ODOT Region 1 Active Transportation Needs Inventory

Summary Presentation

November, 2015

www.oregon.gov/ODOT/ATNI

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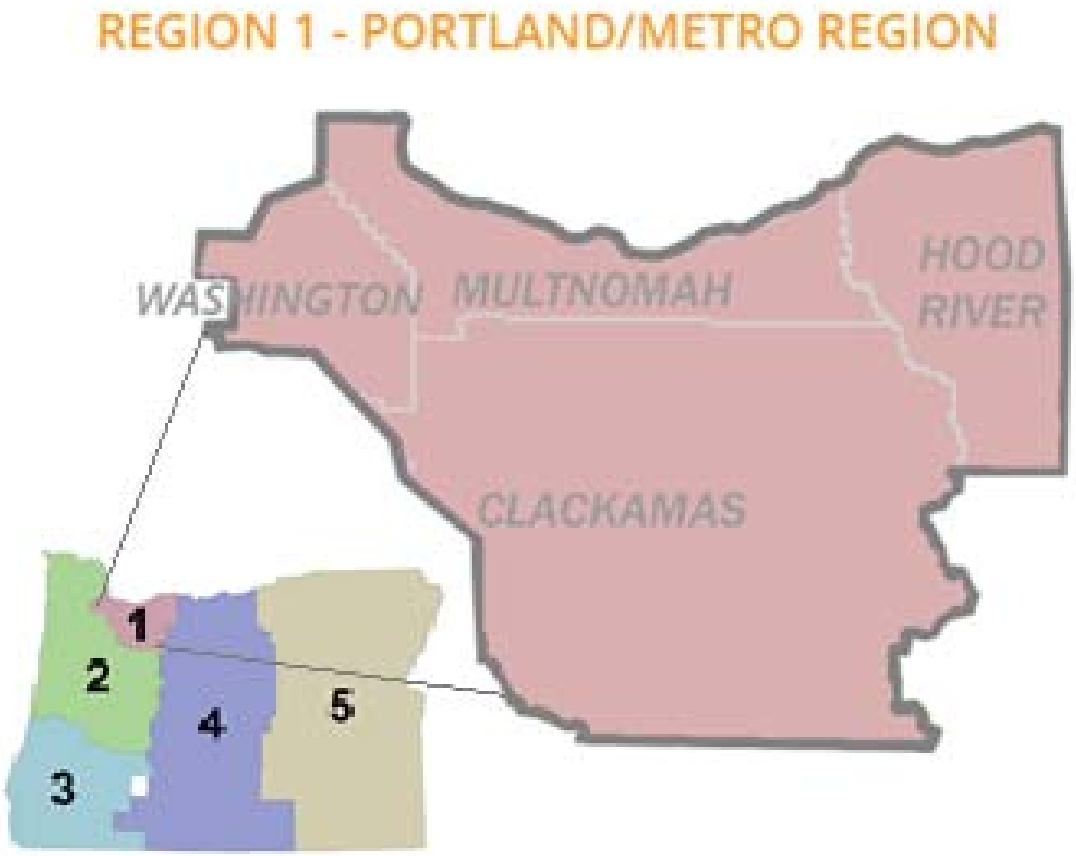
Why is this project needed?



225 miles Urban Highway
- Includes highways where ODOT doesn't own sidewalk

265 miles Rural Highway

281 miles Interstate & Expressway mainline

35 Local Jurisdictions

4 Counties

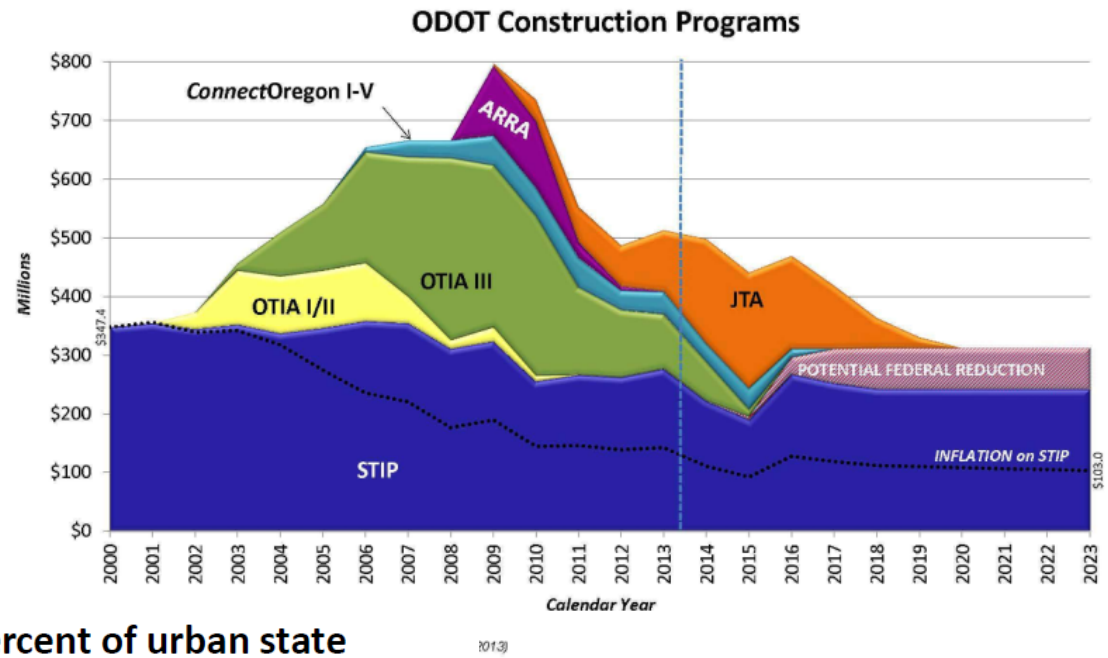
1 MPO

1 ACT **new**

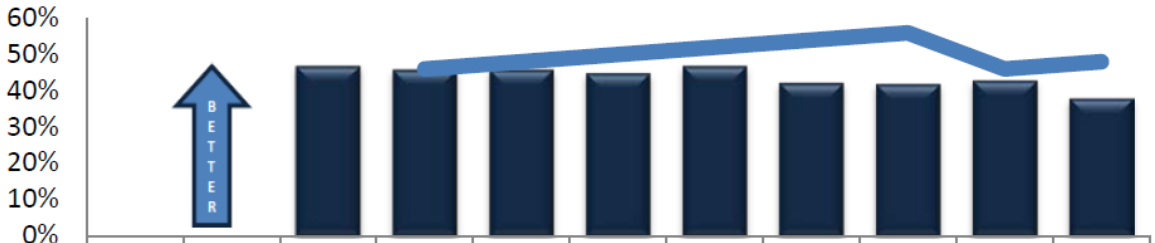
Why is this project needed?

