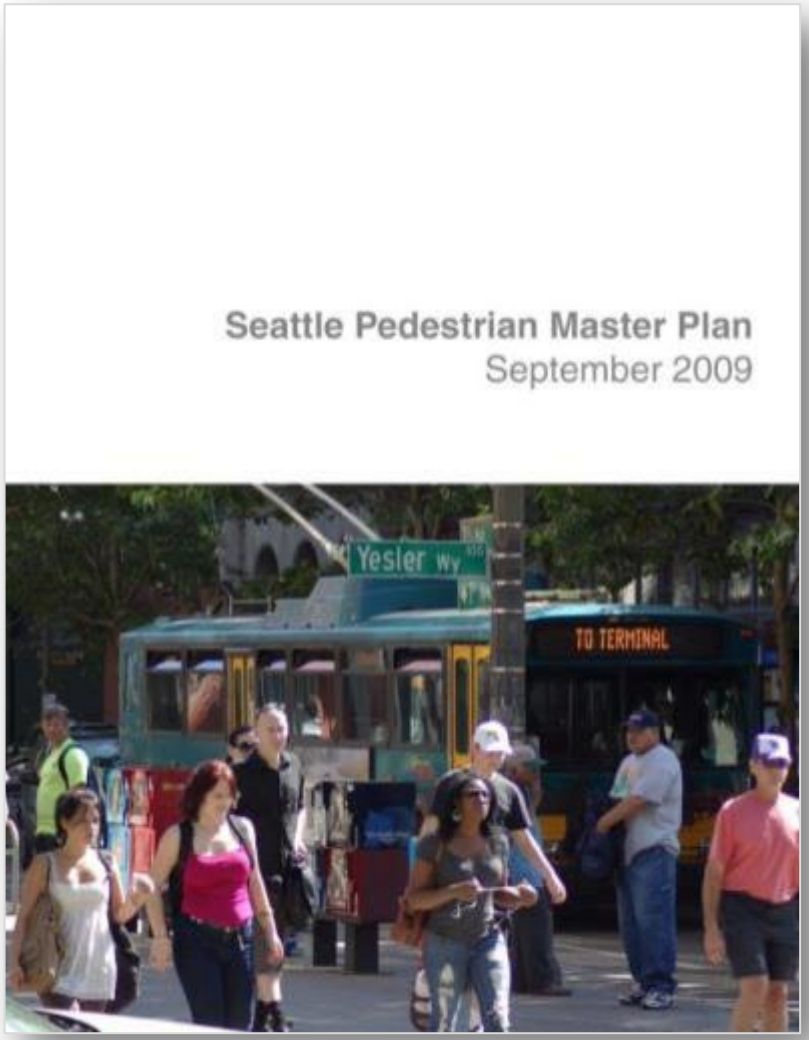
Which tools are appropriate for different locations?

Plan Implementation

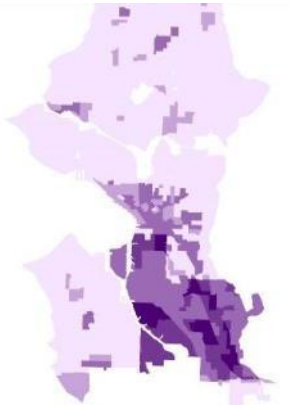
- PMP Implementation Plan (matching resources to needs)
- Updating ROWIM / standard specs for Toolbox items

PMP is a resource allocation plan

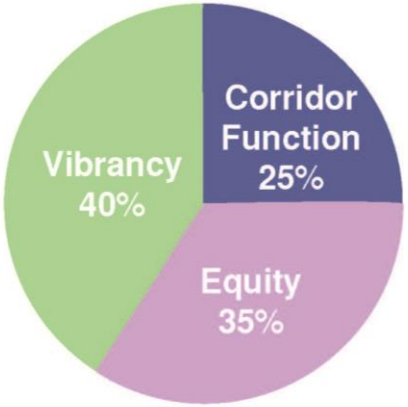
- Data-driven prioritization of funding
- Designed to focus resources where:
  - There is high existing and potential pedestrian demand
  - There are safety concerns
  - There are populations with the greatest need



