East Portland Arterial Streets Strategy

EPCO LUTC April 17, 2019

PBOT
PORTLAND BUREAU OF TRANSPORTATION

Project Overview

What is EPASS?

- ✓ PBOT has many projects in the works for the major streets in East Portland.
- ✓ Our Vision Zero commitment will direct more funds and safety improvements to the High Crash Corridors and intersections in East Portland.
- ✓ EPASS will ensure that we are planning our projects with consideration of impacts and benefits to the whole transportation network, using the latest best practices in arterial design and safety.

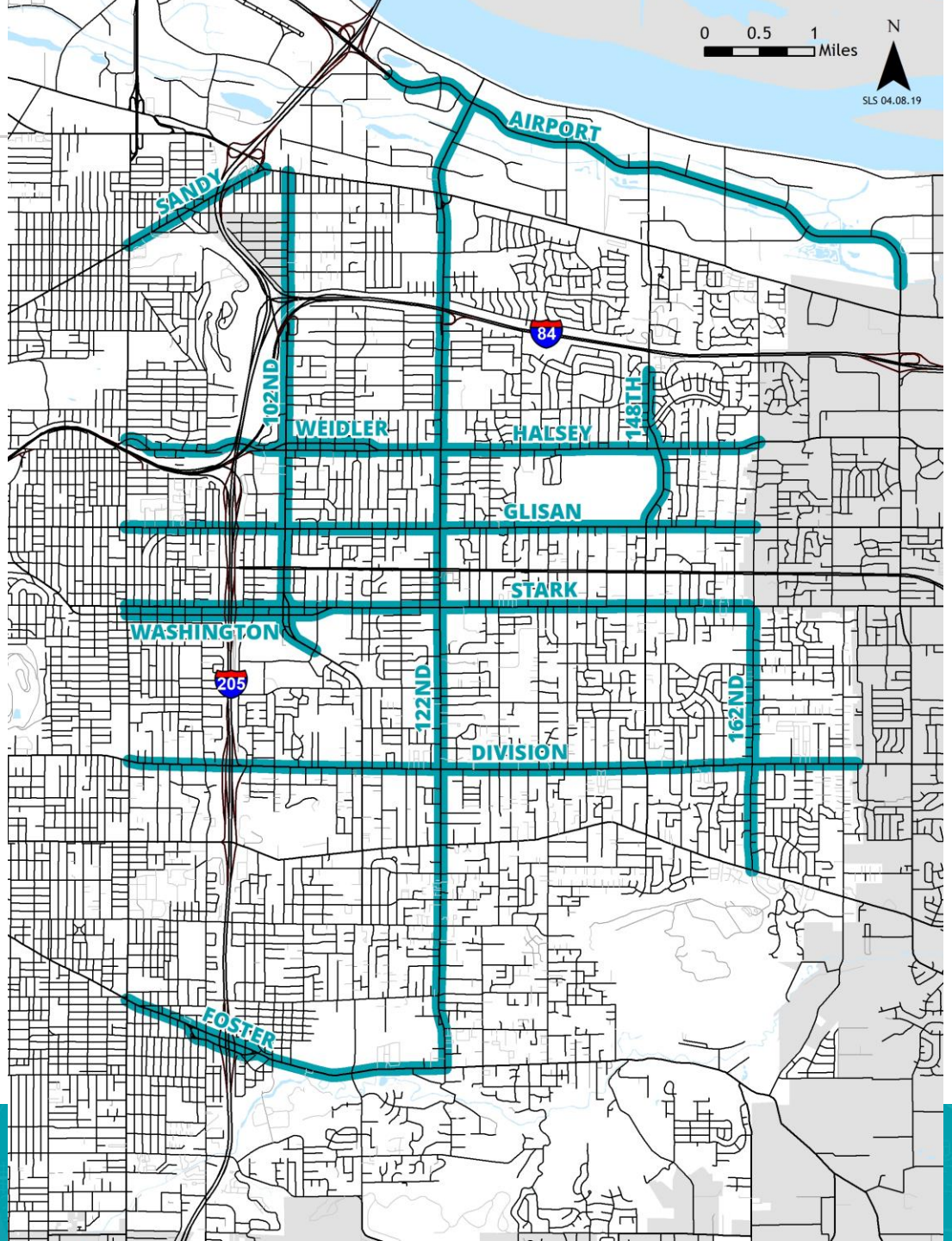
EPASS will:

- Develop design concepts for all roadways on the EPASS network (or share concepts that have already been developed as part of other projects)
- Engage the public to: verify community values heard in other recent outreach efforts, understand opinions on design tradeoffs, provide feedback on design tools and concepts
- Model roadway design and typical cross sections to understand traffic impacts, diversion, expected safety benefits, and multimodal mobility
- Identify/refine projects for upcoming funding measures

What is the EPASS network?

- 4+ Lane Arterial Streets between 82nd Avenue and eastward City limits, maintained by PBOT:

- NE/SE 102nd Ave
- NE/SE 122nd Ave
- NE 148th Ave
- SE 162nd Ave
- NE Airport Way
- NE Sandy Boulevard
- NE Halsey Street
- NE Glisan Street
- SE Stark Street
- SE Division Street
- SE Foster Road



EPASS: Existing Conditions

Memo 1 Public Input: Feedback from recent East Portland Plans

- East Portland In Motion (2012)
- Vision Zero Action Plan (2016)
- Growing Transit Communities (2017)
- Bloom Report (2018)
- Transportation Systems Plan (TSP) Update (2018)
- Enhanced Transit Corridors (2018)
- PedPDX (In progress)
- “Walking While Black” Focus Groups (2017)
- 122nd Avenue Safety Project (In progress)
- 102nd Avenue Safety Project (In progress)
- Outer Division Multi-Modal Safety Project (In progress)
- East Glisan Street Update (In progress)
- 162nd Avenue Safety and Access to Transit Project (In progress)
- Stark Human-Centered Design Piot (2018)
- 82nd Avenue of Roses High Crash Corridor Plan (2008)

Memo 1: Input: Frequent Themes Across Plans

Safe Crossings

- Difficulty crossing multi-lane arterials on foot or mobility device
- Desire for more frequent and visible crossings, especially near parks and schools

Speeding

- Particularly high speeds during off-peak hours near low-density uses (e.g. Glendoveer Golf Course)

Memo 1: Input: Frequent Themes Across Plans

Sidewalks

– Earlier input: maximize sidewalk infill/length

- Recent feedback: focused on wider sidewalks without obstructions

Street lighting

- Lighting is deficient, often only on one side of an arterial roadway
- Walking at night feels dangerous for traffic and personal safety
- Visibility is poor for those walking and driving

Memo 1: Input: Frequent Themes Across Plans

Access to Transit

- Many feel existing transit is not a viable alternative to driving
- More frequent transit service and better transit access improved acceptance of less popular design elements.