"Current funding levels are inadequate to complete the biking and walking facilities on the state system by the 2030 Oregon Transportation Plan target date."

ODOT Key Performance Metrics Report, May 2014



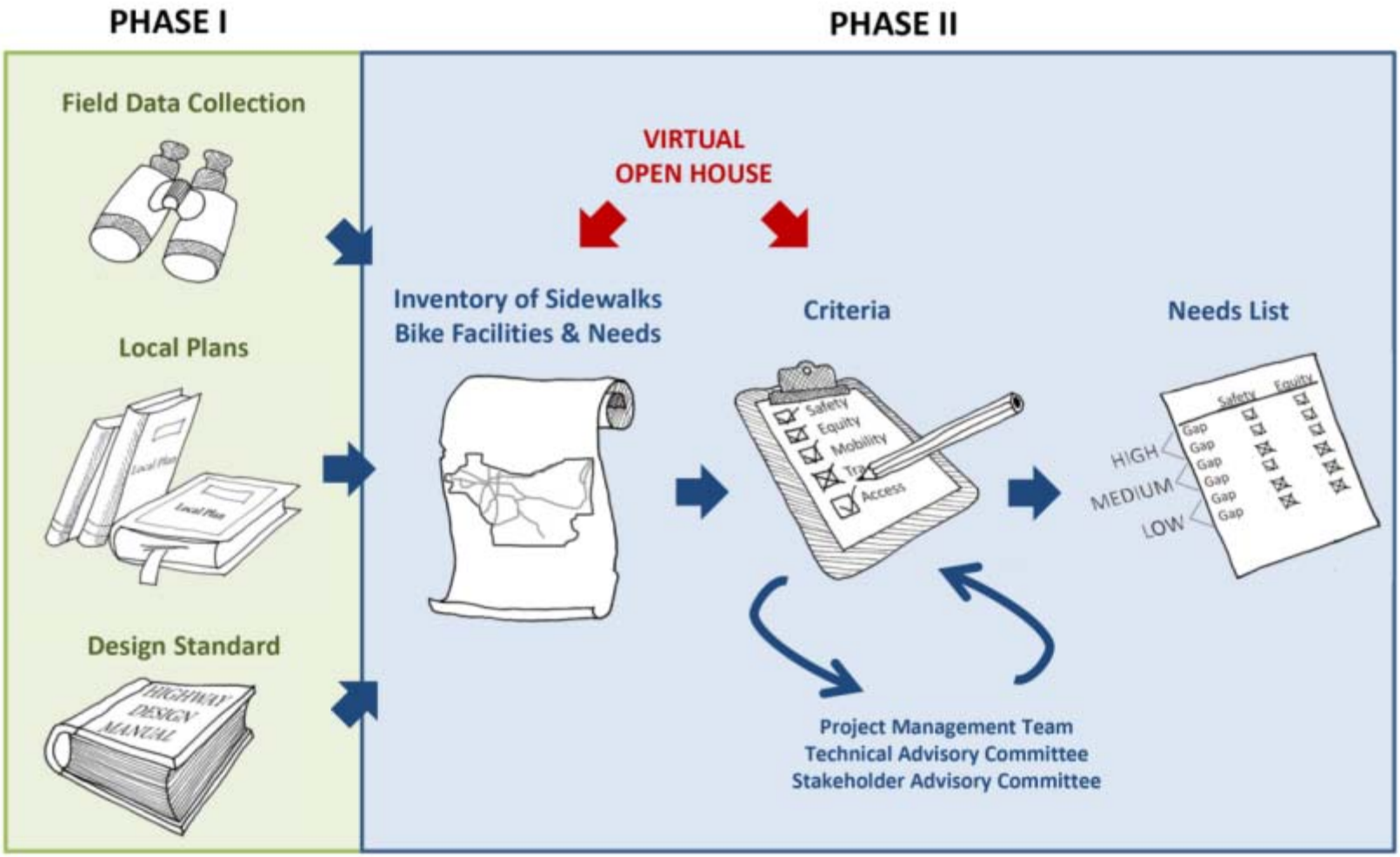
Bike Lanes and Sidewalks - Percent of urban state highways with bike lanes and sidewalks



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Actual			47%	46%	46%	45%	47%	42%	42%	43%	38%
Goal				46%	48%	50%	52%	54%	56%	46%	48%

- ODOT inventory was not complete & needed updates
- No strategic process for identifying and prioritizing ODOT active transportation needs

ACTIVE TRANSPORTATION NEEDS INVENTORY PROCESS



Phase 1: Inventory

PHASE I

Field Data Collection

Local Plans

Design Standard

"Gap"
No existing facility

"Substandard"
Existing facility, doesn't meet ODOT minimum standard

"Meets Standard"
Existing facility, meets ODOT standard

Identified Need in Adopted Local Plan*
**Can apply to areas that are a Gap, Substandard, or Meets Standard*