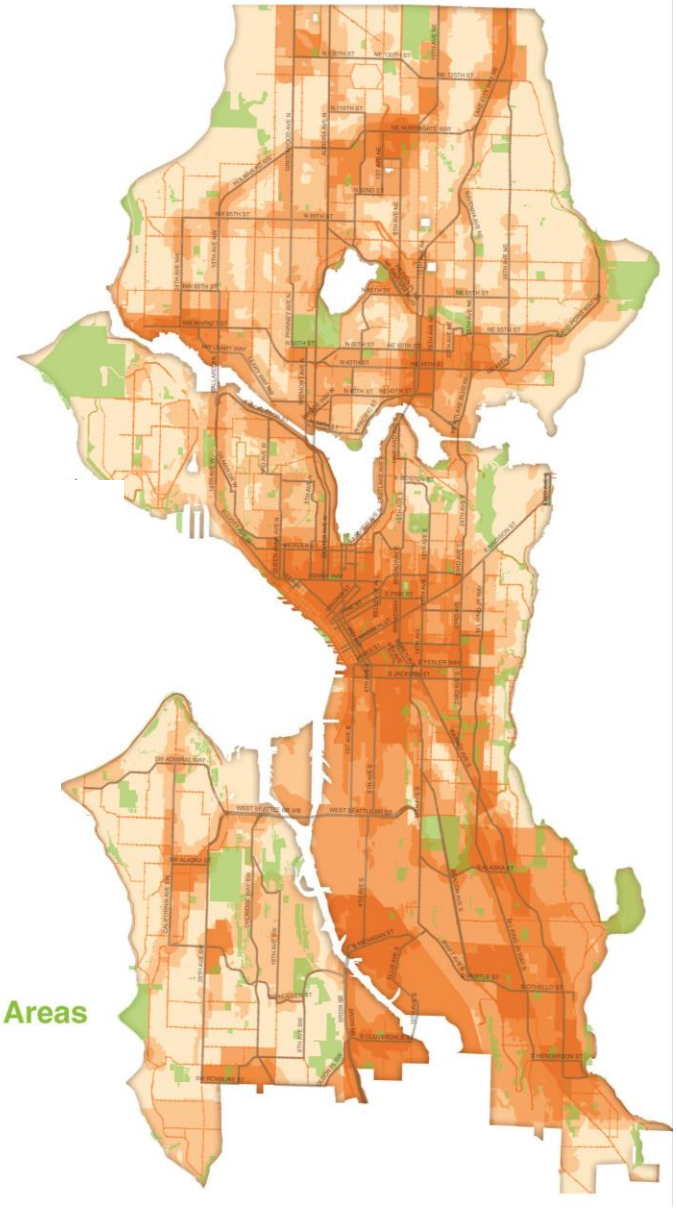
Building Blocks



Contribution to Total Score



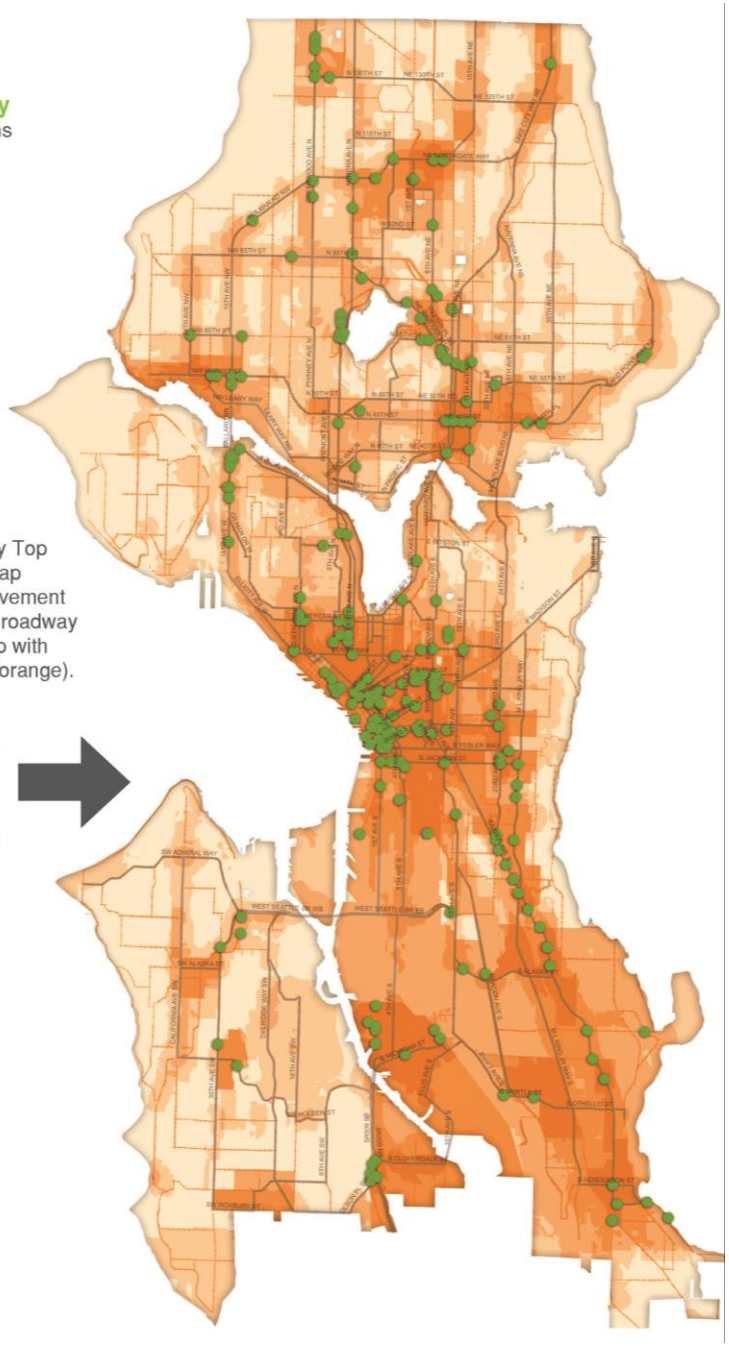
High Priority Areas



Across the Roadway

Top Tier Project Locations

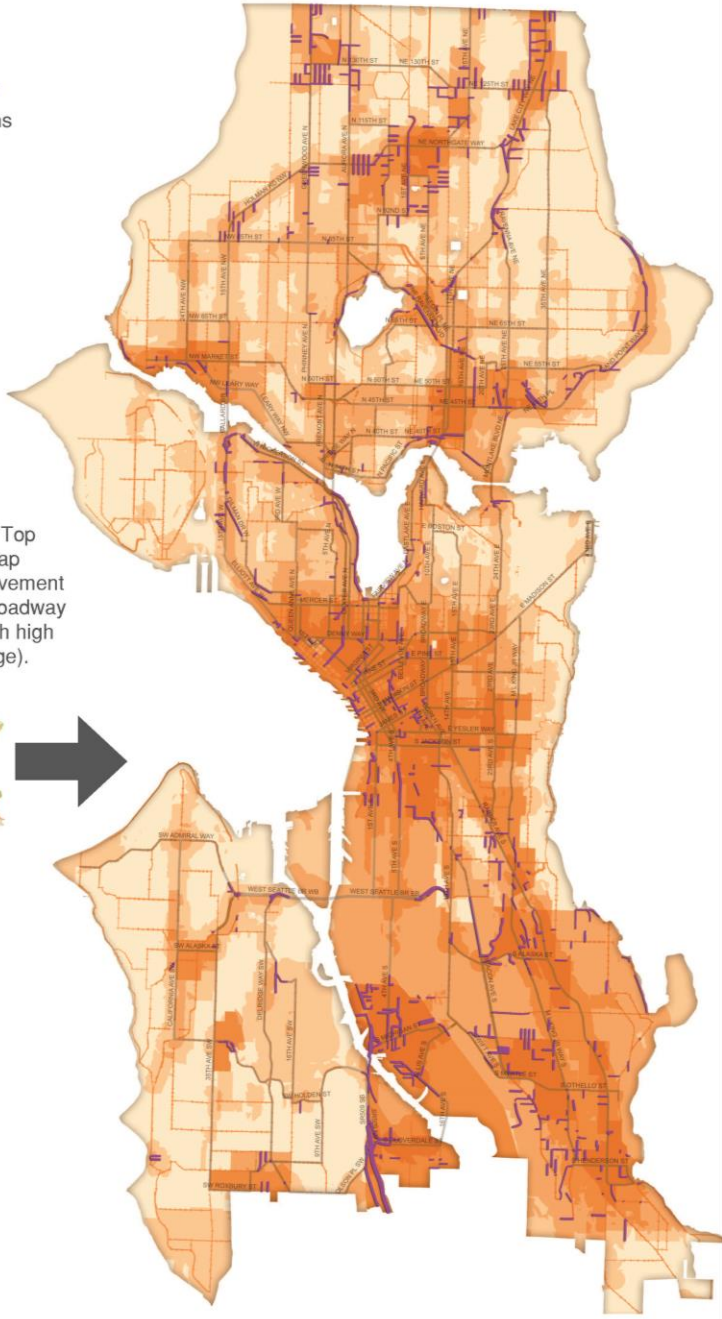
The Across the Roadway Top Tier Project Locations Map shows where high improvement opportunities across the roadway (dark green dots) overlap with high priority areas (dark orange).



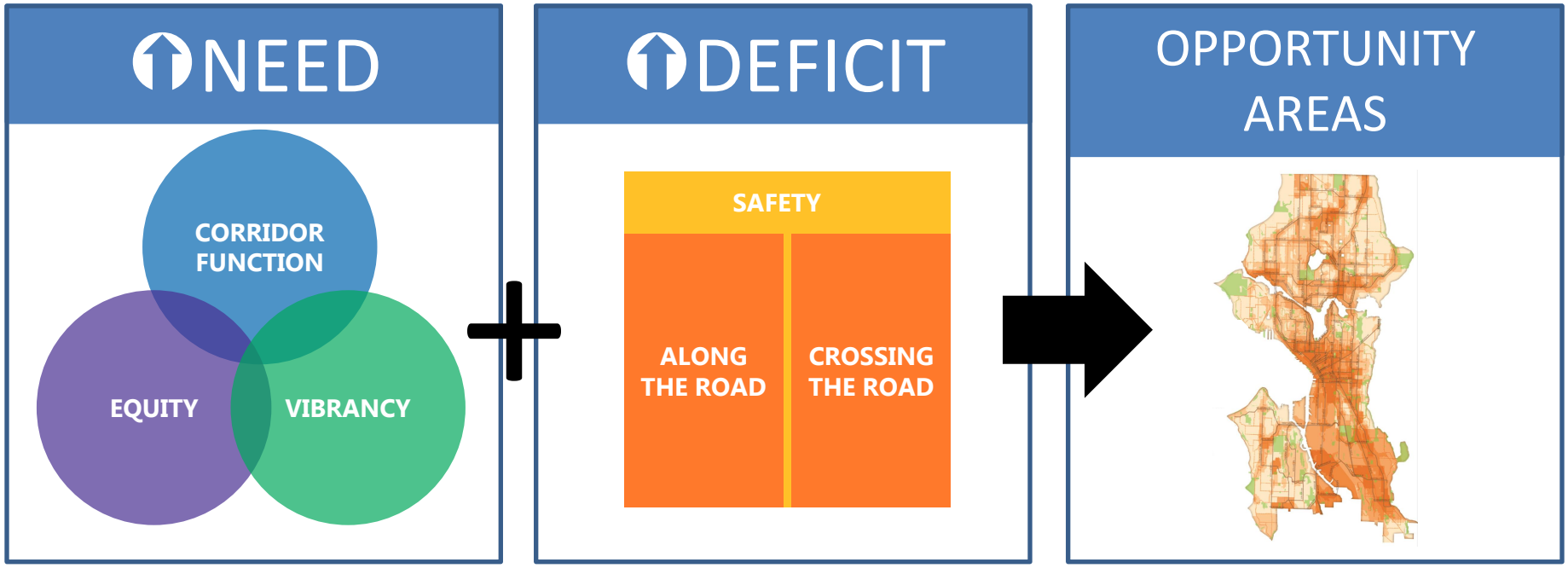
Along the Roadway

Top Tier Project Locations

The Along the Roadway Top Tier Project Locations Map shows where high improvement opportunities along the roadway (purple lines) overlap with high priority areas (dark orange).



Existing prioritization methodology

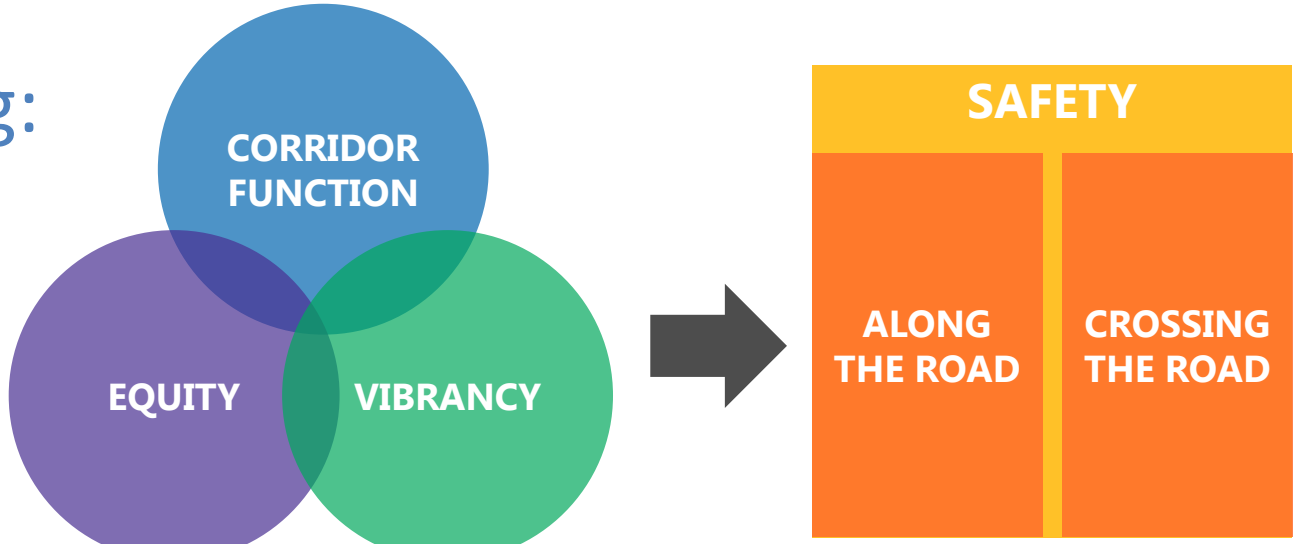


Goals for updated methodology:

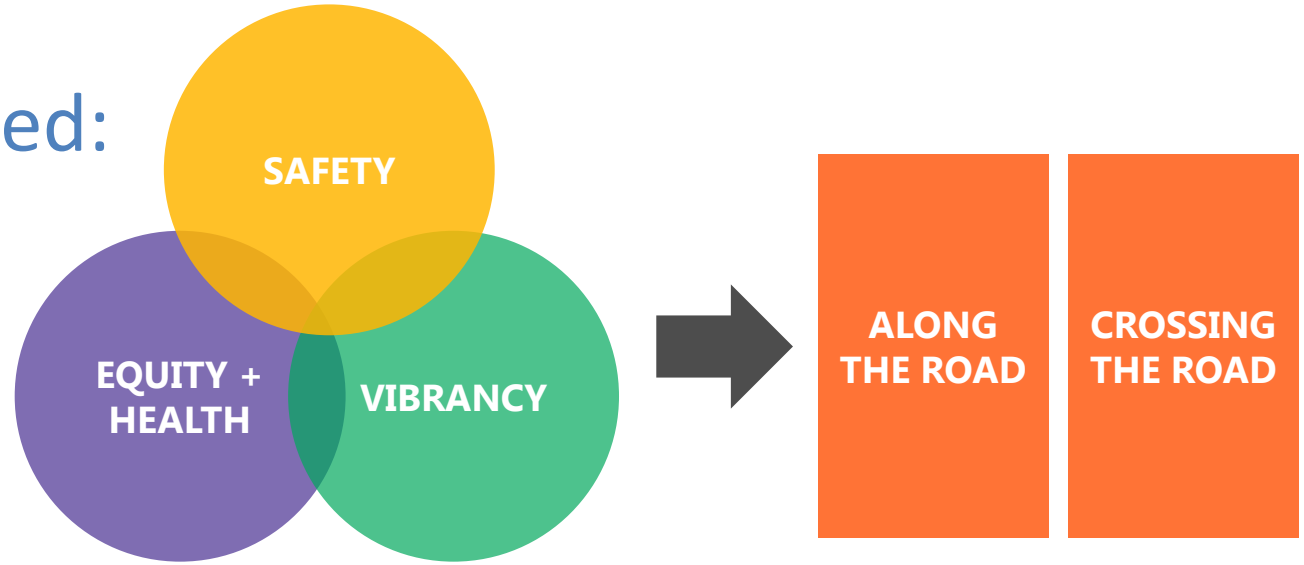
- Update outdated data
- Reground plan in goals
- Revise criteria to align with recent SDOT/City initiatives
- Streamline methodology: Closer correlation between goals and prioritization
  - Simplify for better legibility
  - Separate “signal” from “noise”
  - Narrow priority project list
  - Emphasize connectivity
  - Ground projects to “motivating need”

Updated prioritization structure

Existing:



Proposed:



Potential datasets: What's most important?

Health and Equity Factors
Auto ownership
Low income population
Disability population
Diabetes rates
Physical activity rates
Obesity rates
Communities of color
Age 17 and younger
Age 65 and older
Low English-speaking ability
Low educational attainment
Renter households
Housing cost-burdened households
Canopy cover

Safety Factors
Pedestrian collisions
Arterial classifications
Roadway width
Signalized pedestrian crossing spacing
Speed

Vibrancy Factors
Universities or Colleges
Major Generator (e.g. Pike Place, Convention Center)
Multi-family, condominiums and apartments
Major Retail
Minor Retail
Hospital and Community Service
Park and Open Space
Population forecast
Employment forecast
Light rail stations
Major bus stops
Minor bus stops
Trails
Bridges
Stairways
Urban Hubs/Villages
NC Zoning
FTN network
Arterials
Neighborhood Greenways
Schools

Along the Roadway
Street classifications (proxy for volume)
Arterial speed limit
Buffer
Sidewalk status
Slope (along)
Parking
Curb
Length of block
Peak hour parking
Street trees
Alleys

Crossing the Roadway
Street classifications (proxy for volume)
Arterial speed limit
Road width
Distance between traffic signals and stop signs
Crosswalk
Curb ramp
Signal control
Stop sign control
Number of collisions
Block length

Reframe "Corridor Function" as "Safety"

Safety Goal: Reduce the number and severity of crashes involving pedestrians.

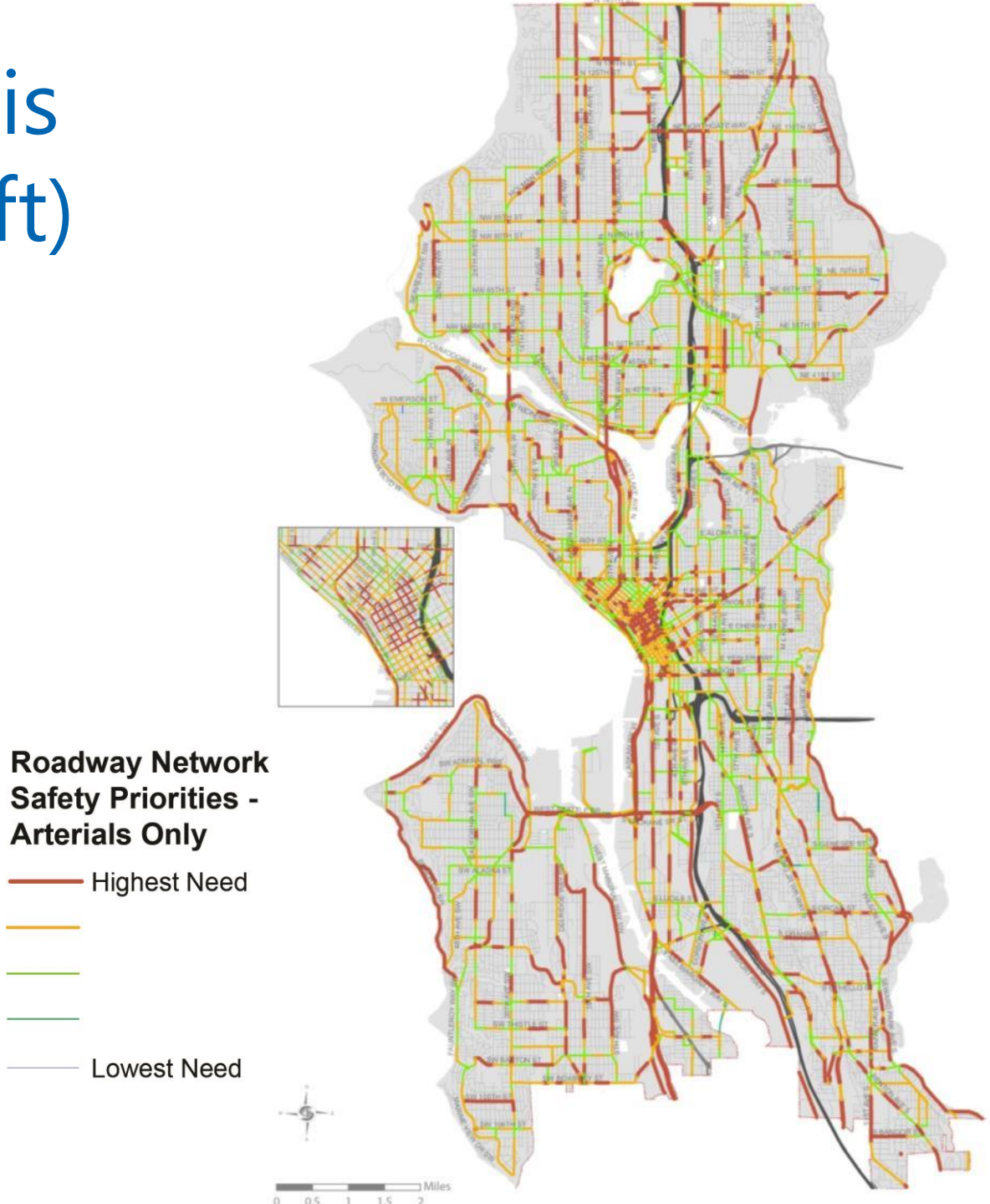
Corridor Function

Existing 2009 Factors	
Seattle street types	Removed as these are being updated and because previous auto-prioritization policy language has been removed from City's planning documents.

Safety

New Factors (based on SDOT Pedestrian Safety Analysis)	
Pedestrian collisions	Serious injuries and fatalities highly weighted. Data from the last 8 years.
Arterial classifications	Proxy for volume; Majority of severe injuries occur on principal and minor arterials
Roadway width	Using # of lanes where available, and curb to curb width where # lanes is not available.
Signalized pedestrian crossing spacing	Capturing both signal-controlled intersections and signal-controlled mid-block crossing opportunities
Speed	85th percentile speeds where available, and posted speed limit where actual speed is not available.

Safety analysis (working draft)