Traffic Diversion

- Concerns about cut-through traffic on residential streets during peak hours
- Speed enforcement, traffic calming, and limited access to residential streets were favored as design interventions for roadway reconfigurations

Bicycle Infrastructure

- Residents expressed lower levels of support compared to other areas of Portland
- Commonly heard there aren't destinations to bike to, jobs are too far
- Greenways and paths had higher levels of support than bike lanes on arterials

Memo 1: Input: Frequent Themes Across Plans

Enforcement

- Desire by some for more speed and traffic violation enforcement
- Concerns about racial profiling for those walking and driving
- Many brought up infrastructure being demolished by drunk drivers

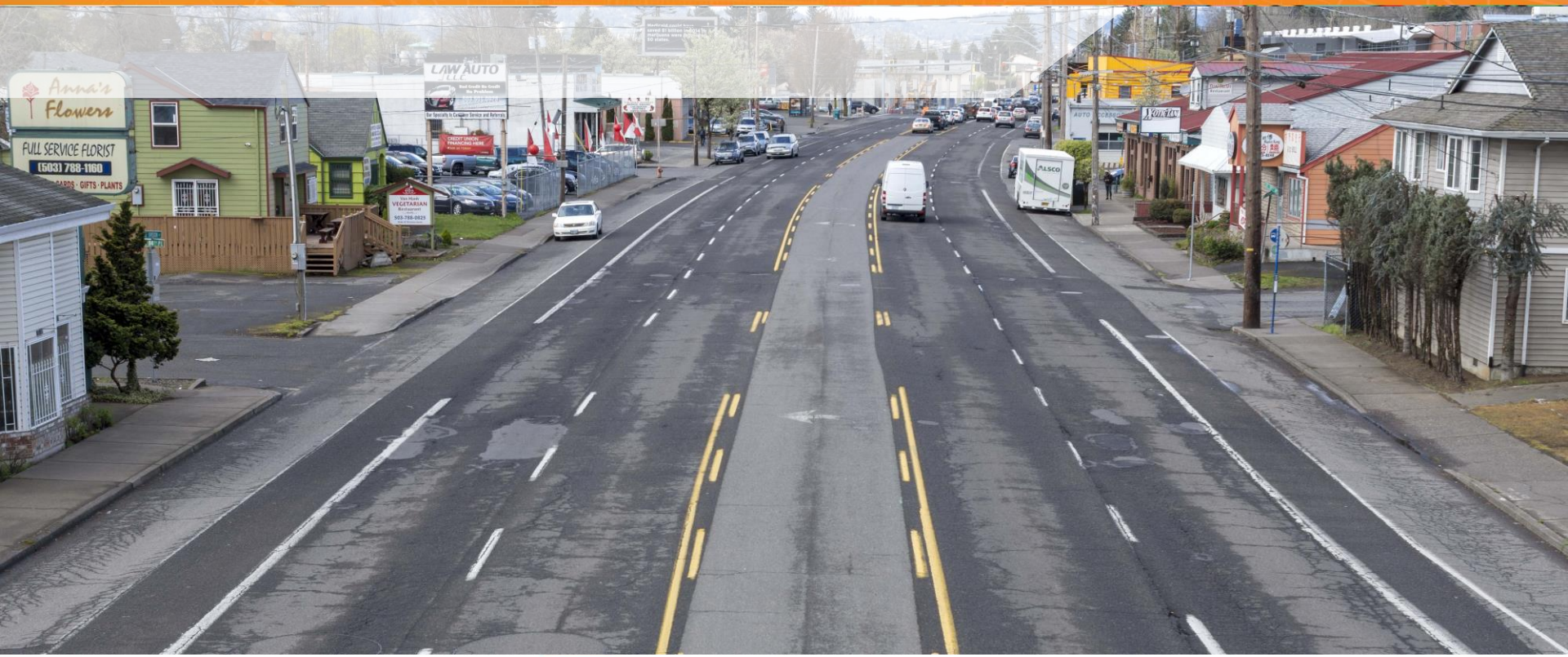
Modal Separation

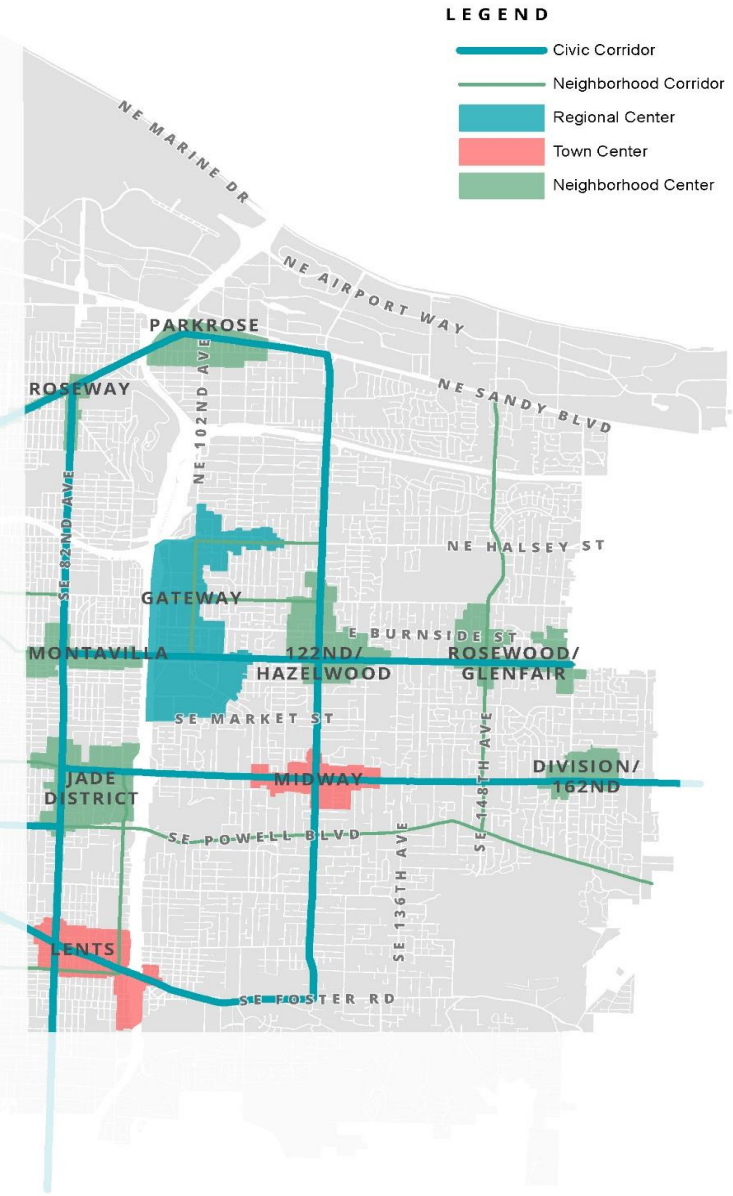
- More support for modal separation (e.g. greenways, off-street path) though support of multimodal paths has shifted due to increases in camping along paths

Congestion

- Residents are concerned about commute times and congestion during peak travel times
- May people who live in East Portland work somewhere else, and vice versa

EPASS: Arterial Policy & Projects





East Portland Comp Plan Designations

Regional Center:

- Gateway

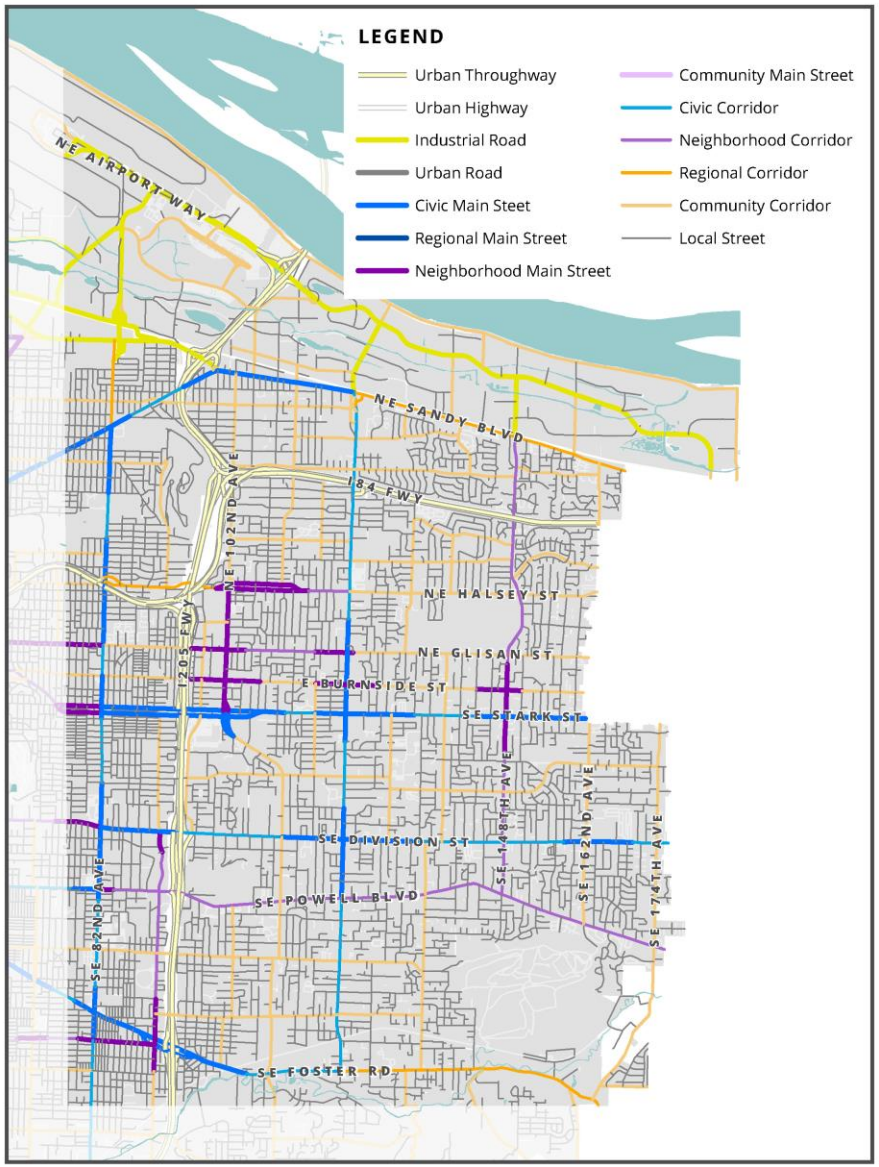
Town Centers:

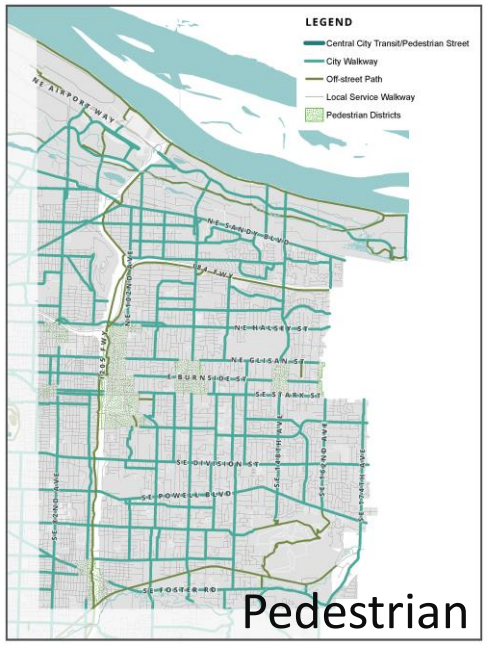
- Midway
- Lents

Neighborhood Centers:

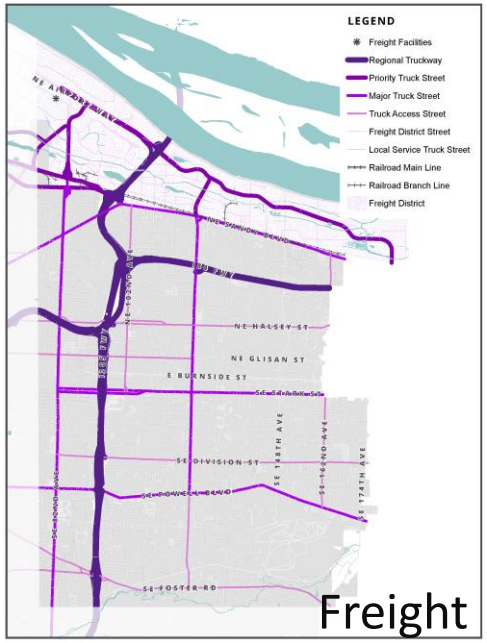
- Parkrose
- Roseway
- 122nd/Hazelwood
- Rosewood/Glenfair
- Jade
- Division/162nd

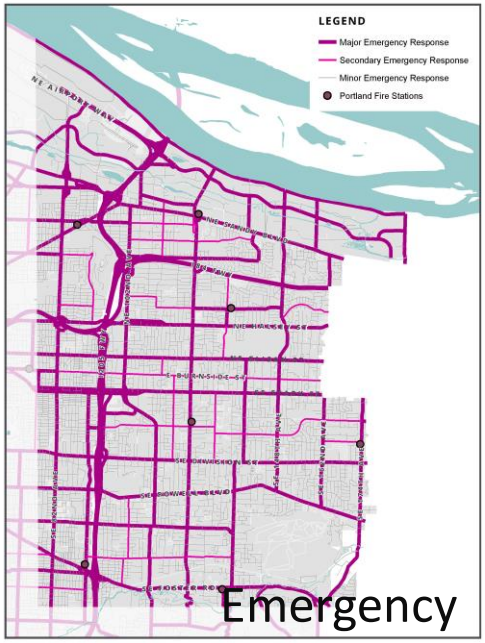
Comprehensive Plan Street Design Classifications





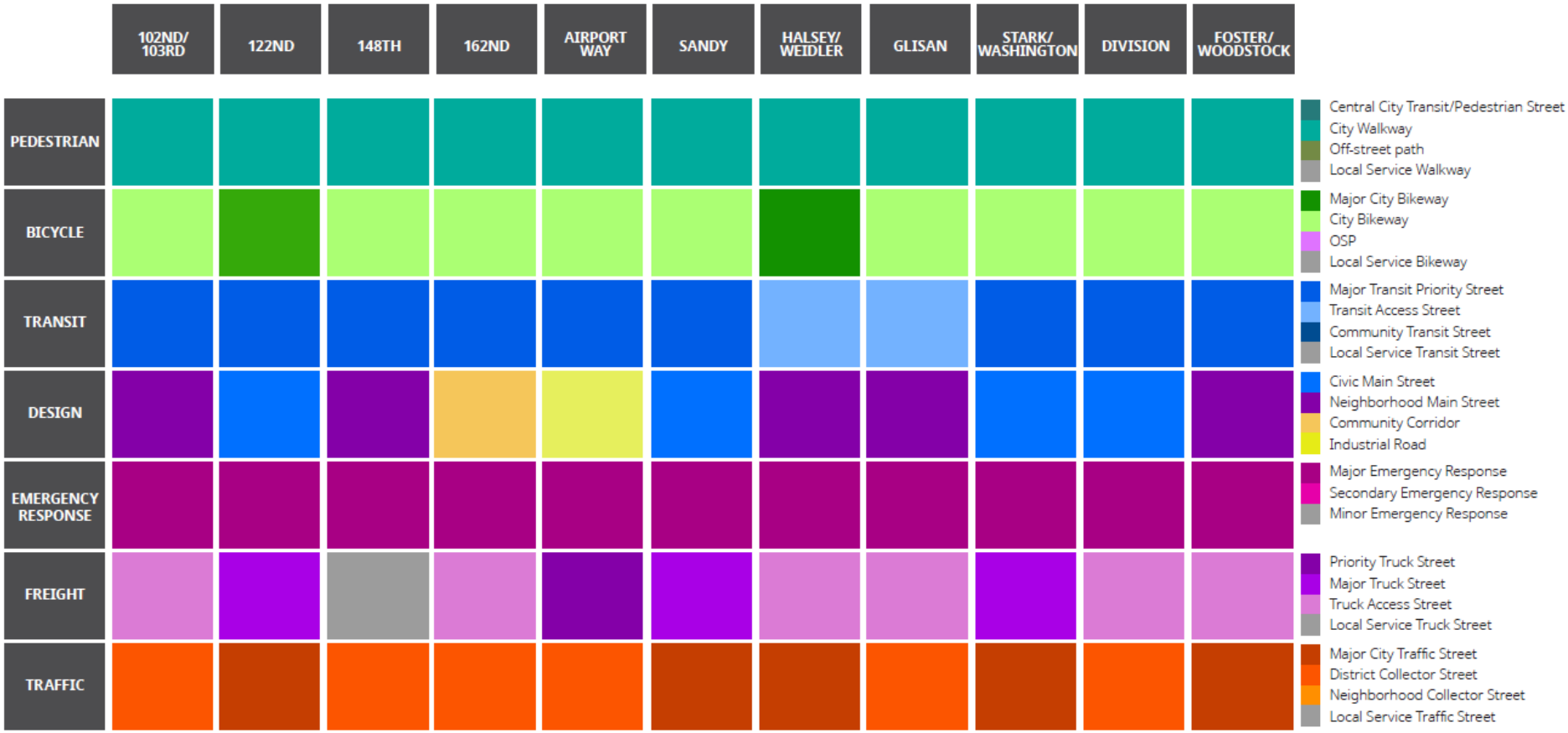
East Portland Street Functional Classifications

