



## Mobility Implementation Plan

Volume 1

Bellevue Transportation  
Commission

City of Bellevue, WA  
March 2022

# Mobility Implementation Plan

## Transportation Commission February 10, 2022

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Transportation

FEHR  PEERS

# MOBILITY IMPLEMENTATION PLAN

Presentation: Review content of the MIP

- MIP Goals
- Layered Network
- Performance Metrics
- Performance Management Areas
- Performance Targets
- Project ID and Implementation
- Multimodal Concurrency

Review Next Steps

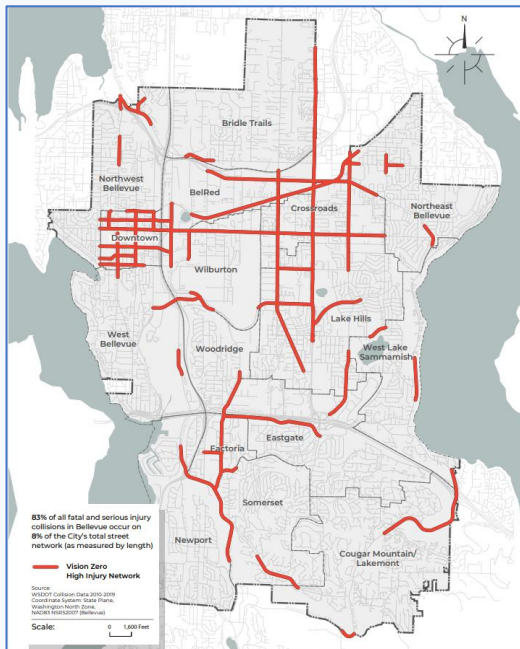




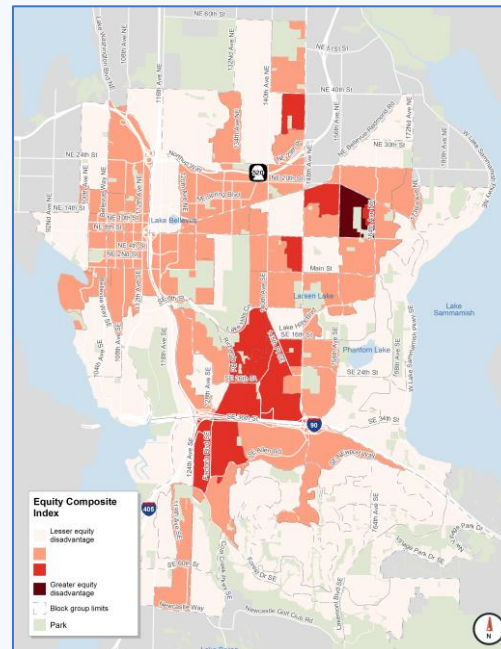
# Mobility Implementation Plan Goals

- **Safety:** Eliminate serious injuries and fatalities from crashes (Vision Zero)
- **Equity:** Design and prioritize projects to address equitable access
- **Growth:** Support growth and accommodate multimodal travel
- **Access/Mobility:** Improve connections to destinations