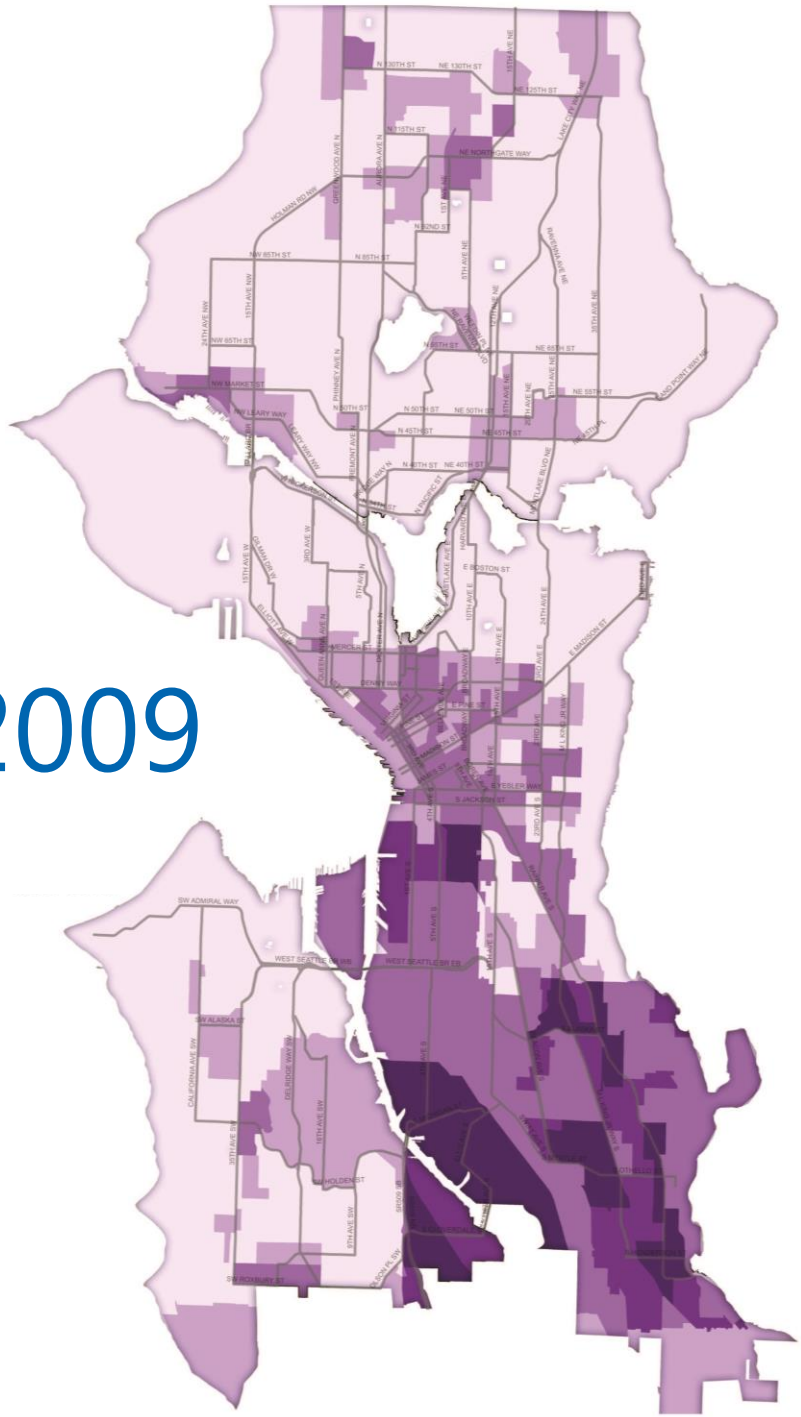
Equity + Health

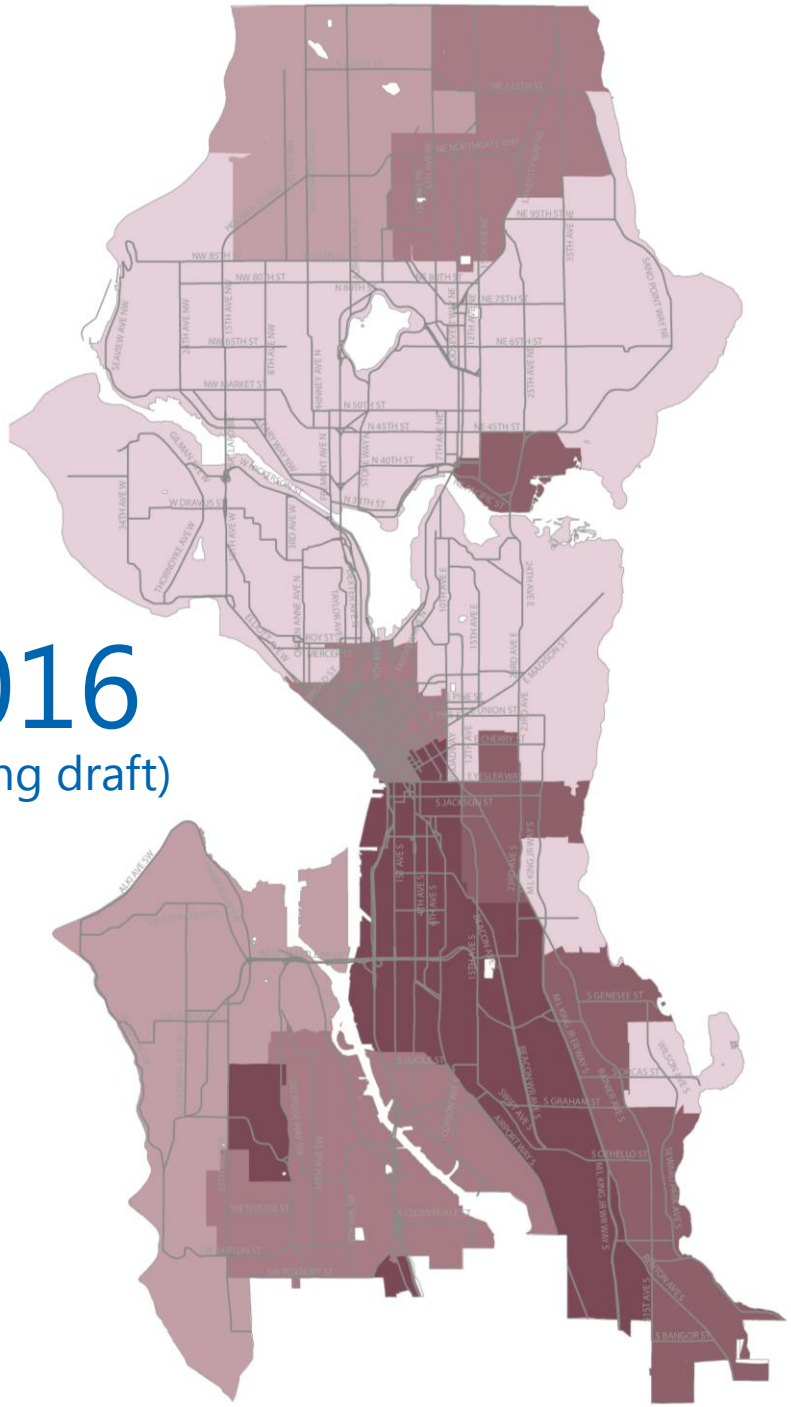
Equity: Make Seattle a more walkable city for all through equity in public engagement, service delivery, accessibility, and capital investments.

Health: Get more people walking to improve health and increase mobility.

2009 Factors
~~Auto ownership~~
Low income population
Disability population
Diabetes rates
Physical activity rates
Obesity rates

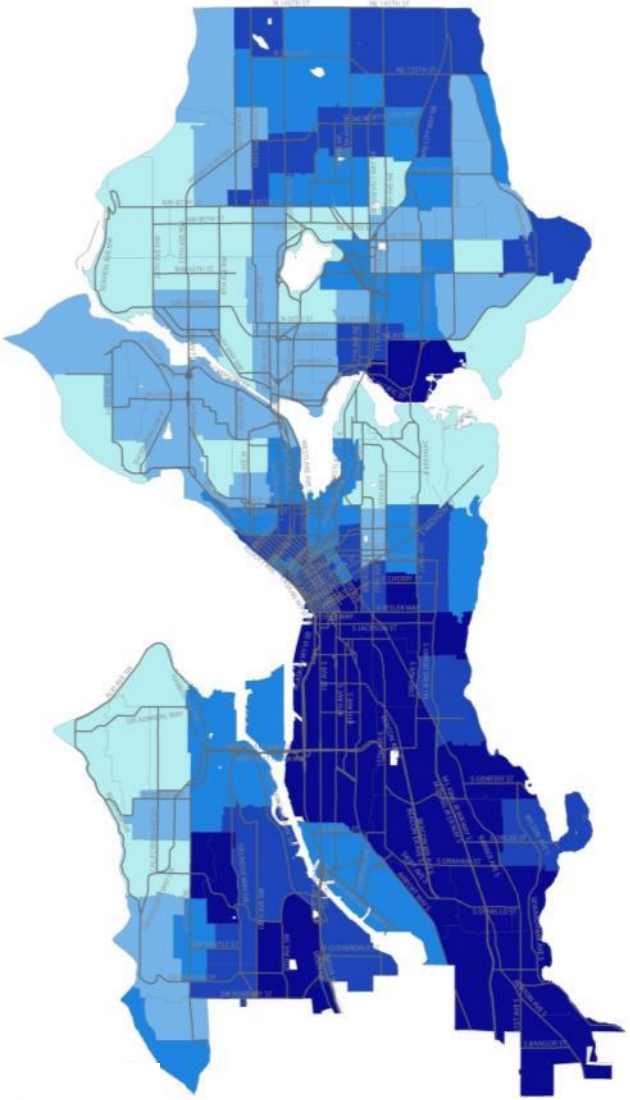
Additional Factors	
Communities of color	Used in Seattle 2035, RSJI, Move Seattle/Levy, BMP Equity Analyses
~~Age 17 and younger~~	Our intention for including age would be dependence on walking but that is captured in low-income. Unsure how to account for "high concentration of vulnerable users."
~~Age 65 and older~~	
~~Low English-speaking ability~~	Captured with Communities of color
~~Low educational attainment~~	Captured with Low income
~~Renter households~~	Captured with Low income
~~Housing cost-burdened households~~	Captured with Low income
~~Canopy cover~~	Captured through "presence of buffer" in Along and Across the Roadway measures


2009

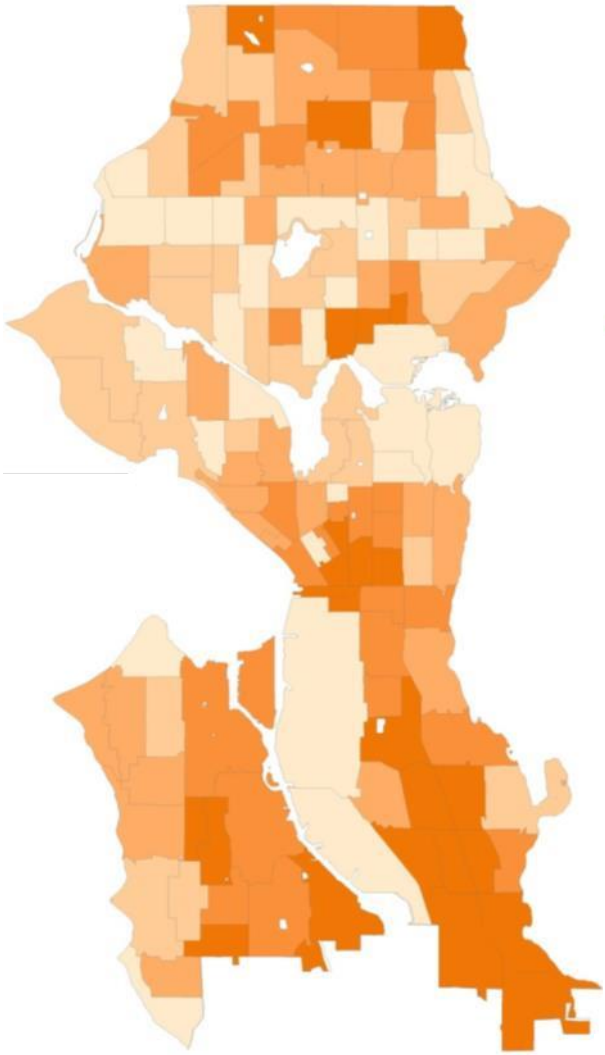

2016
(working draft)