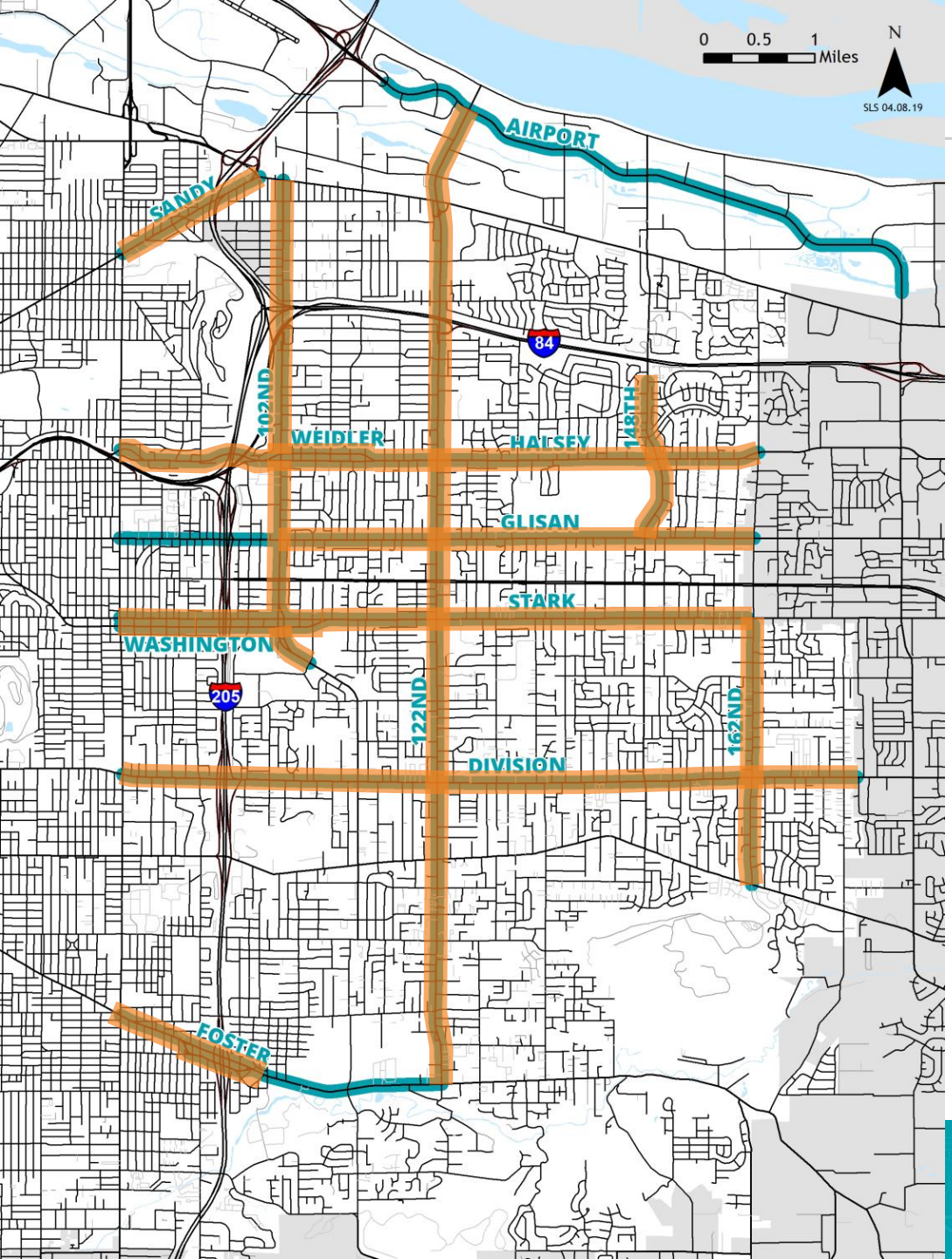




Arterial Transportation System Plan Designations

EPASS Network Street Classifications





East Portland Arterial Projects in Progress

2019

- Foster Streetscape
- Halsey-Weidler Streetscape
- NE 102nd Ave Pilot Project
- East Glisan Street Update

2020

- Outer Division Multimodal Safety Project
- SE 162nd Ave Safety & Access to Transit
- NE 148th Ave Crossing & Restriping
- Outer Halsey Safety Project
- 122nd Ave Safety Project Phase 2