Phase 1: Inventory

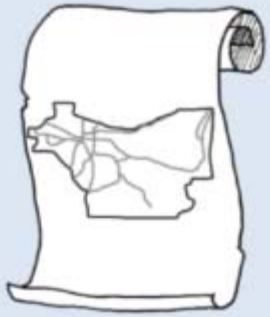
PHASE I

Field Data Collection

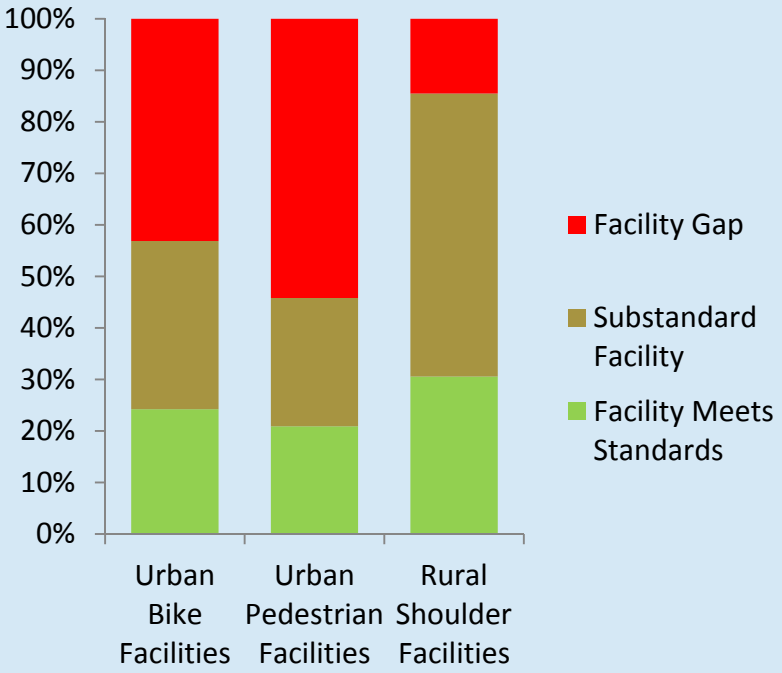
Local Plans

Design Standard

Inventory of Sidewalks Bike Facilities & Needs



Region 1 Active Transportation Inventory



Region 1 Ped/Bike Facilities Atlas

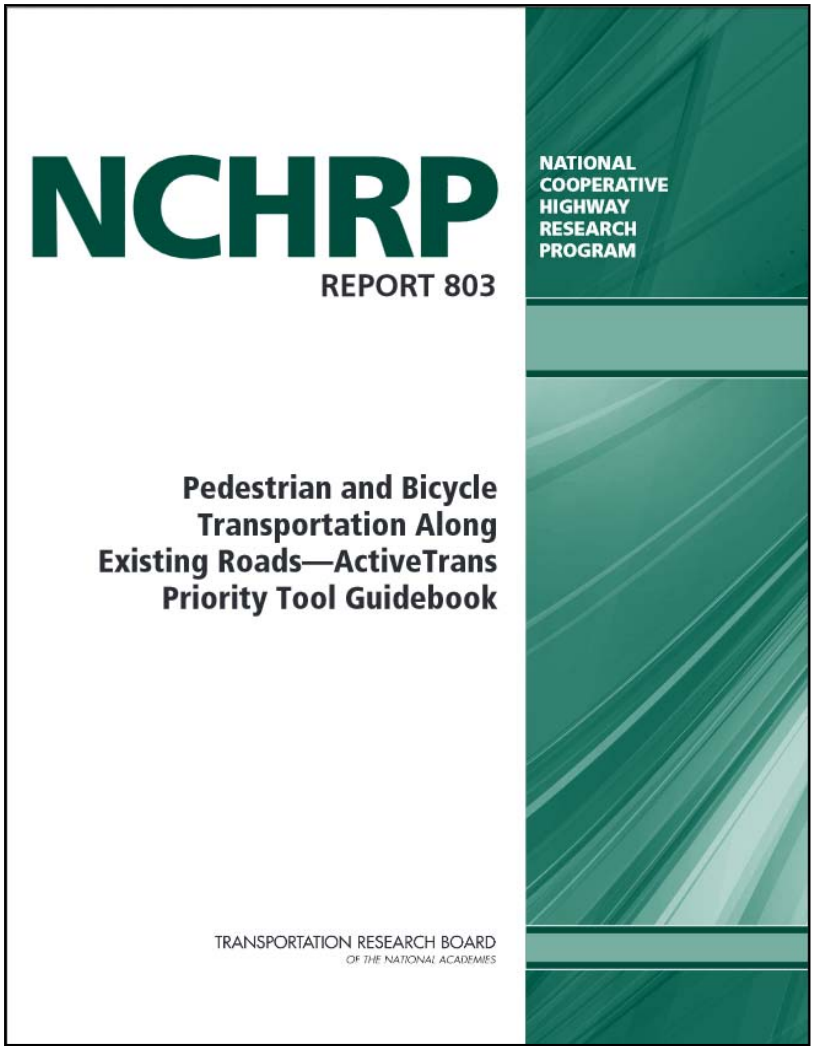
- Complete atlas posted on project website: www.oregon.gov/ODOT/ATNI

Phase II: Outreach & Evaluation

- TAC, SAC, & PMT
- Over 40 stakeholder meetings & interviews
  - Over 500 participants
- Virtual Open House
  - Project Background
  - Interactive Map Comment Tool
  - Criteria Survey
  - Over 2,500 comments