Equity datasets included

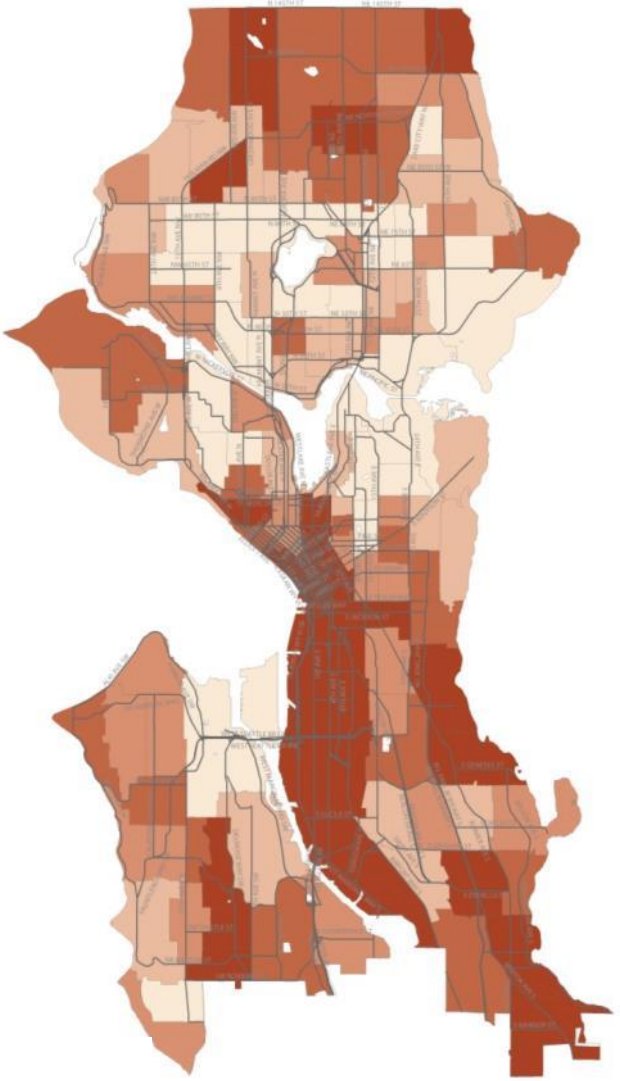
Communities of color



Low-income pop.

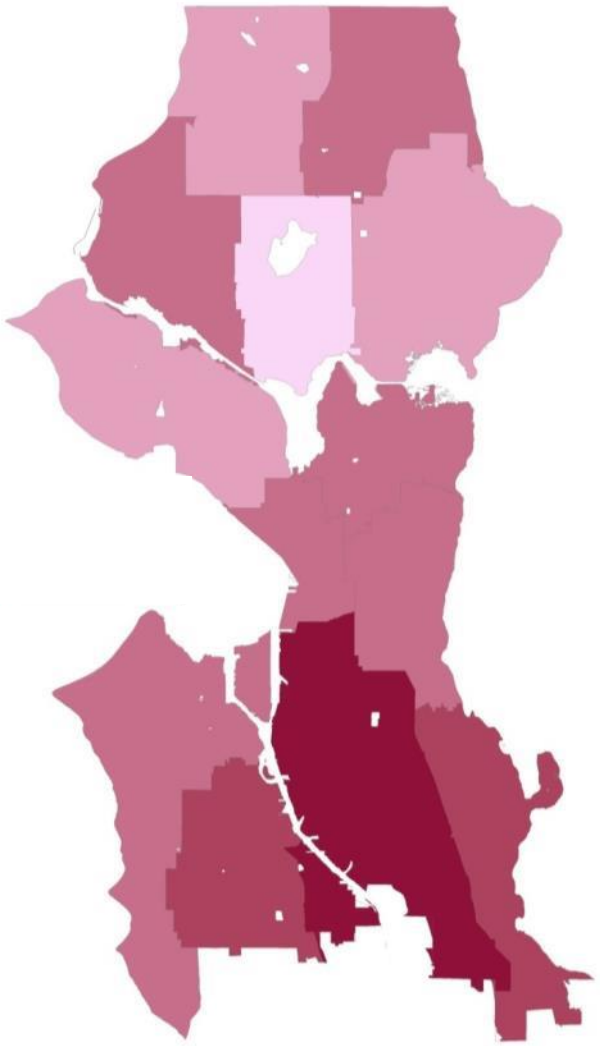


Disability pop.