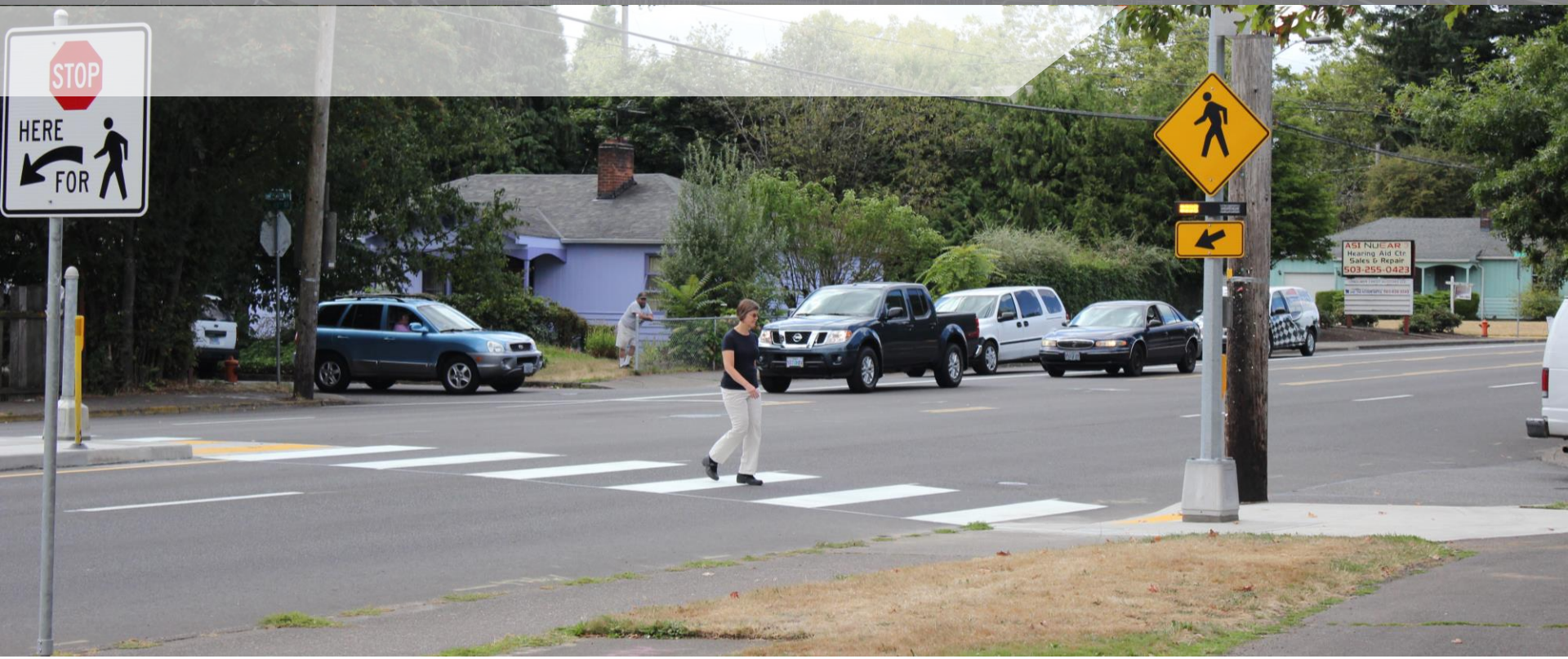
2021

- Lents Town Center Phase 2
- Outer Stark Safety Project
- NE Halsey Safety & Access to Transit
- Jade/Montavilla Connected Centers

Project Development

- Stark/Washington Couplet
- 148th Avenue Improvements
- Sandy Blvd Enhanced Transit Corridor
- 102nd Avenue BAT Lane

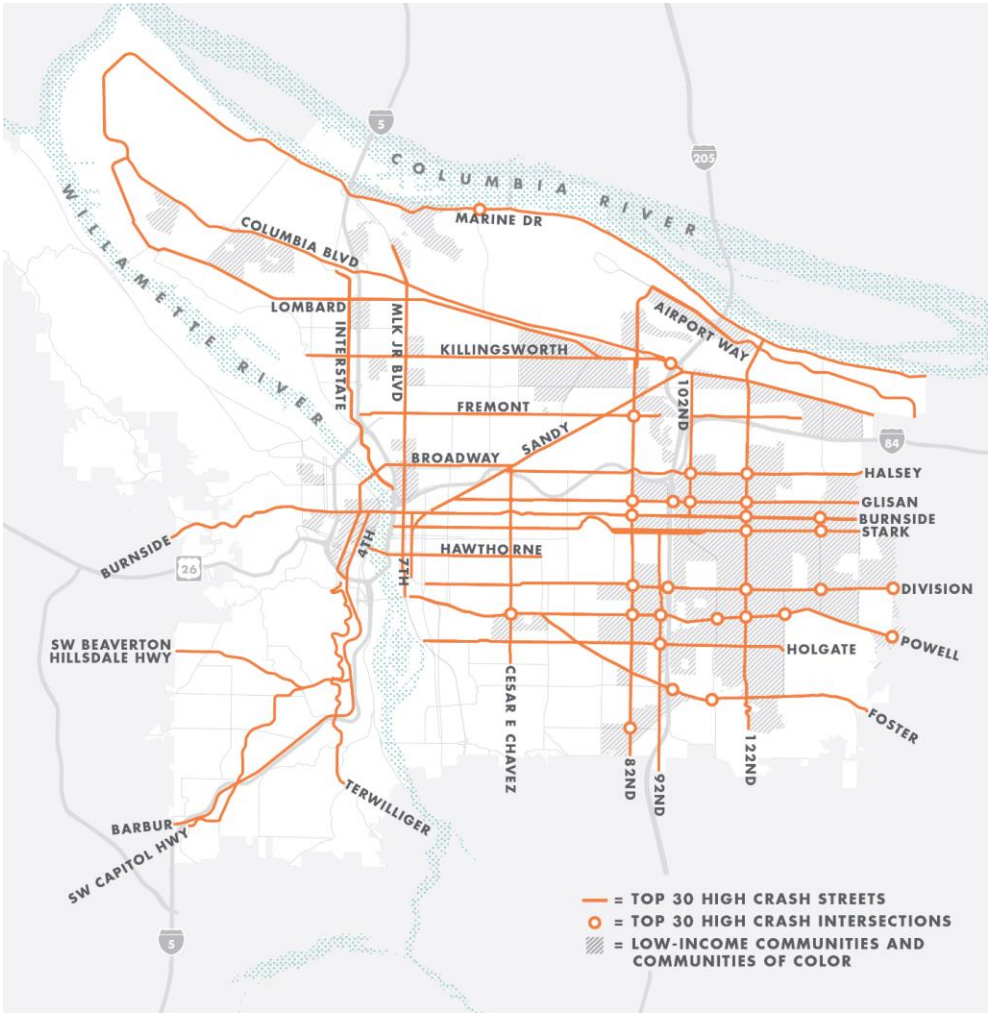
EPASS: Crash History and Safety Analysis