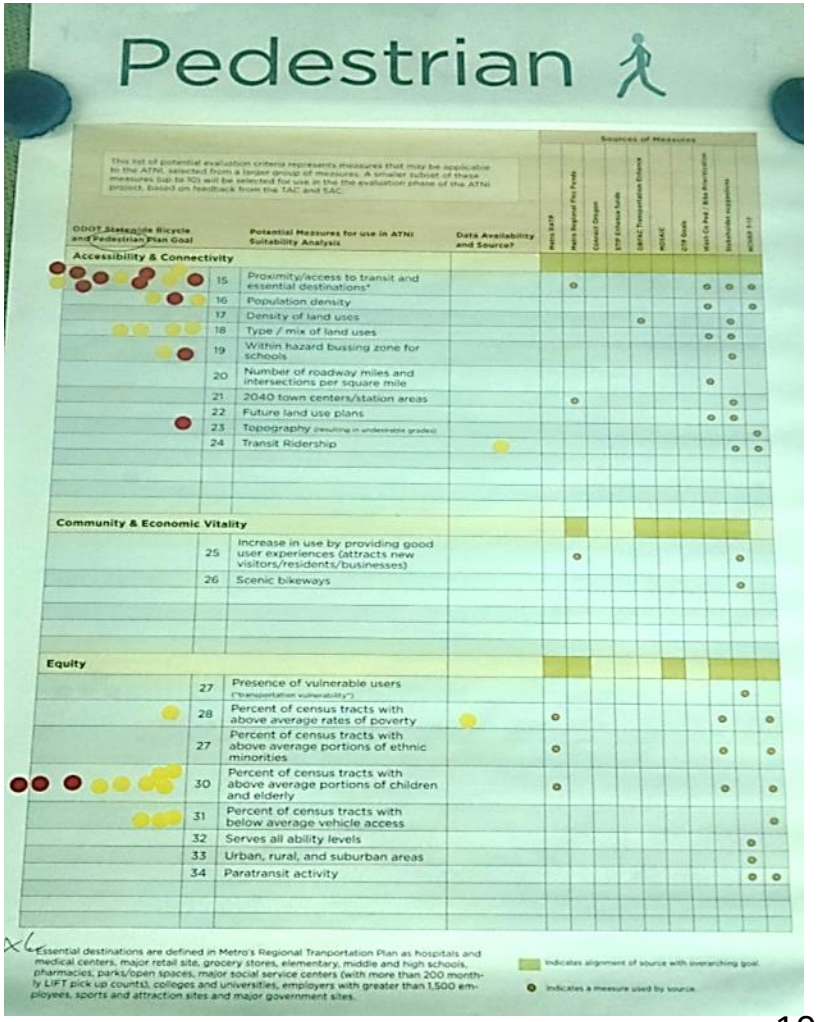
Phase II: Outreach & Evaluation

- **NCHRP Report 803**
  - Best Practices
    - Literature review
    - Survey
    - Interviews
  - Spreadsheet Tool
    - Automates prioritization
    - "Preset" with common evaluation criteria
    - Transparent process
    - Easy to update/adjust
  - Pilot Tested



Phase II: Outreach & Evaluation

DRAFT Statewide Bike / Ped Plan Goals
Safety
Mobility & Efficiency
Accessibility & Connectivity
Community & Economic Vitality
Equity
Health
Sustainability
Strategic Investment
Coordination, Cooperation, & Collaboration