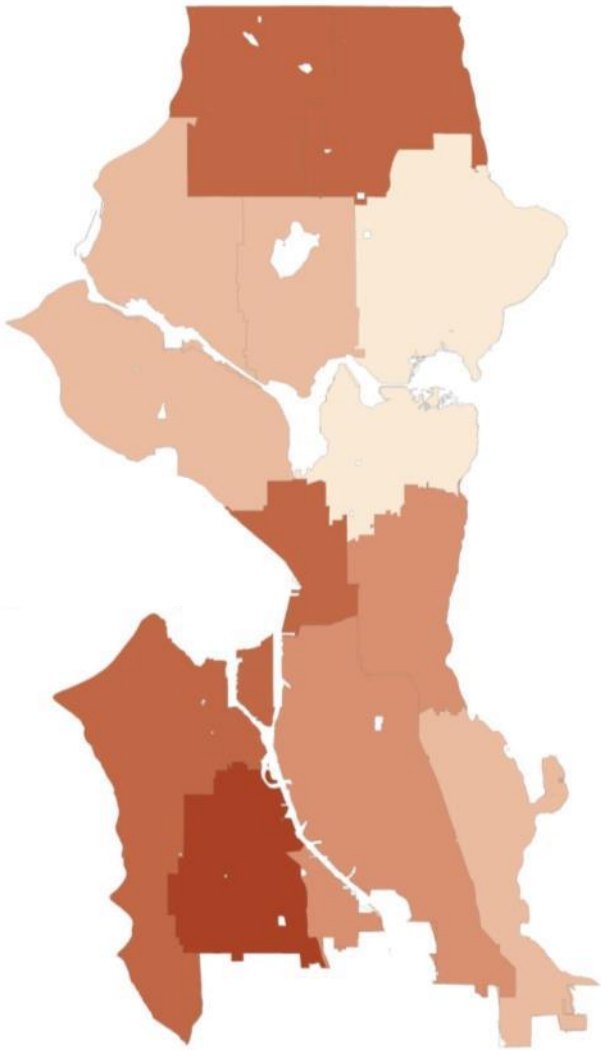


Equity datasets included

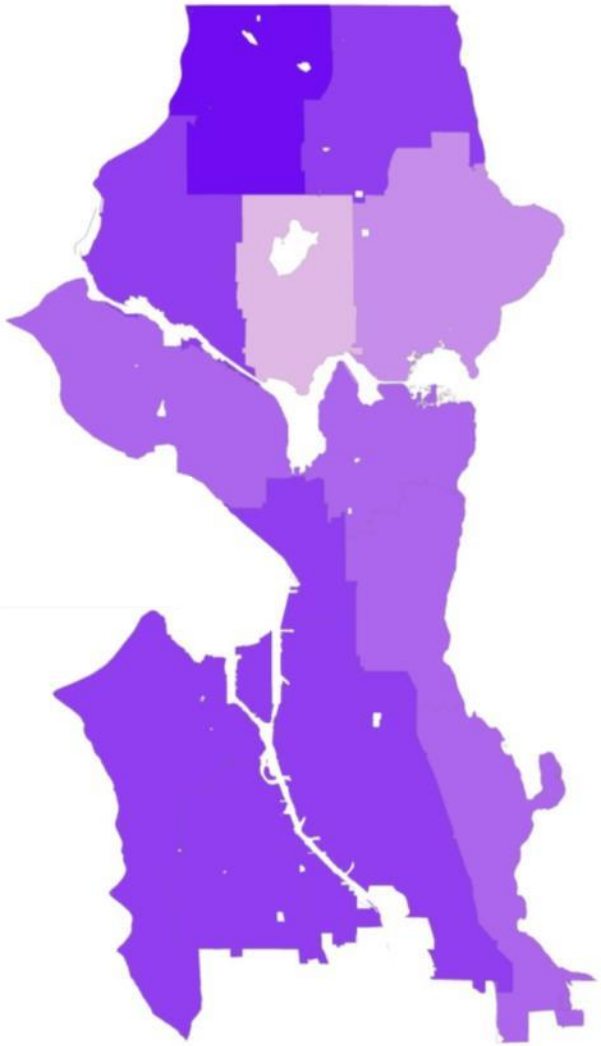
Physical activity



Obesity rate

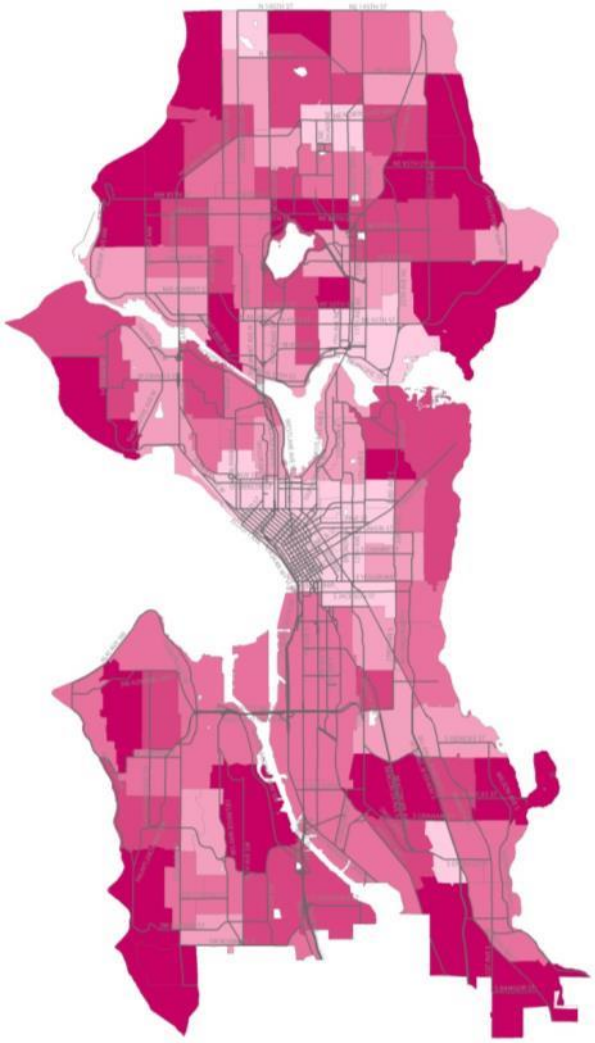


Diabetes rate

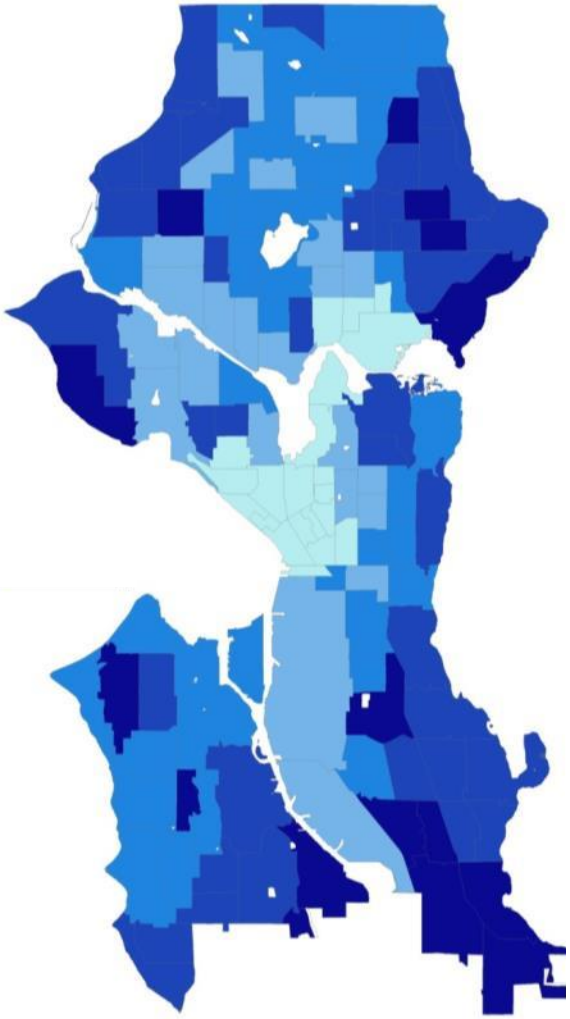


Equity datasets not recommended

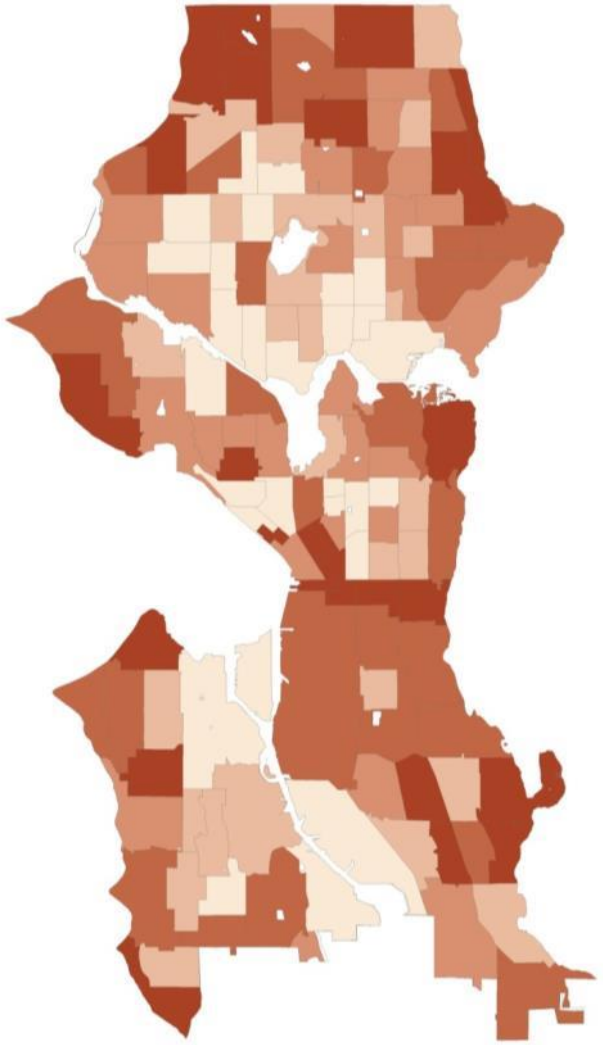
Cars / household



Under 18 pop.

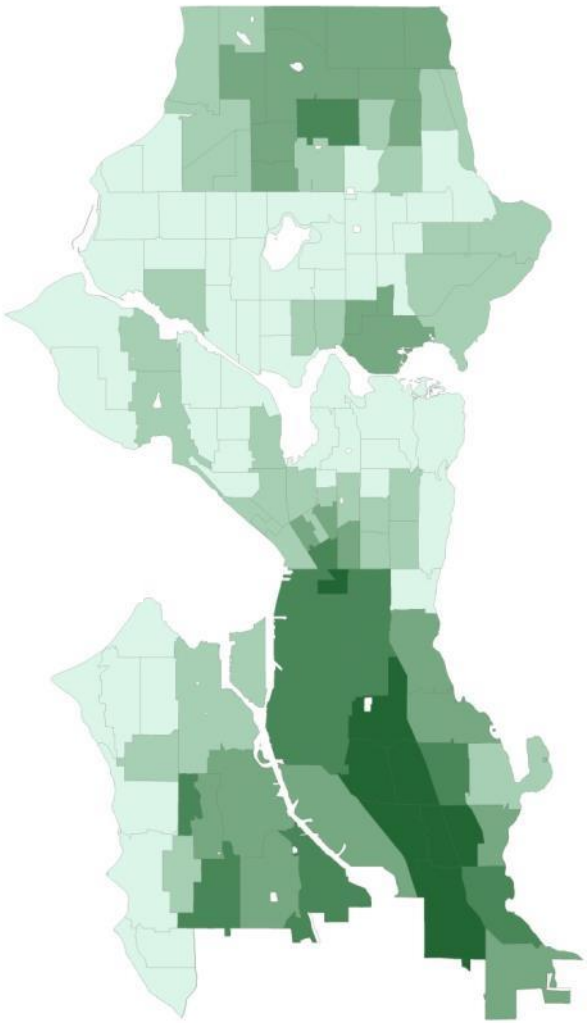


65 and older pop.