Memo 3: Traffic Safety Analysis on EPASS Corridors

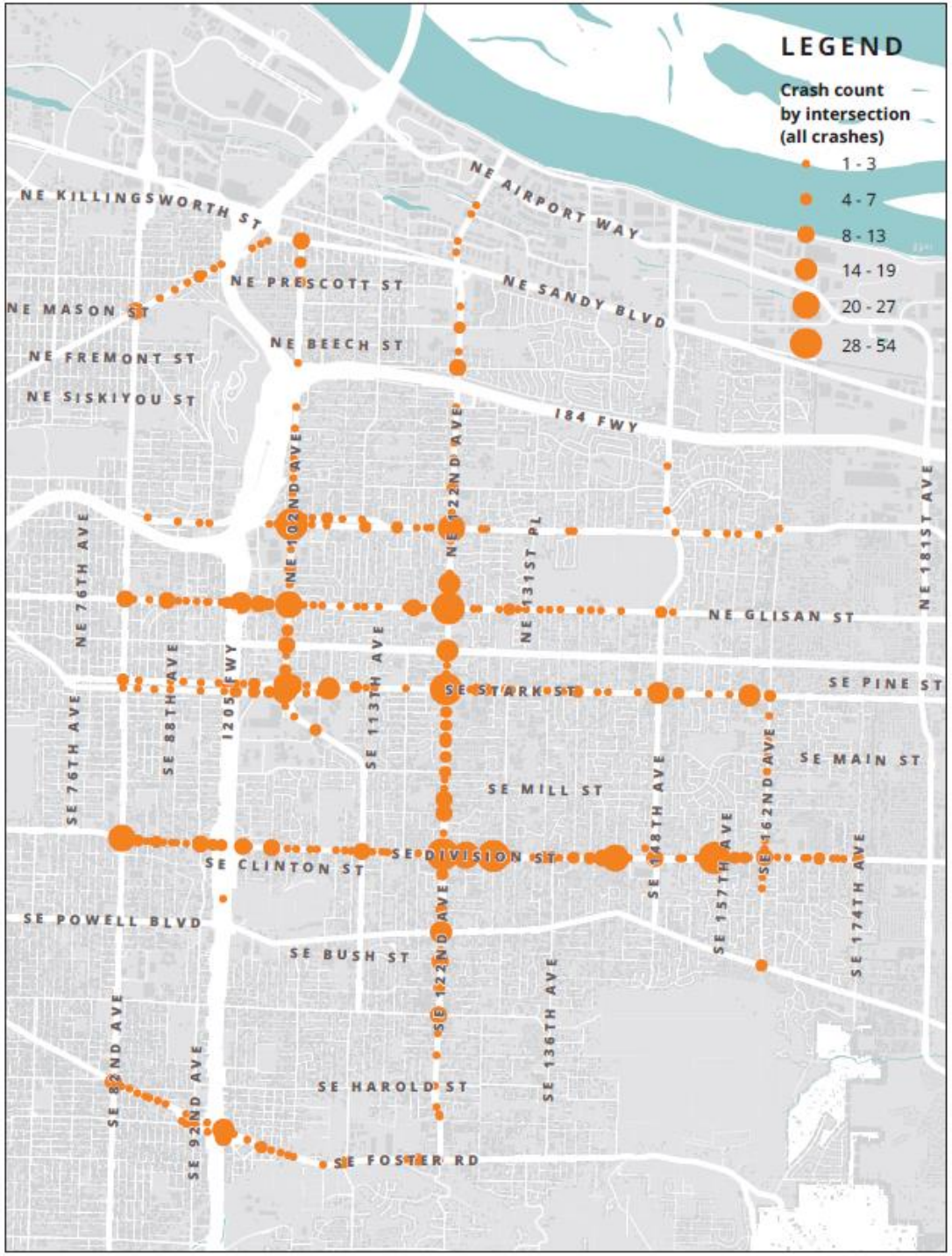
- East Portland has a disproportionate number of serious injury and fatal crashes relative to the city as a whole
- Over half of the High Crash Corridors, and 28 out of 30 High Crash Intersections are located in East Portland
- Except for NE 148th and SE 162nd, ALL of the EPASS network are in the High Crash Network