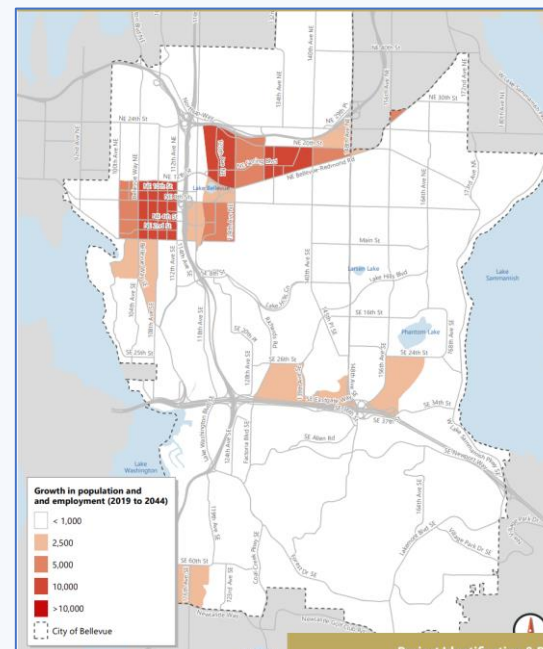
## Improve Safety



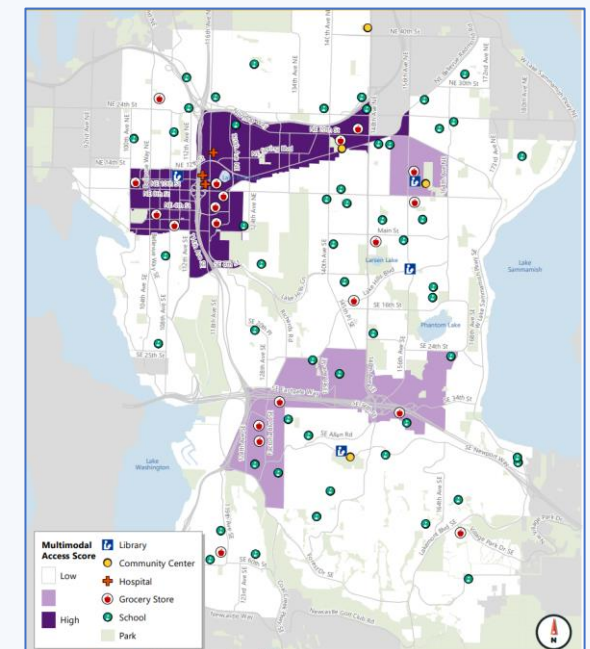
## Consider Equity



## Accommodate Growth



## Improve Access/Mobility



# The Layered Network

## Land Use

- Intensity and mix of uses

## Pedestrian

- Along arterials and across arterials

## Bicycle

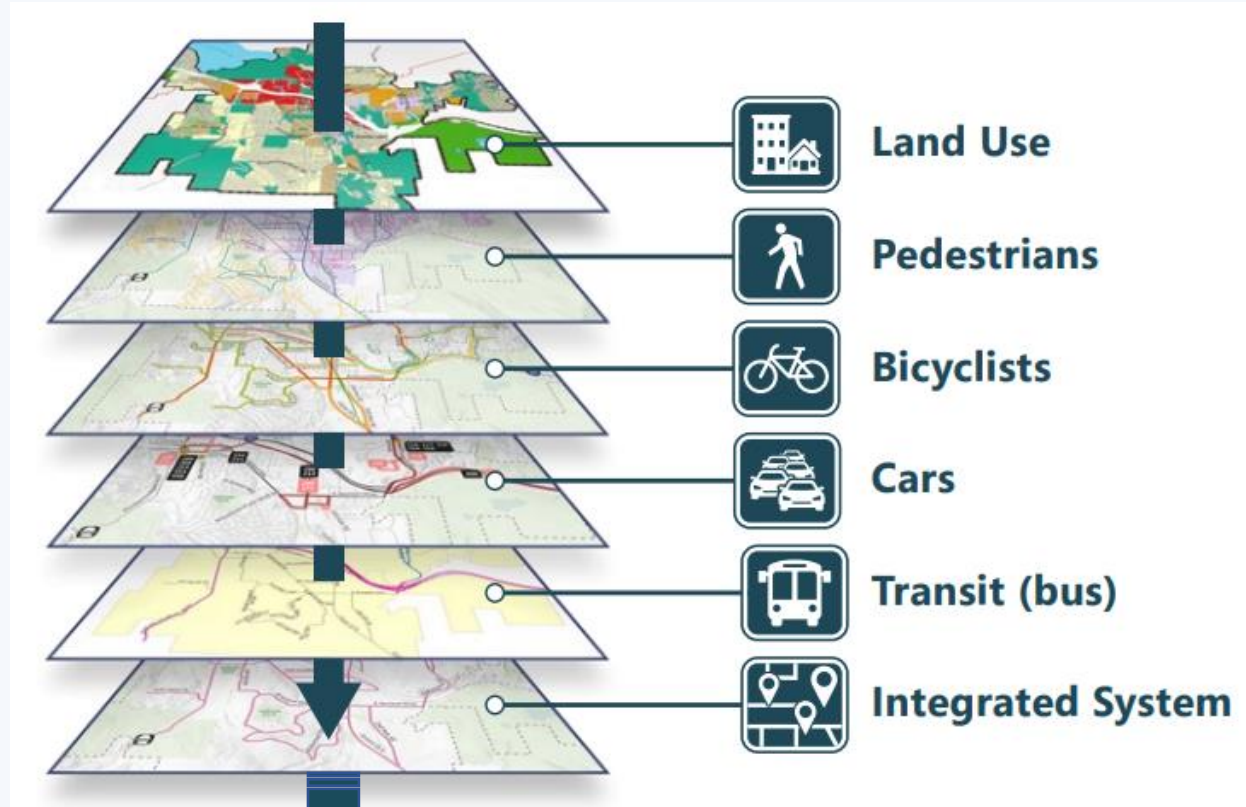
- Network from Pedestrian and Bicycle Transportation Plan

## Vehicle

- Primary Vehicle Corridors and System Intersections

## Transit

- Frequent Transit Network from Transit Master Plan and transit stops



## Integrated System

- Reveals potential modal/land use compatibilities and conflicts



# Performance Metrics

Metrics describe how each mode of the transportation system is measured:

Physical metrics & Functional metrics

## **Pedestrian**

- Sidewalk width (including landscape strip)
- Arterial crossing spacing: intersections & mid-block

## **Bicycle**

- Level of Traffic Stress (LTS) corridors & intersections

## **Transit**

- Travel Time Ratio and Bus Stop Amenities

## **Vehicle**

- Travel Speed on Primary Vehicle Corridors
- V/C Ratio at System Intersections



# Performance Metrics

## Pedestrian

- Sidewalk Dimensions on Arterials
- Designated Crossing Spacing on Arterials

Context	Downtown / BelRed	Activity Center	Neighborhood Shopping Center	Pedestrian Destination	Elsewhere in the City
Component					
Sidewalk Width and Landscape Buffer Width	Downtown Land Use Code  BelRed Land Use Code	16 ft. total	13 ft. total on frontage adjacent to shopping center	13 ft. total on frontage of pedestrian destination and within 100 ft. of a FTN stop	Bellevue Land Use Code  Transportation Design Manual

Context	Downtown / BelRed	Activity Center	Neighborhood Shopping Center	Pedestrian Destination	Elsewhere in the City
Component					
Spacing Between Arterial Crossings	Downtown Transportation Plan (300 ft.)	≤ 800 ft.: Factoria ≤ 600 ft.: Elsewhere	One crossing every 600 ft. or less within shopping center area	Within 600 feet of primary entrance Within 300 ft. of bus stop pair on FTN	Applicable as needed