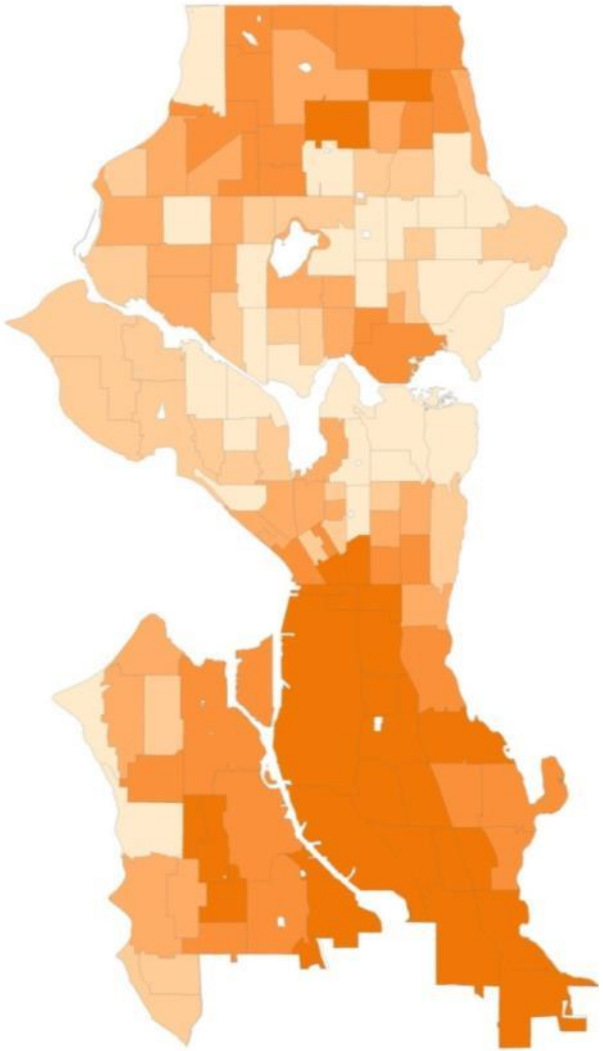


Equity datasets not recommended

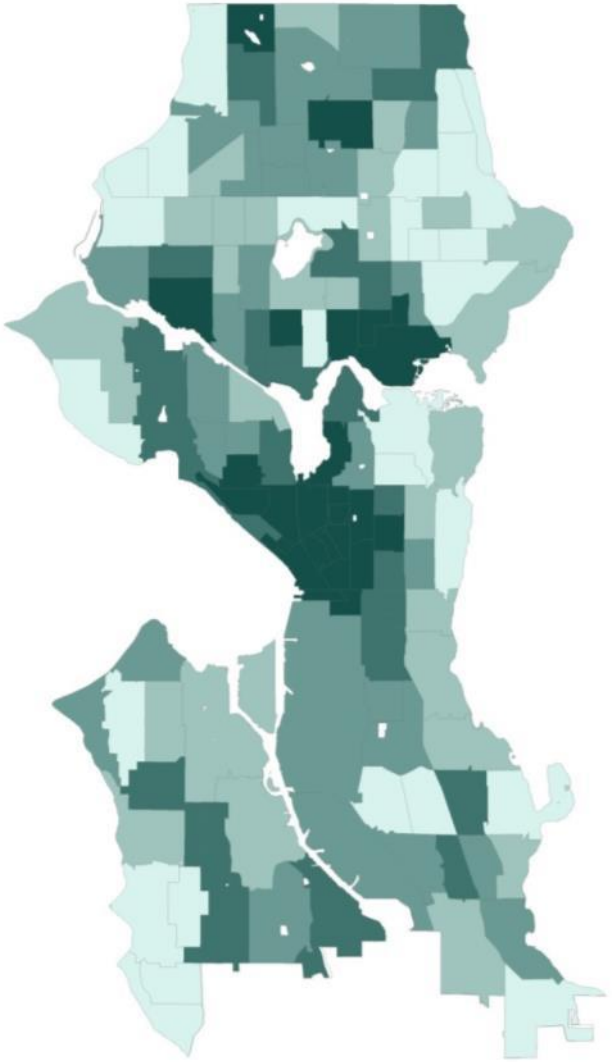
Low English speaking ability



Low educational attainment



Renter occupied

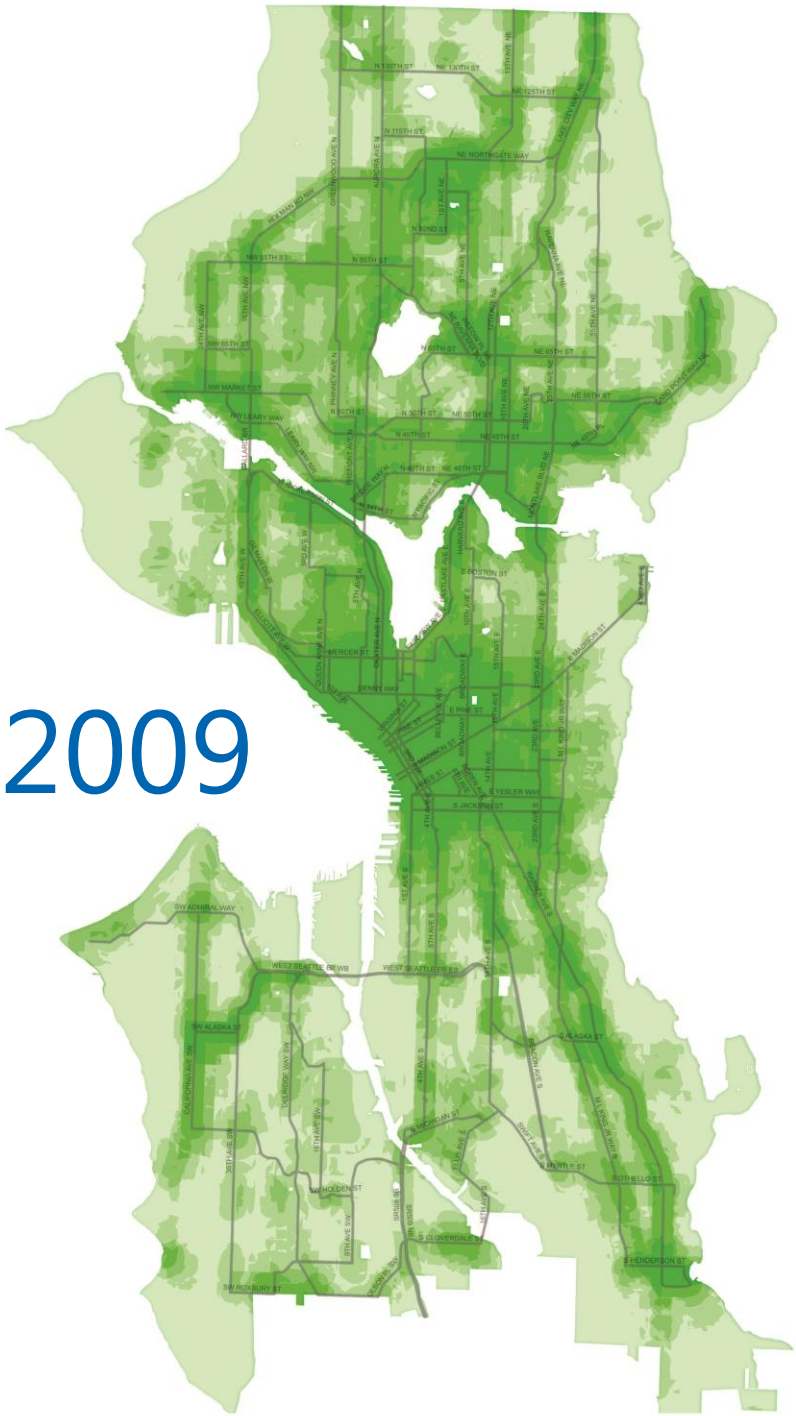


Vibrancy

Vibrancy: Develop a connected pedestrian environment that sustains healthy communities and supports a vibrant economy.

2009 Factors
Universities or Colleges
Major Generator (e.g. Pike Place, Convention Center)
Multi-family, condominiums and apartments
Major Retail
Minor Retail
Hospital and Community Service
Park and Open Space
Population forecast
Employment forecast
Light rail stations
Major bus stops
Minor bus stops
Trails
Bridges
Stairways

Recommended Factors	
Urban Villages & Urban Centers	Factors in job and housing growth. Urban Centers will be heavily weighted.
Neighborhood Commercial Zoning	Capture neighborhood retail destinations outside of urban villages.
10 minute walkshed to Frequent Transit Network (FTN) stops	
10 minute walkshed to parks	
10 minute walkshed to schools	

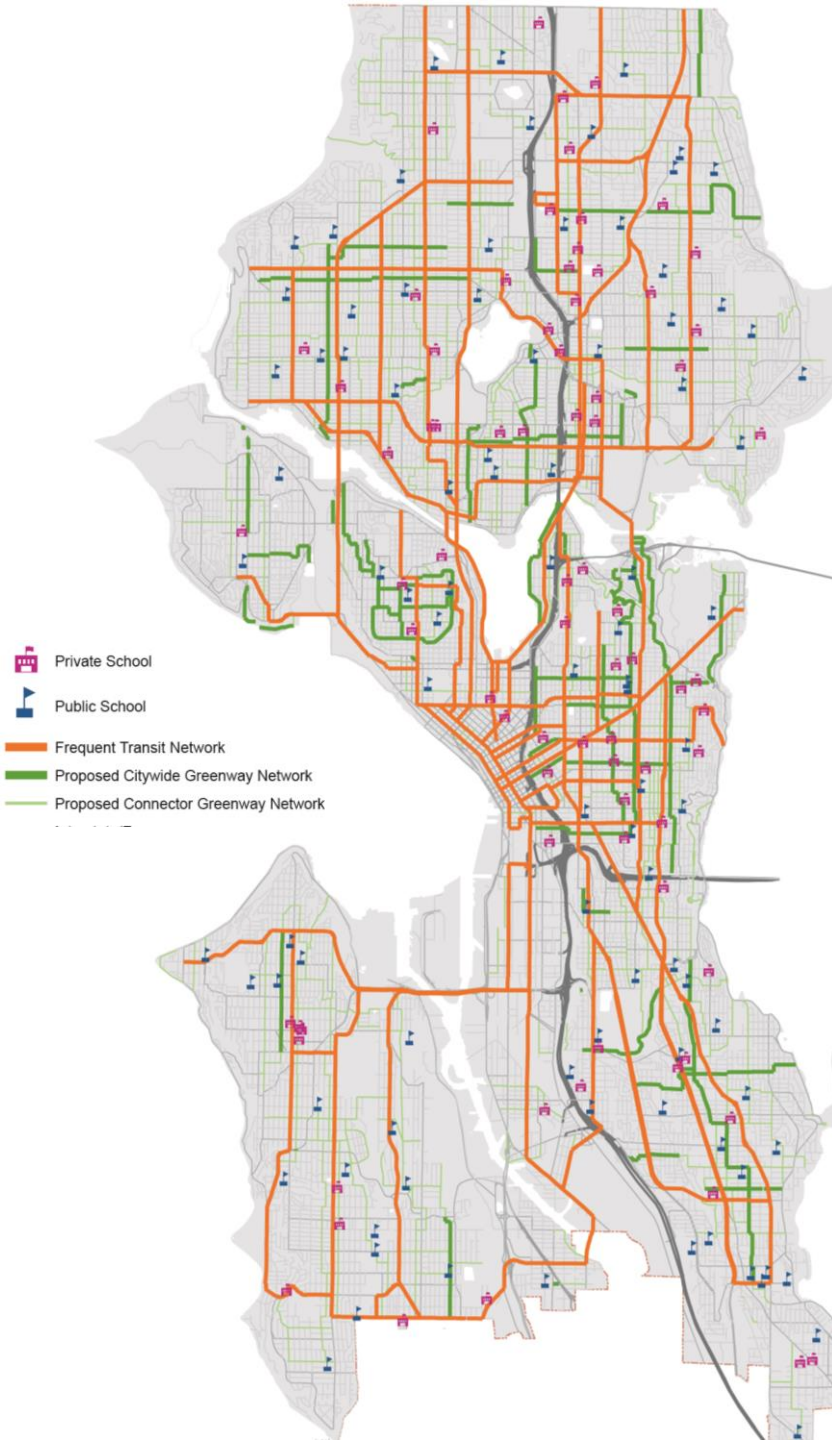


2016
(working draft)

Explore priority focus on connections to key destinations (schools and transit)