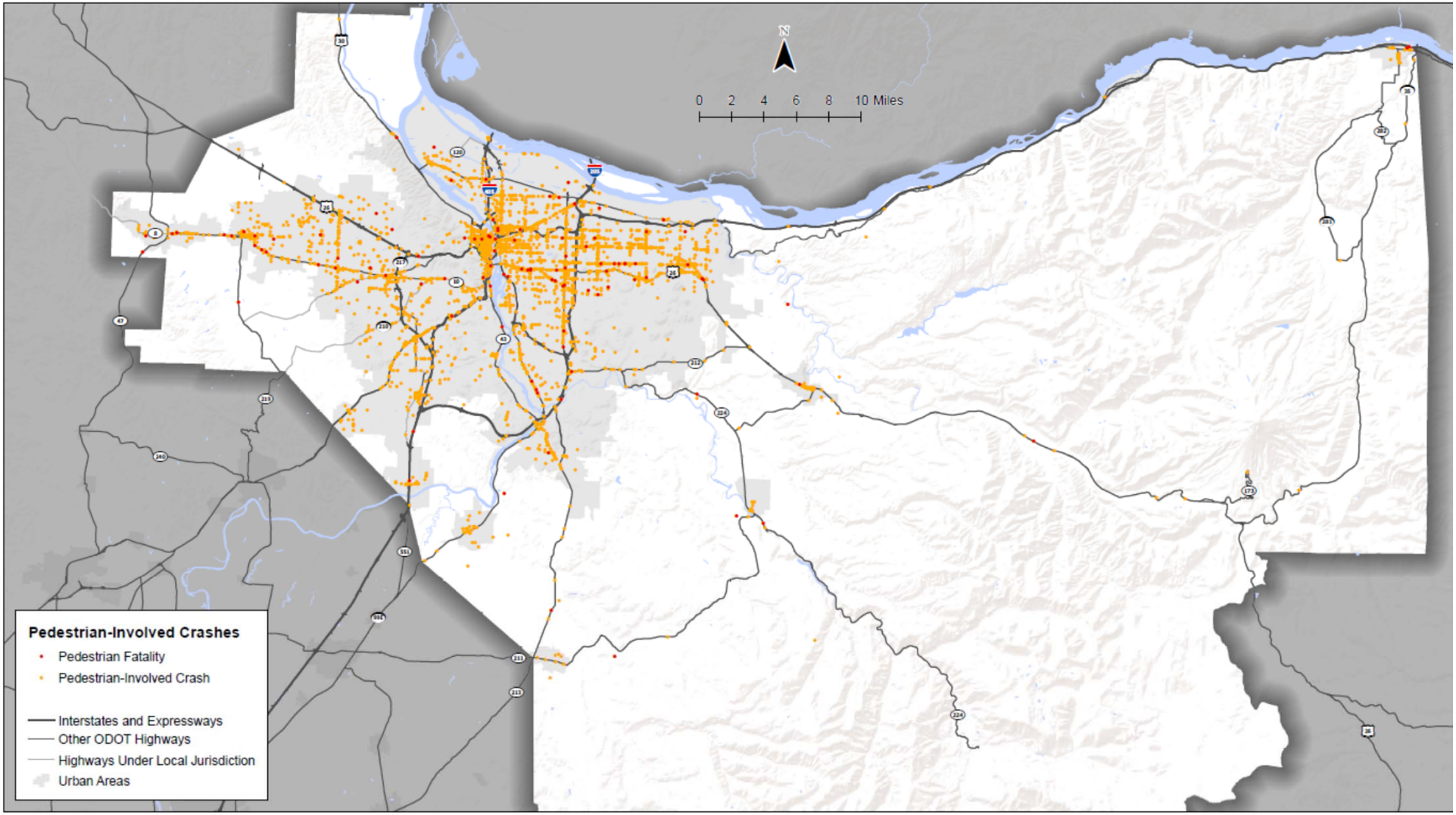
Phase II: Outreach & Evaluation

Top Criteria Selected by TAC / SAC
Crash History: EPDO analysis of ped/bike-involved crashes
Crash Risk: Index of risk factors (e.g. vehicle speed, vehicle volumes, # of lanes)
System Completeness: Size of gap & completeness of surrounding walk/bike network
Access to Transit: Number & type of transit lines within walk/bike distance
Access to "Essential Destinations": Number of schools, hospitals, stores, etc. within walk/bike distance
Transportation Disadvantaged and Vulnerable Users: Index of census data (e.g. children, elderly, poverty, non-white, hispanic, disabled, no car)
In Adopted Local Jurisdiction Plan

Phase II: Outreach & Evaluation

Weight	NCHRP Spreadsheet Prioritization Factors	Evaluation Criteria Selected by TAC/SAC
8	Safety	Crash History
		Crash Risk
7	Demand	Access to Transit
		Access to Essential Destinations
4	Connectivity	System Completeness
3	Equity	Transportation Disadvantaged
2	Stakeholder Input	In Local Plan
4	Existing Conditions	Gaps & Deficiencies
	Compliance	*Could be added in future*
	Constraints	*Could be added in future*
	Opportunities	*Could be added in future*

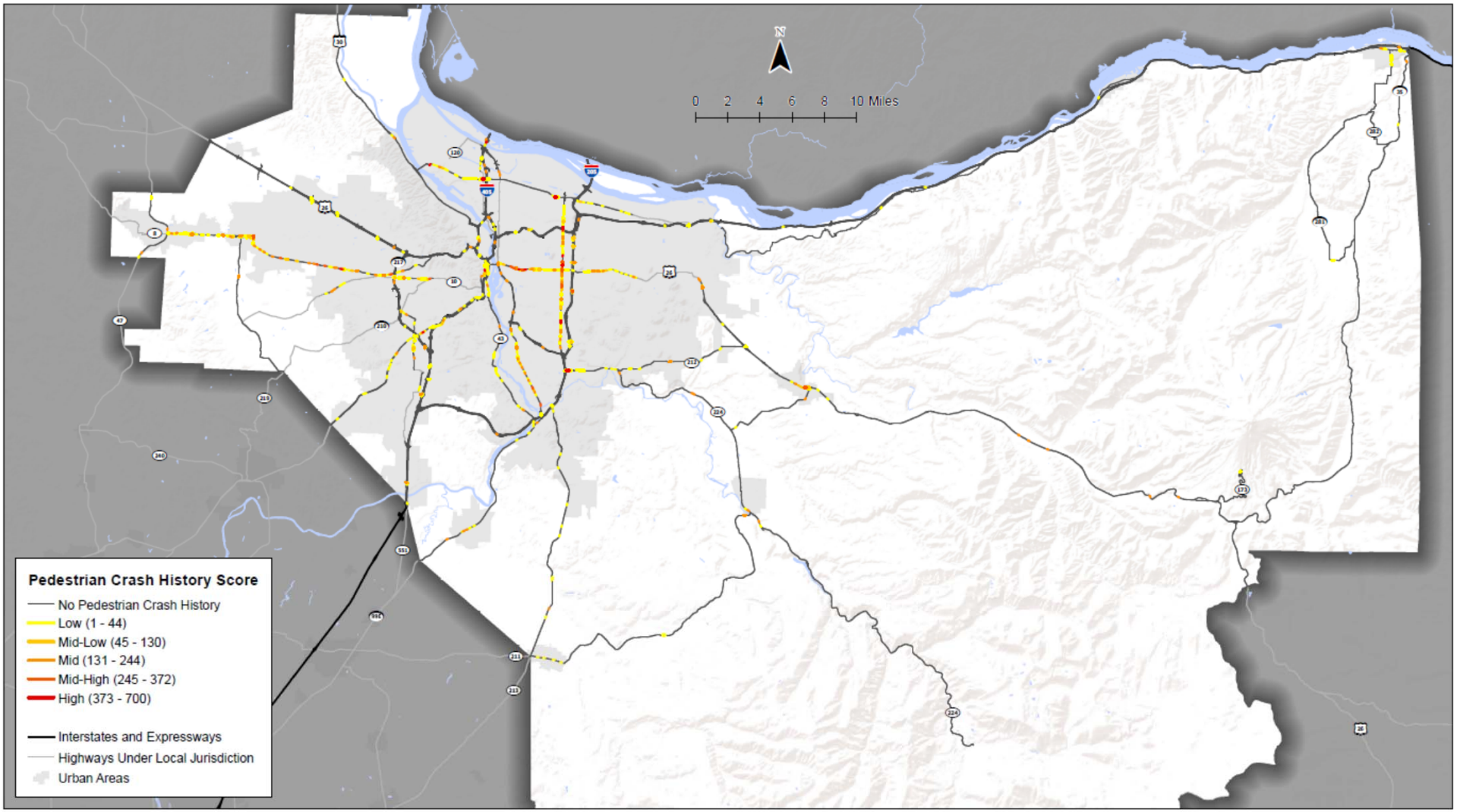
Applying the Evaluation Criteria



Pedestrian Crash History, 2009-2013

Figure 1a

Applying the Evaluation Criteria



Pedestrian Crash History Score is an Equivalent Property Damage Score (EPDO Score) calculated for each tenth by converting all crash severity levels to a property damage equivalent. In the calculation, fatal and severe injury (injury A) crashes are equivalent to 100 PDO crashes; moderate and minor injury (injury B and C) crashes are equivalent to 10 PDO crashes. The EPDO score is