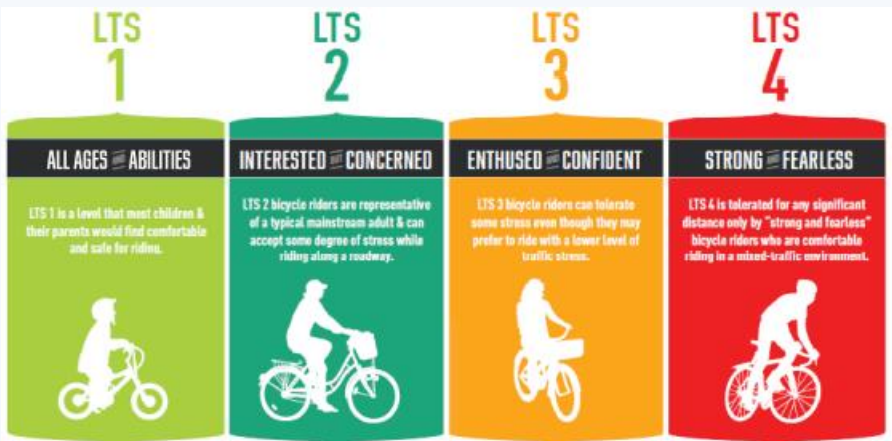




# Performance Metrics

## Bicycle

Level of Traffic Stress (LTS)  
on the Bicycle Network  
corridors and intersections



Roadway Characteristics		Bicycle Facility Components: Guideline to Achieve Intended Level of Service/Level of Traffic Stress					
Speed Limit	Arterial Traffic Volume	No Marking	Sharrow Lane Marking	Striped Bike Lane	Buffered Bike Lane (Horizontal)	Protected Bike Lane (Vertical)	Physically Separated Bikeway
</=25	<3k	1	1	1	1	1	1
	3-7k	3	3	2	1	1	1
	>/=7k	3	3	2	2	1	1
30	>10k	3	3	2	2	1	1
	10-25k	4	4	3	3	2	1
	>/=25k	4	4	3	3	3	1
35	<25k	4	4	3	3	3	1
	>/=25k	4	4	4	3	3	1
>35	Any	4	4	4	4	3	1



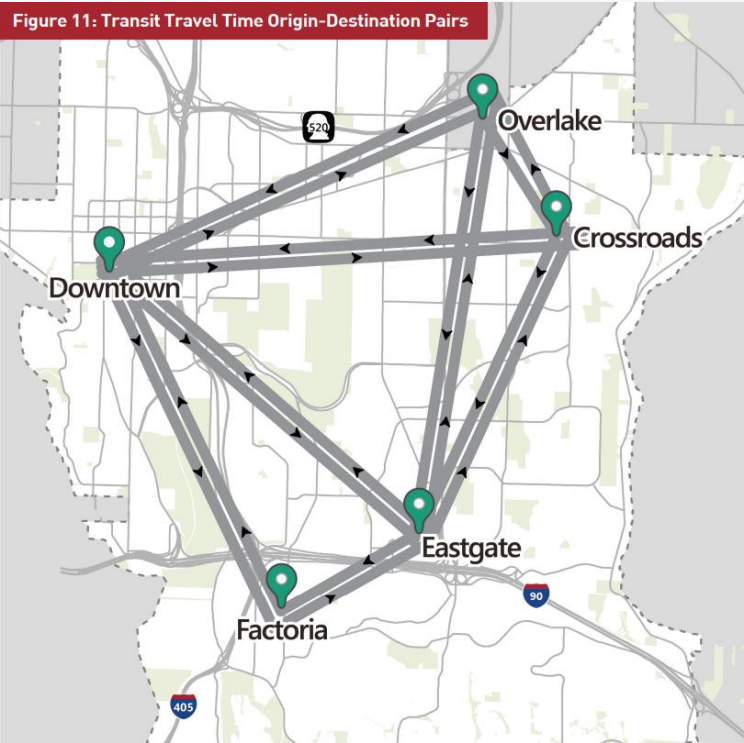
# Performance Metrics

## Transit

- Travel Time Ratio
  - Relative to auto travel time between activity centers on Frequent Transit Network routes
- Bus Stop Amenities



Context	Local Transit Stop	Primary Transit Stop	Frequent Transit Network Stop/ RapidRide Stop
Component			
Weather Protection	Yes, Priority locations have 25+ daily boardings	Yes	Yes
Seating	Yes, Priority near Pedestrian Destinations	Yes	Yes
Paved Bus Door Passenger Zone	Yes, Zone length 25-30 ft.	Yes, Zone length 40 ft.	Yes, Zone length 60 ft.
Wayfinding	Optional	Yes	Yes
Bicycle Parking	Optional	Yes	Yes