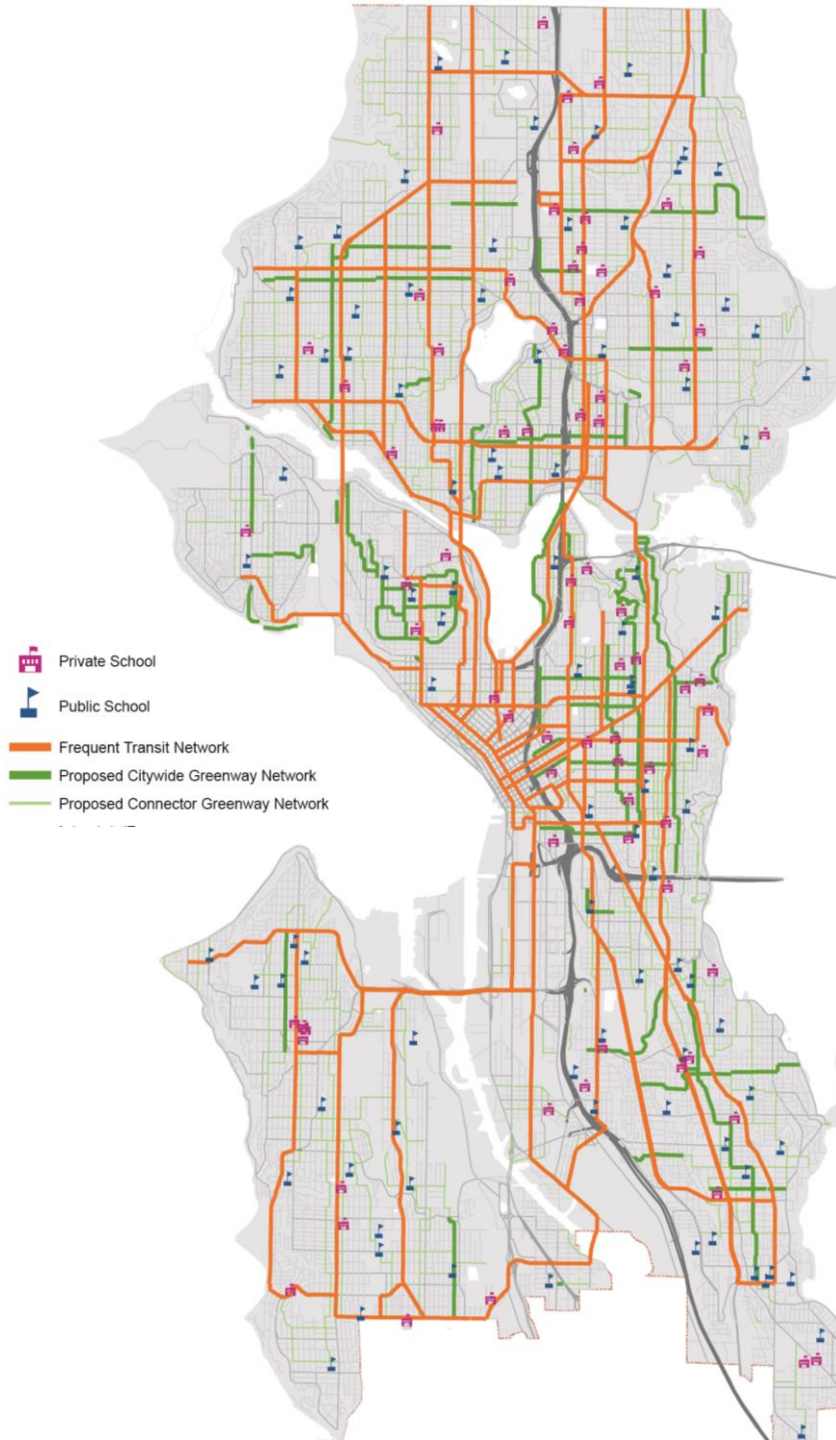
- Transit access: arterials
- School access: neighborhood greenways

Destination Connectivity Network	
Frequent transit network without sidewalks	
Neighborhood Greenways	Per adopted BMP (may look at pedestrian-oriented modifications)



Potential benefits of focus on access to transit and schools

- Broader geographic distribution of priorities
- Sharpens priorities by focusing on key generators
- Addresses desire for system connectivity
- Underscores role of greenways in PMP



Discussion: **Crossing the Roadway***

2009 Factors: Segment Value Calculation	
~~Street classifications (proxy for volume)~~	Propose removing since included in Safety.
~~Arterial speed limit~~	Propose removing since included in Safety.
Road width	
Distance between traffic signals and stop signs	

2009 Factors: Intersection Value/Balance Calculation	
Crosswalk	
Curb ramp	Discussion: To be updated via current ADA ramp audit?
Signal control	Refine per SDOT's Pedestrian Safety Analysis.
Stop sign control	
~~Number of collisions~~	Pedestrian collisions included in Safety

New Factors: Segment Value Calculation	
Block Length	Moved from ATR as a proxy for crossing demand.

*To be informed by SDOT's Pedestrian Safety Analysis

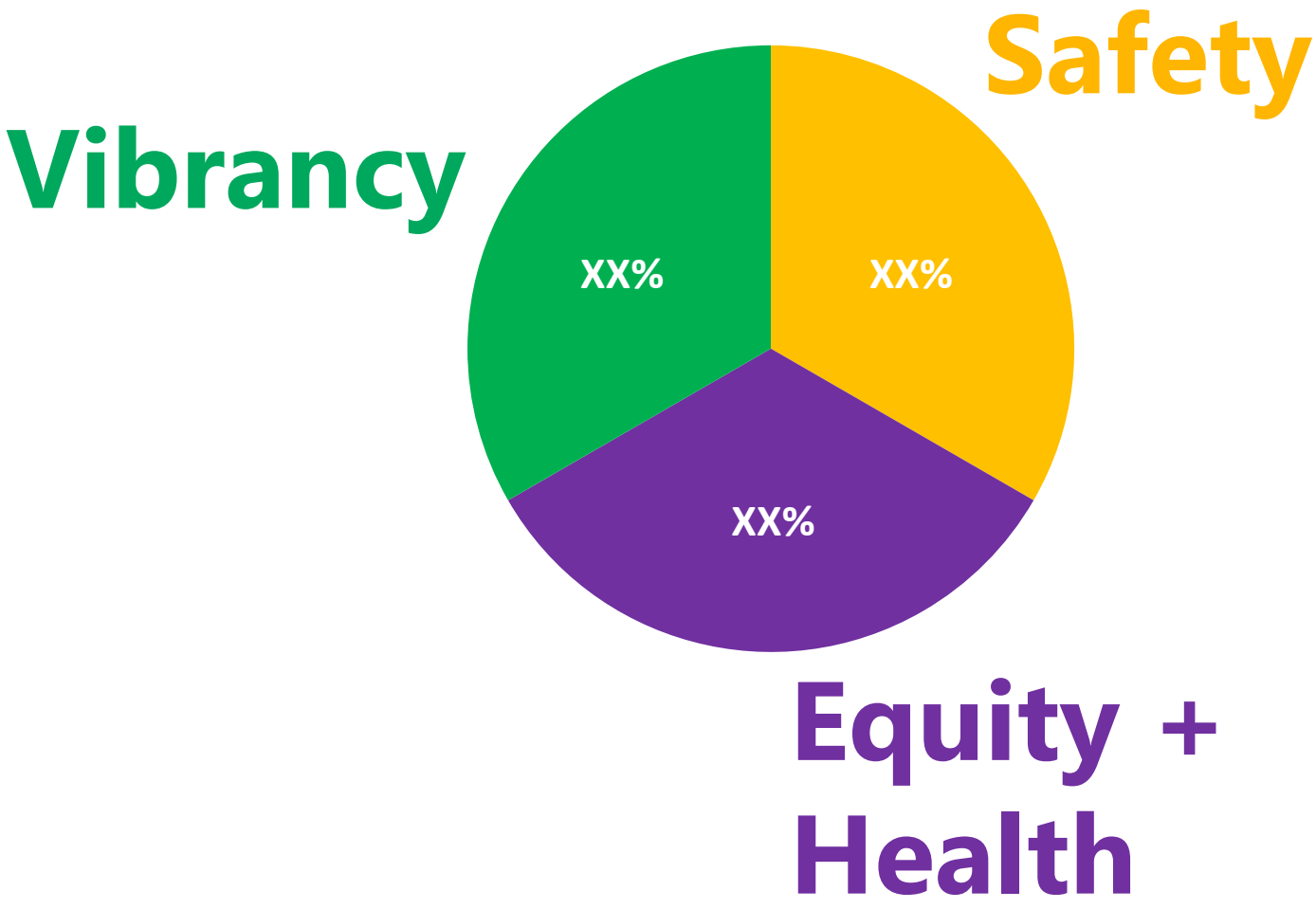
Discussion: **Along the Roadway**

2009 Factors	
~~Street classifications (proxy for volume)~~	Propose removing since included in Safety.
~~Arterial speed limit~~	Propose removing since included in Safety.
Buffer	
Sidewalk status	
Slope (along)	
Parking	
Curb	
~~Length of block~~	Move to CTR as a proxy indicator for crossing demand/where pedestrian crossing should be established.

Potential New factors (To be informed by SDOT's Pedestrian Safety Analysis)	
Peak hour parking	Differentiated, and likely higher rated, than parking. Buffer during the busiest times.
Street trees	Presence of trees as a buffer and indicator of a quality walking environment. Presence of street trees is positively correlated with walkability. To be updated when SDOT's street tree inventory is completed. .
Alleys	Used as a proxy for access control, limited to alleys, rather than many driveways.

Discussion: If network connectivity is an overlay in Vibrancy do we need 'arterials without sidewalks" and "closes network gap" in Along the Roadway?

Key next question: How to weigh factors?



Next steps

- Public surveys for feedback on:
  - The factors that should guide how the City prioritizes walkability improvements (to inform weighting)
  - Low cost sidewalk concepts and other new toolbox items