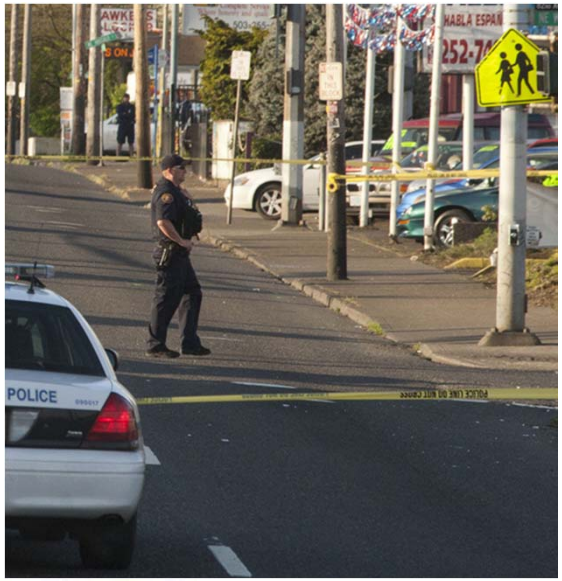
Pedestrian Crash History Score

Figure

Applying the Evaluation Criteria

In Local Plan
Score: 0-1

Crash History
Score: 0-651

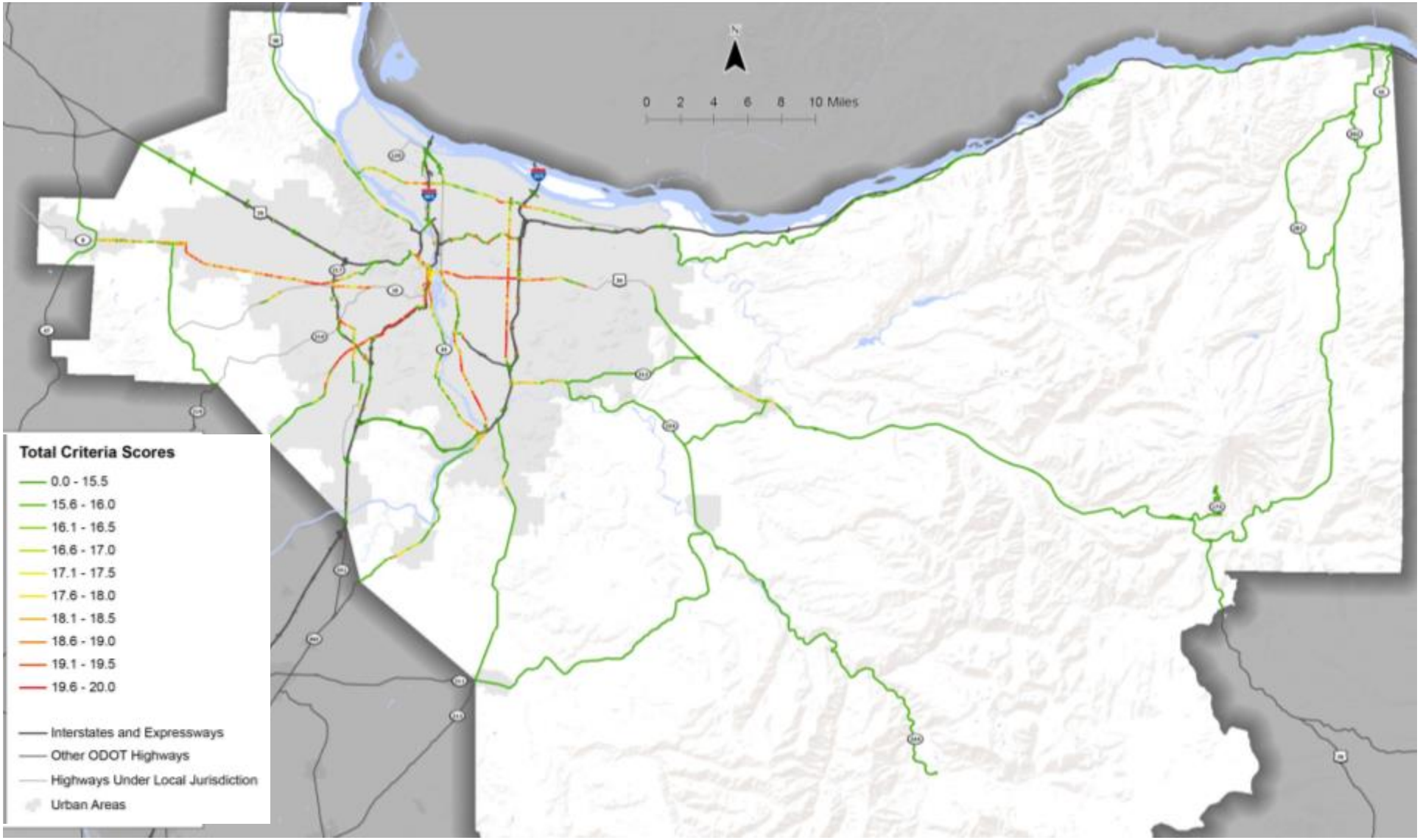


Applying the Evaluation Criteria

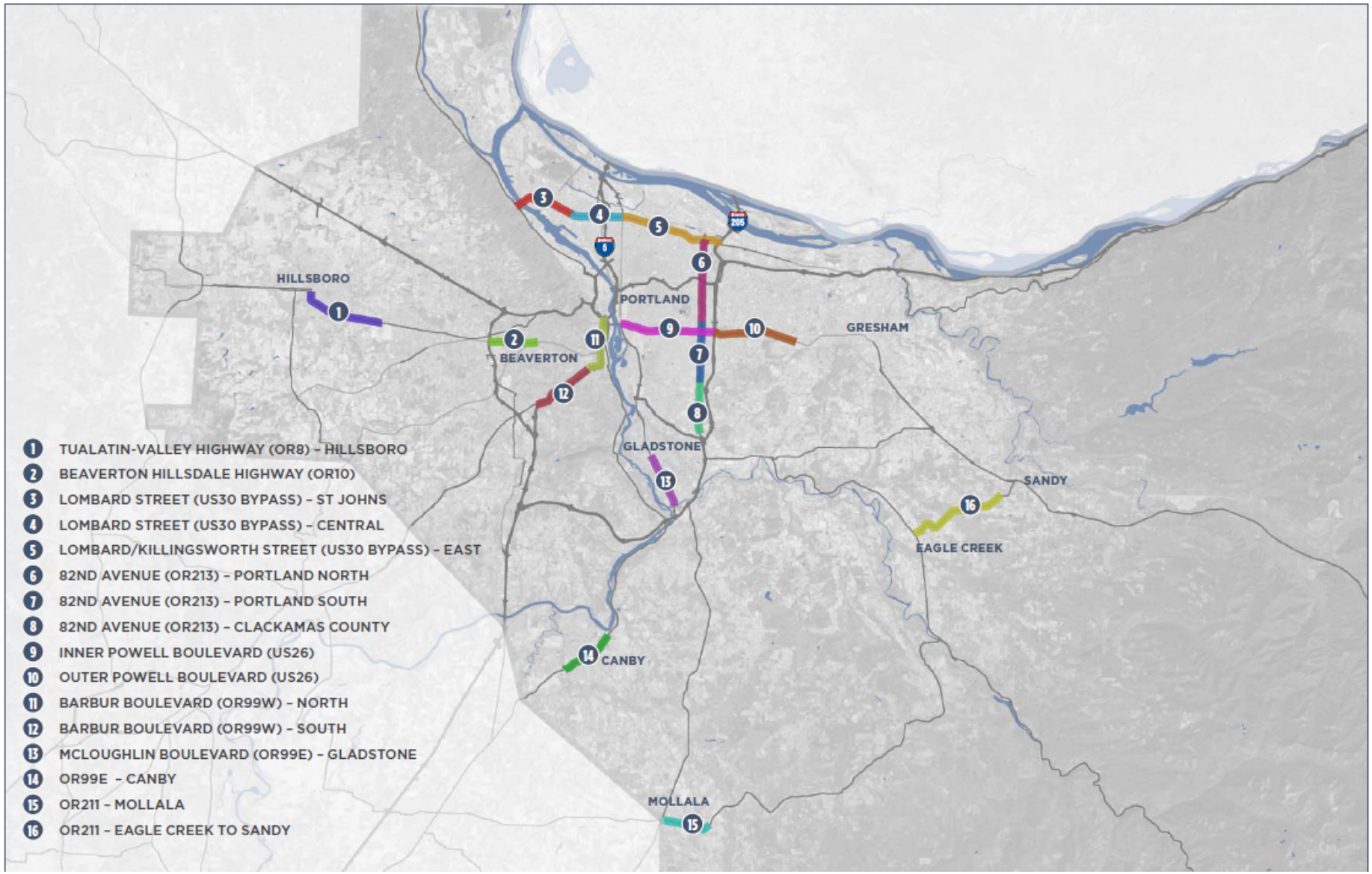
GAP LOCATION	Stakeholder Input SCORE	Stakeholder Input WEIGHTED SCORE	Safety SCORE	Safety WEIGHTED SCORE	Demand SCORE	Demand WEIGHTED SCORE	Connectivity SCORE	Connectivity WEIGHTED SCORE	Equity SCORE	Equity WEIGHTED SCORE	Prioritization Score	Urban or Rural
COLUMBIA RIVER: 25.2 to 25.3	0.0	0.0	3.6	29.1	0.5	3.2	0.0	0.0	4.0	12.0	**44.3**	Rural
OSWEGO: 9.8 to 9.9	10.0	20.0	3.8	30.5	3.5	24.5	0.9	3.5	2.6	7.9	**86.5**	Urban
MT. HOOD: 71.92 to 72.02	0.0	0.0	1.8	14.5	0.5	3.2	0.0	0.0	3.7	11.0	**28.7**	Rural
MT. HOOD: 5.9 to 6	10.0	20.0	2.3	18.2	6.7	46.6	4.4	17.4	6.9	20.7	**122.9**	Urban
COLUMBIA RIVER: 63.1 to 63.2	0.0	0.0	1.8	14.5	0.0	0.0	0.0	0.0	5.2	15.6	**30.1**	Urban

- Complete network evaluation
  - >9,000 tenth mile highway segments
- Mode specific
  - Pedestrian score