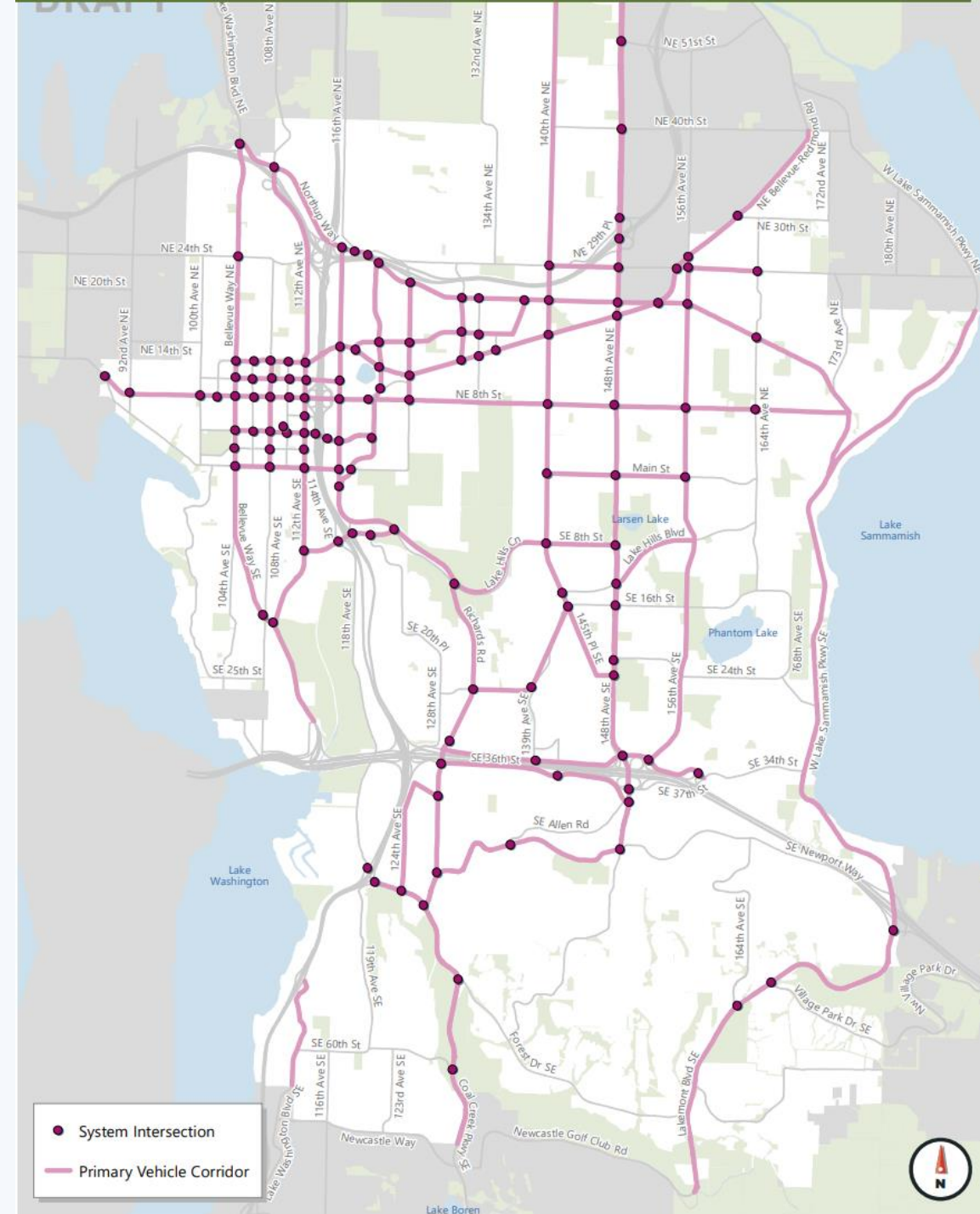




# Performance Metrics

## Vehicle

- Corridor Travel Speed
  - On Primary Vehicle Corridors
- Volume/Capacity Ratio
  - At System Intersections