  - Bicycle score
  - Combined score

Applying the Evaluation Criteria



Corridor Summaries



TUALATIN-VALLEY HIGHWAY (OR8) – HILLSBORO

Jurisdiction: City of Hillsboro
Corridor Extents: SE Oak St to east of SW Cornelius Pass Rd (MP 8.28 to MP 12.41)
Corridor Length: 4.13 miles
AADT: ~32,000
Posted Speed: 45 MPH
Transit Service: TriMet Line 57 (frequent service)
Driveway Density: 112.1 per mile
RATP Classification: Off-street Bicycle & Pedestrian Parkway
ODOT Functional Classification: Statewide Hwy
Ownership: ODOT owned and maintained
Pedestrian Crash History: 3 fatalities; 2 severe injury crashes
Bicycle Crash History: 0 fatalities; 1 severe injury crashes
Current Planning Status: Tualatin Valley Hwy Corridor Plan completed 2013.
Corridor Context:

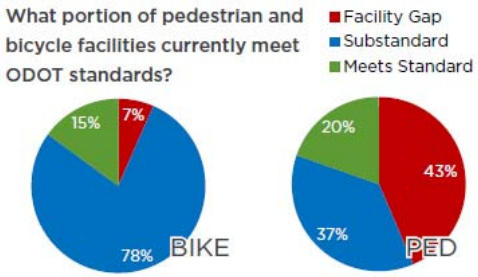
- Major east/west connection through City of Hillsboro, parallel to railroad on the south
- Primarily commercial land uses, with some residential, park land, and a school
- Gaps in both the sidewalk and bicycle facilities, with no sidewalk adjacent to the railroad