# Performance Management Areas

## Type 1 PMA

» High Density/Mixed Use

Downtown, BelRed, Wilburton/East Main

## Type 2 PMA

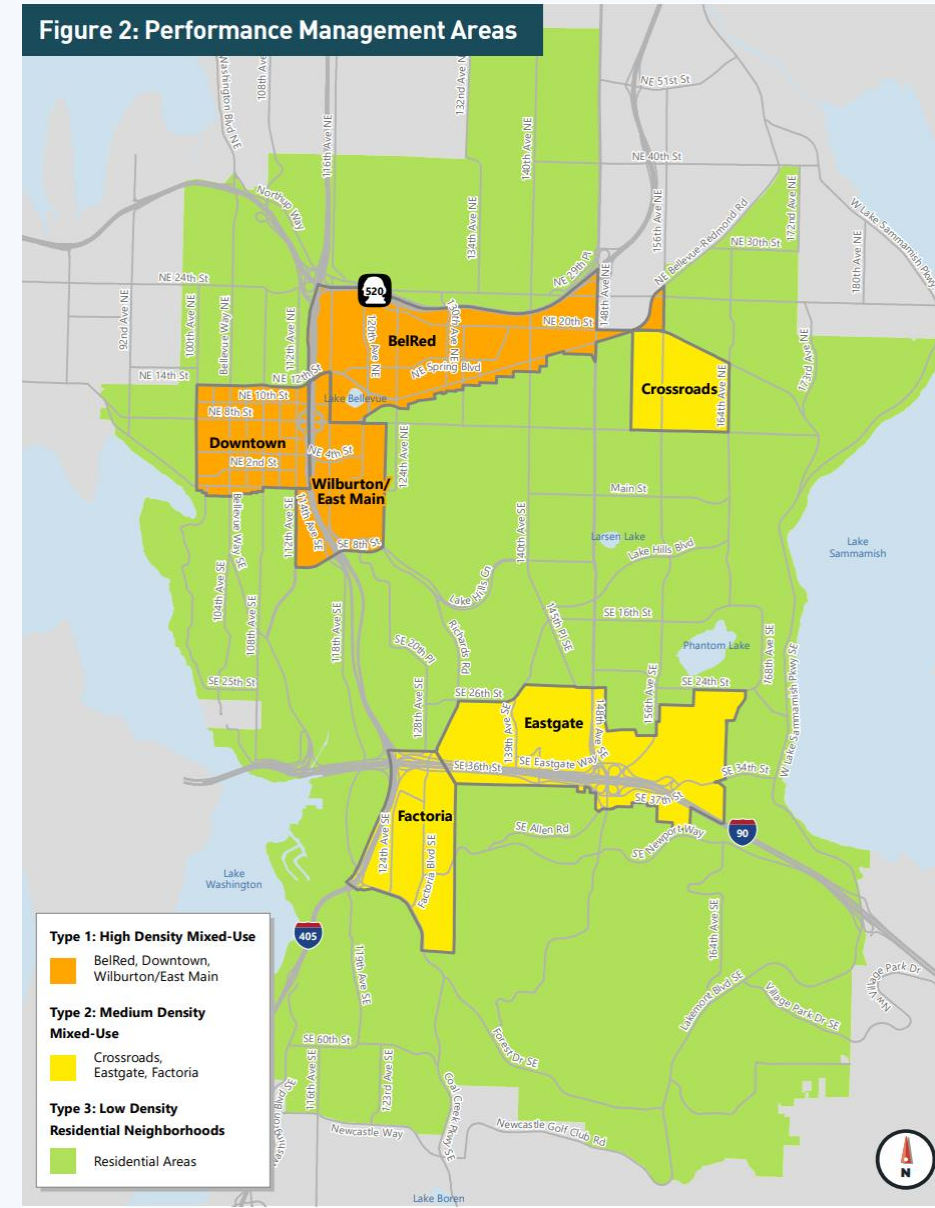
» Medium Density/Mixed Use

Crossroads, Eastgate and Factoria

## Type 3 PMA

» Lower-density residential areas with supportive retail/services

Figure 2: Performance Management Areas





# Performance Targets

- Performance Target relates to how the user experiences the transportation system, each mode
- Monitoring or forecasting performance reveals existing or potential future Performance Target gaps in the system

**Meets target / Does not meet target**

- Performance Target gaps are locations where performance of any mode **Does not meet target**
  - Candidate locations for project investment
  - Does not prescribe a specific project or performance outcome
  - Project Identification & Prioritization process will inform project candidates for the Transportation Improvement Program and the Transportation Facilities Plan

# Performance Targets for Each Mode

Mode		Performance Target	Monitoring and Reporting
Pedestrian		<ul style="list-style-type: none"><li>• Sidewalk on both sides of the arterial; sidewalk dimensions vary</li><li>• Arterial crossings at designated spacing near major trip-generating land uses; the spacing of arterial crossings varies by land use context</li></ul>	Percentage of sidewalk system complete citywide and for locations within each PMA
Bicycle		Bicycle network facilities (corridors and intersections) meet the intended LTS	Percentage of bicycle network complete citywide and for locations by PMA
Transit		<ul style="list-style-type: none"><li>• Transit travel time ratio of less than 2.0</li><li>• Stops on the Frequent Transit Network have passenger amenities</li></ul>	List and map of activity center pairs that meet the travel time ratio Performance Target; percent of bus stops on the FTN that include all five passenger amenities
Vehicle	Type 1 PMA High Density Mixed-Use	<ul style="list-style-type: none"><li>• 1.0 V/C ratio at System Intersections</li><li>• &gt;0.5 Typical Urban Travel Speed for Primary Vehicle Corridors</li></ul>	List and map of Primary Vehicle Corridors and System Intersections that meet the PMA Performance Target
	Type 2 PMA Medium Density Mixed-Use	<ul style="list-style-type: none"><li>• 0.90 V/C ratio at System Intersections</li><li>• &gt;0.75 Typical Urban Travel Speed for Primary Vehicle Corridors</li></ul>	
	Type 3 PMA Residential	<ul style="list-style-type: none"><li>• 0.85 V/C ratio at System Intersections</li><li>• &gt;0.9 Typical Urban Travel Speed for Primary Vehicle Corridors</li></ul>	