Bicycle Facilities
- Facility Gap
- Substandard
- Meets Standard

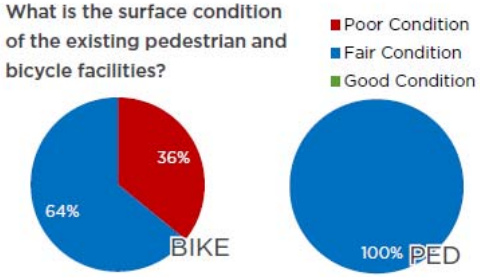
Pedestrian Facilities
- Facility Gap
- Substandard
- Meets Standard

Crossings
- Enhanced* Pedestrian Crossing
- ODOT Traffic Signal

What portion of pedestrian and bicycle facilities currently meet ODOT standards?



What is the surface condition of the existing pedestrian and bicycle facilities?



# of Crossings: 11 signals; 1 enhanced crossing
Average Distance Between Crossings: 0.34 miles

TYPICAL CROSS SECTIONS

5-Lane with Two-Way Left Turn, Shoulders, Sidewalk on One Side

4-Lane with Painted Median and Shoulders

Data and analysis from the ODOT Region 1 Active Transportation Needs Inventory project. For more information, visit: http://www.oregon.gov/ODOT/ATNI

**Enhanced crossings are locations with a marked crosswalk, median island, flashing beacon, pedestrian signal, or grade-separation*

TUALATIN-VALLEY HIGHWAY (OR8) – HILLSBORO (CONTINUED)

OVERALL EVALUATION SCORE

PEDESTRIAN EVALUATION SCORE

BICYCLE EVALUATION SCORE

0.0 - 7.5
7.6 - 8.0
8.1 - 8.5
8.6 - 9.0
9.1 - 9.5
9.6 - 10.0

A higher evaluation score indicates a higher level of need, based on the eight evaluation criteria shown in the table below.

Evaluation Criteria (Scored on 0-10 scale)	Average Score in Corridor*		Max Score in Corridor*	
	Ped	Bike	Ped	Bike
Crash History	2.1	1.8	9.7	10.0
Crash Risk	8.8	7.2	10.0	8.8
Access to Transit	2.5	3.4	7.0	4.0
Access to Essential Destinations	6.2	6.7	9.9	7.6
Transportation Disadvantaged	5.6	5.6	7.9	7.9
Improves System Completeness	0.9	7.0	7.4	9.4
In Local Plan	10.0	10.0	10.0	10.0
Existing Conditions	8.3	5.1	10.0	10.0
Overall Adjusted Score	9.4	9.5	10.0	10.0

**based on scores of the 0.1-mile segments making up each corridor*

NEEDS IN LOCAL PLANS

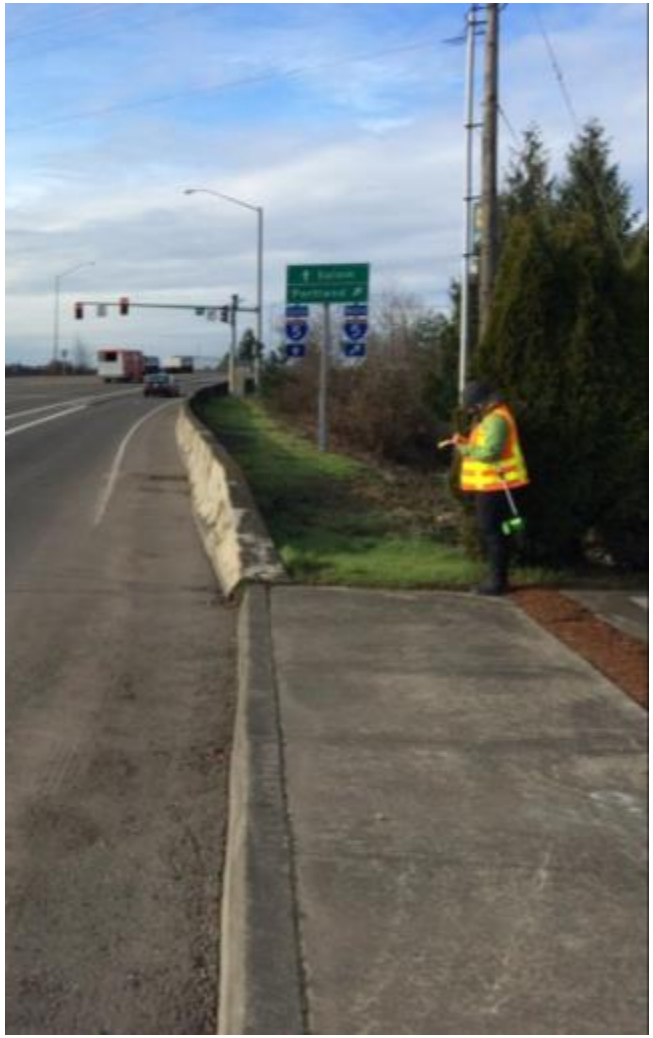
- **Tualatin-Valley Highway Corridor Plan**
- **Metro Regional Transportation Plan (RTP)**

Intersection or Crossing Needs
Needs along Roadway Segment

"Needs in local plans" are roadway segments, intersections, or crossing locations on ODOT facilities that are identified in local jurisdiction plans.

Next Steps

- 2019-21 STIP scoping input
- 99th and 95th percentile needs
  - Feasibility analysis & “pre-scoping”
  - Alternative routes
  - Constraints (right-of-way, topography, etc.)
  - Planning level cost estimates
- Refine Implementation Guidance Memo
- Refine Corridor Summaries



Questions?

www.oregon.gov/ODOT/ATNI

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