# Performance Targets: Existing

## Mapped and Summarized: Example - Pedestrian Mode

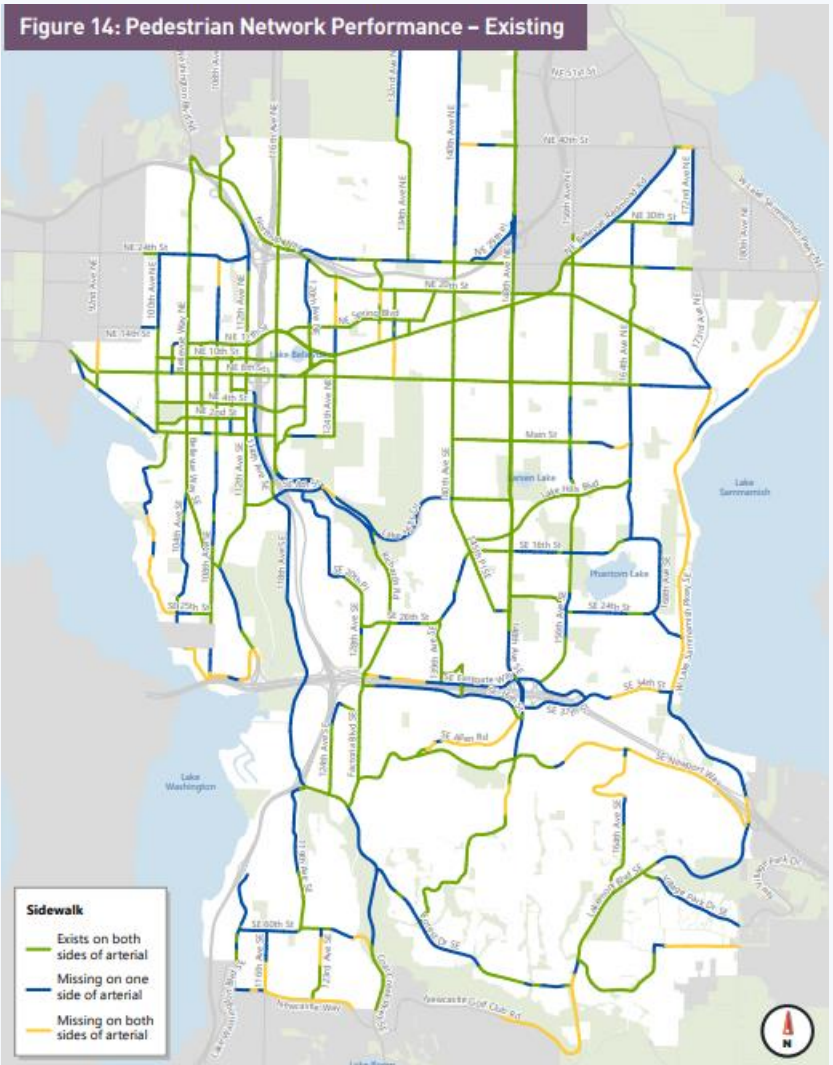


Table 7: Existing (2021) Pedestrian Network Performance Target Results

Citywide		Sidewalk on Both Sides	Sidewalks on One Side	Sidewalk Gaps
Miles		77	44	17
Proportion		56%	32%	12%

Locations within the PMA		Sidewalk on Both Sides	Sidewalks on One Side	Sidewalk Gaps
Type 1 High Density Mixed-Use	Downtown	95%	5%	0%
	BelRed	86%	8%	6%
	Wilburton/ East Main	75%	25%	0%
Type 2 Medium Density Mixed-Use	Crossroads	100%	0%	0%
	Eastgate	29%	63%	8%
	Factoria	70%	28%	2%
Type 3 Residential	Residential	47%	37%	16%

# Performance Targets: Forecast Analysis

## Analysis Assumptions

- Land Use Growth Projection from PSRC (2019-2044)
  - 80K jobs, 35K dwellings (most allocated to Type 1 PMA )
  - Land use distribution will undoubtedly change
    - Potentially soon: Wilburton Commercial Area
    - Longer term: Comprehensive Plan Update
- Preliminary 2033 Transportation Facilities Plan (TFP) Projects
  - The final approved TFP may have a different set of projects
  - Evaluation/modeling tools constantly being refined
  - **Maps and summary analysis will likely change a little**



# Performance Targets: Projection

## Mapped and Summarized: Example - Pedestrian Mode

Figure 21: Pedestrian Network Performance – 2033 TFP

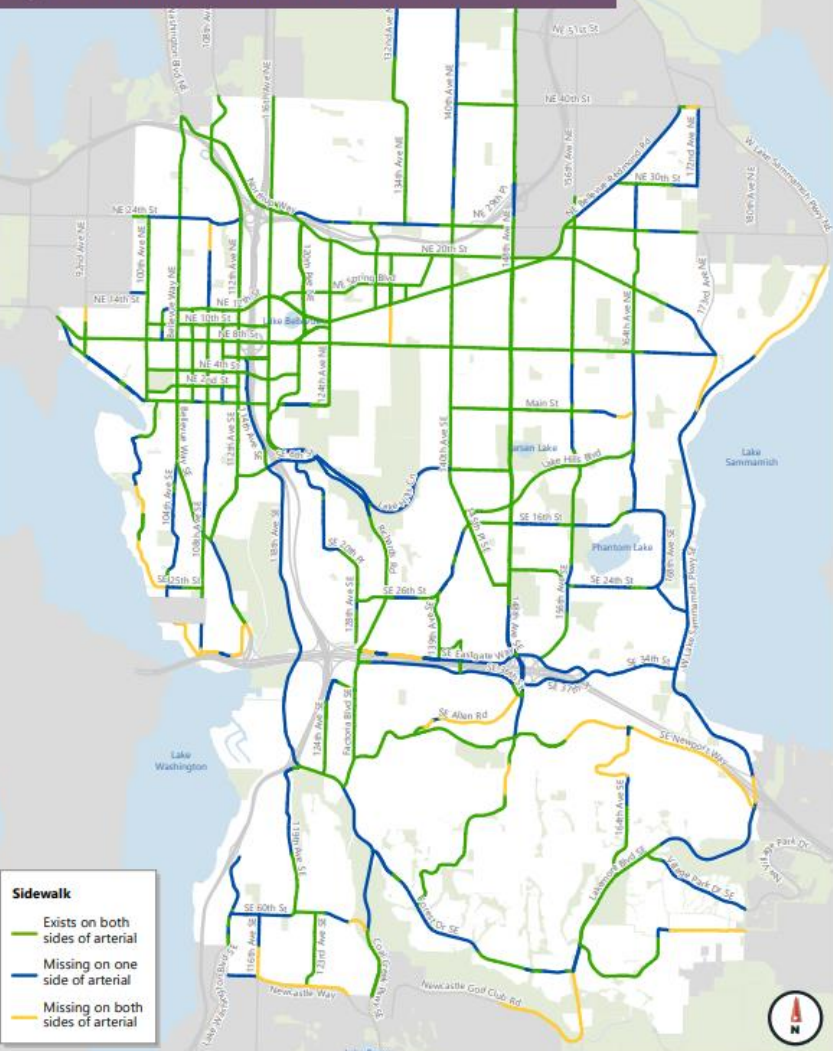
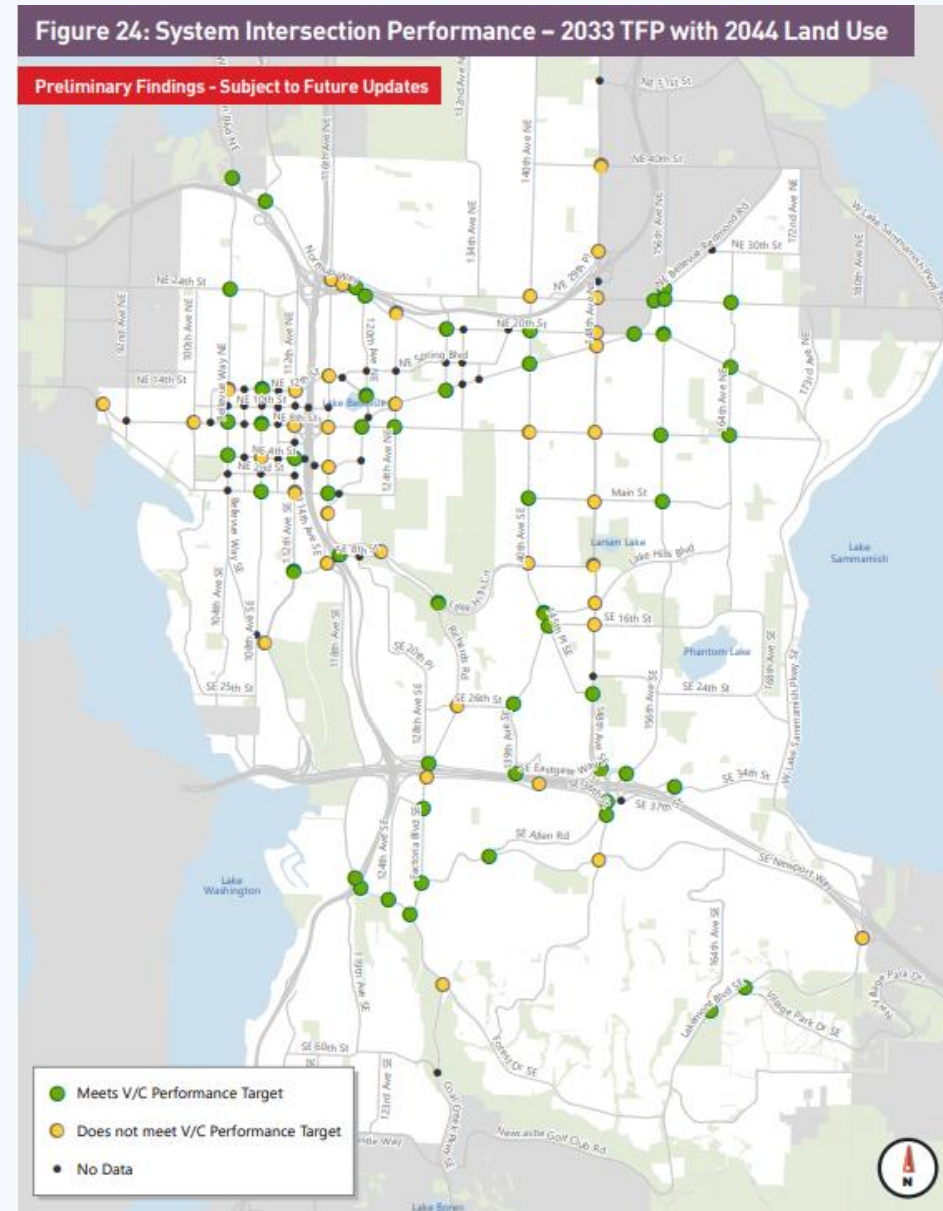


Table 9: 2033 Pedestrian Network Performance Target Results

Citywide	Sidewalk on Both Sides	Sidewalks on One Side	Sidewalk Gaps
Miles	82	45	12
Proportion	59%	33%	8%

Locations within the PMA		Sidewalk on Both Sides	Sidewalks on One Side	Sidewalk Gaps
Type 1 High Density Mixed-Use	Downtown	95%	5%	0%
	BelRed	98%	1%	1%
	Wilburton/East Main	75%	25%	0%
Type 2 Medium Density Mixed-Use	Crossroads	100%	0%	0%
	Eastgate	29%	65%	6%
	Factoria	70%	28%	2%
Type 3 Residential	Residential	50%	38%	12%

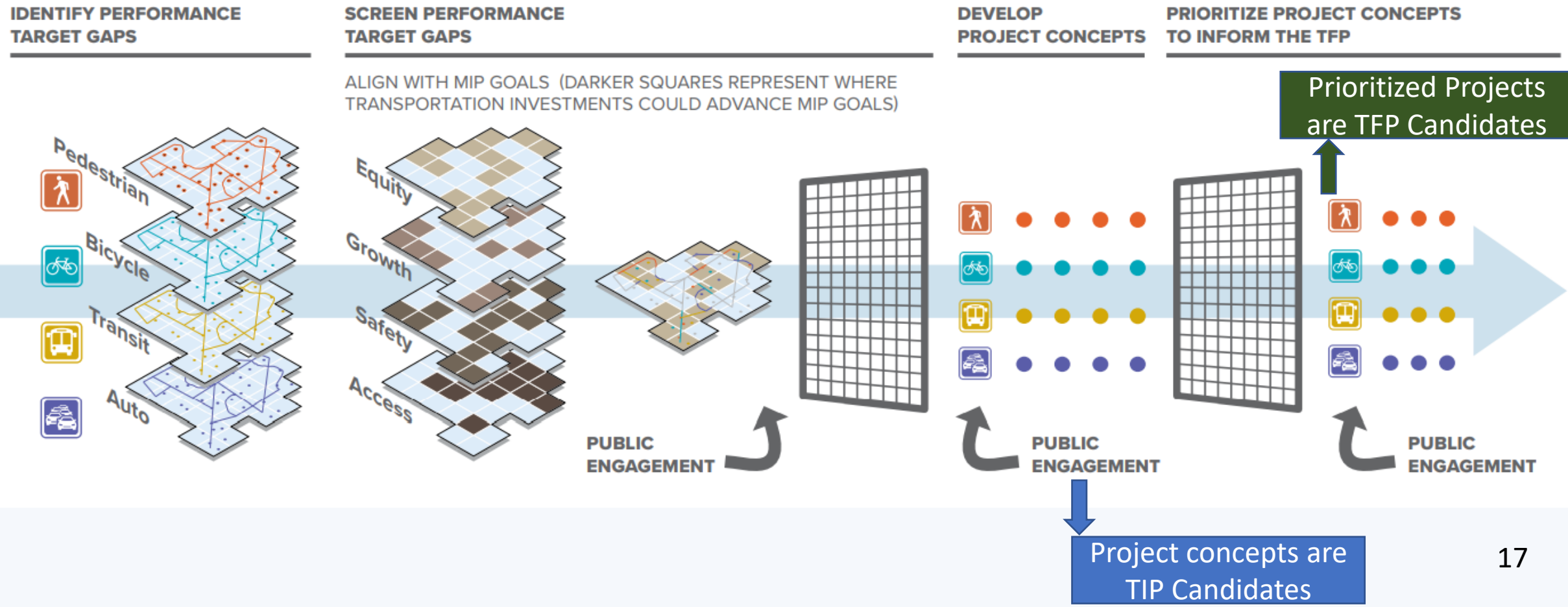
**Figure 24: System Intersection Performance – 2033 TFP with 2044 Land Use**





# Project Identification & Prioritization

Framework to identify and address Performance Target gaps



# Transportation Facilities Plan Supports Concurrency

## Transportation Facilities Plan

(Informed by the Final Step in the MIP  
Project Identification and Prioritization)

MIP Performance Target  
Gaps, MIP Goals, Public  
Input

Multimodal  
Transportation  
Capacity Investments

## Multimodal Concurrency Framework

Long Range  
Transportation Funding  
Forecast

Long Range Forecast  
Growth in Person Trips

Planned Concurrency  
Supply

Forecast Concurrency  
Demand

Projects Funded Through  
Capital Investment  
Program








Developments Seeking  
Permits

Available Supply

Demand

Concurrency = Supply  $\geq$  Demand

# Multimodal Concurrency

Supply	Demand
Transportation Projects	Development Projects
<div><div>4 miles sidewalk 5 midblock crossings</div></div>	<div><div></div><div>100-unit condominium</div></div>
<div><div>5 miles protected bike lane 2 bike signals</div></div>	<div><div></div><div>1 million square foot office building</div></div>
<div><div>2 bus stops with crossing improvements Transit signal priority at 3 intersections</div></div>	<div><div></div><div>250,000 square feet retail</div></div>
<div><div><div>4 turn lanes 4 new lane miles</div></div></div>	
<div><div><div>10,000 Mobility Units</div></div><div>Transportation Projects that provide "Supply" to support "Demand" from Growth</div></div>	<div><div><div>6,000 Mobility Units</div></div><div>Growth that "Demands" transportation "Supply" of all modes</div></div>

Concurrency is achieved and the Level-of-Service Standard is met when

Supply

>

Demand



# Next Steps

## March 10, 2022

- Staff will ask TC to approve MIP
- Approve Transmittal Letter

## April 4, 2022

- TC will transmit MIP to City Council study session
- Council will direct next steps
  - Concurrency Code
    - Recommend to Council
  - MIP/Concurrency Implementation Guide
    - Recommend to TR Director







# Mobility Implementation Plan

Questions?

**Thank You!**

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Please visit the

[Mobility Implementation Plan](#) web site