Vision Zero High Crash Network

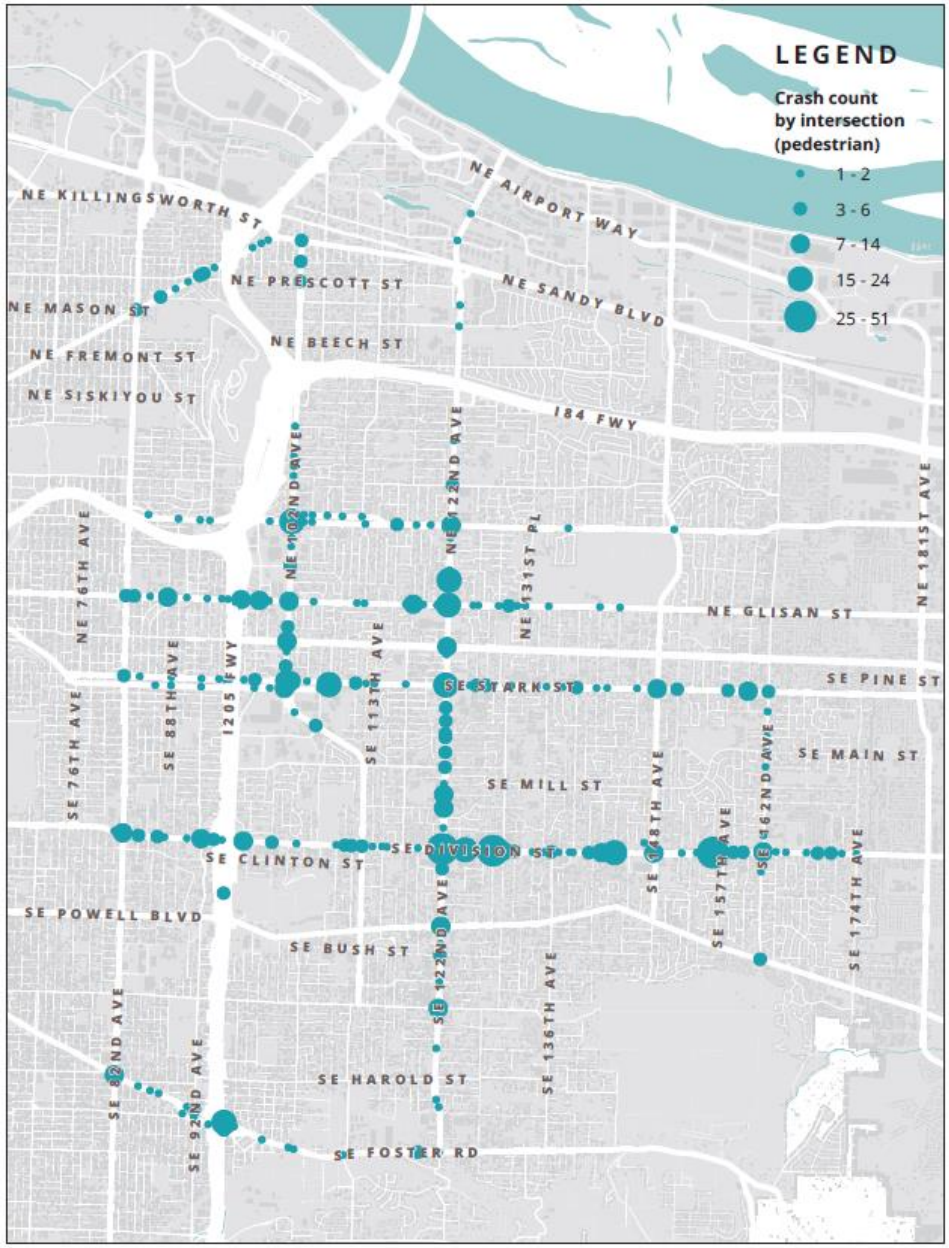


Data and Methodology

- 10 most recent years of crash data (2007-2016)
  - Used crash data for all crashes for vulnerable users (pedestrians and bicyclists)
  - Analyzed Injury A and fatal crashes for vehicles
- Documented crash type for each mode
- Analyzed crash totals and crashes/per mile for each mode
- Looked at the most recent traffic speed count collection data by corridor (between 2015-2018)
  - Documented posted speed, 70/85/90th percentile speed
  - Average % over speed limit
- Documented multimodal infrastructure
  - Sidewalk presence & quality
  - Adherence to crossing spacing guidelines
  - Bicycle facilities presence & quality
  - Street lighting presence



Combined Modal Crashes on EPASS Corridors

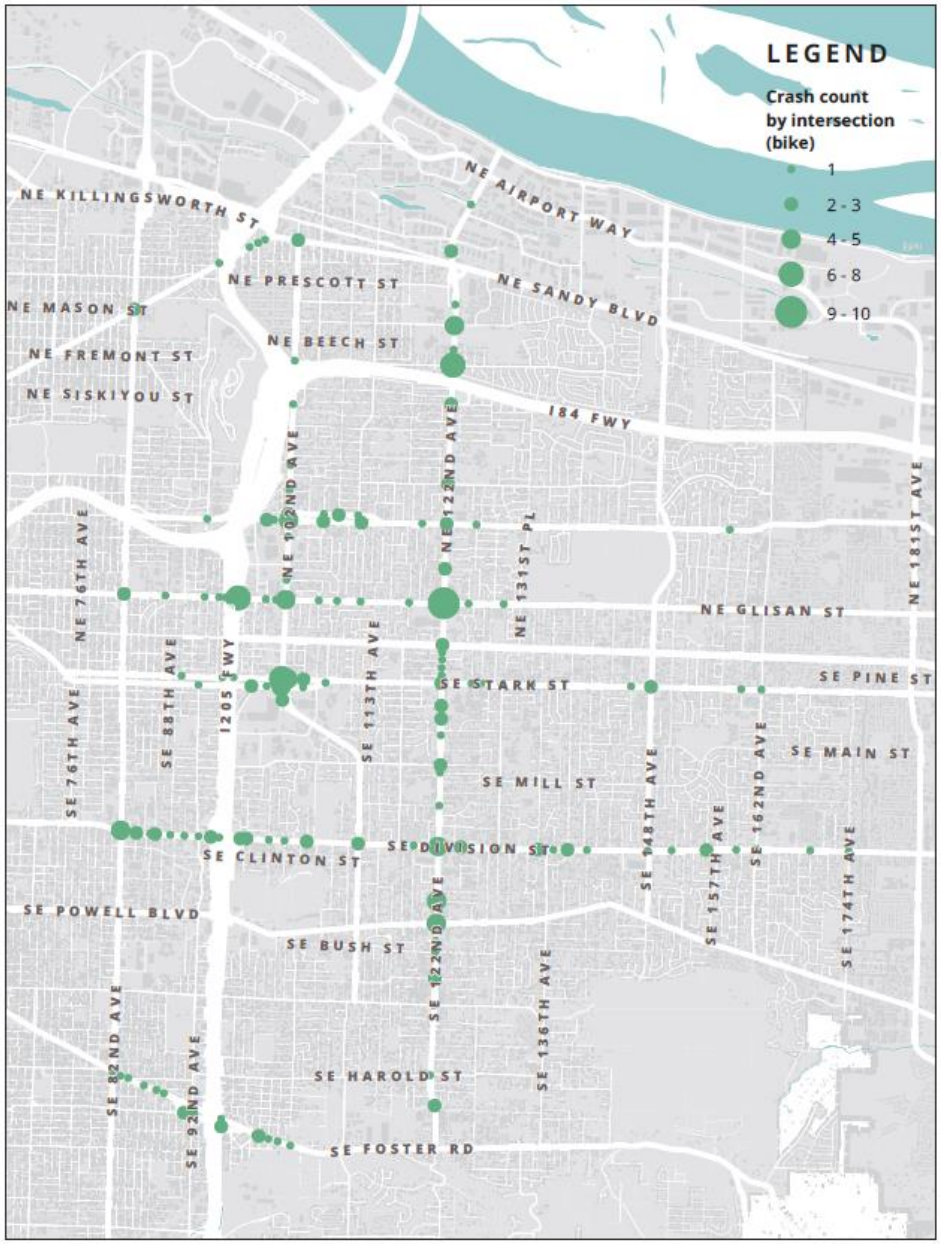


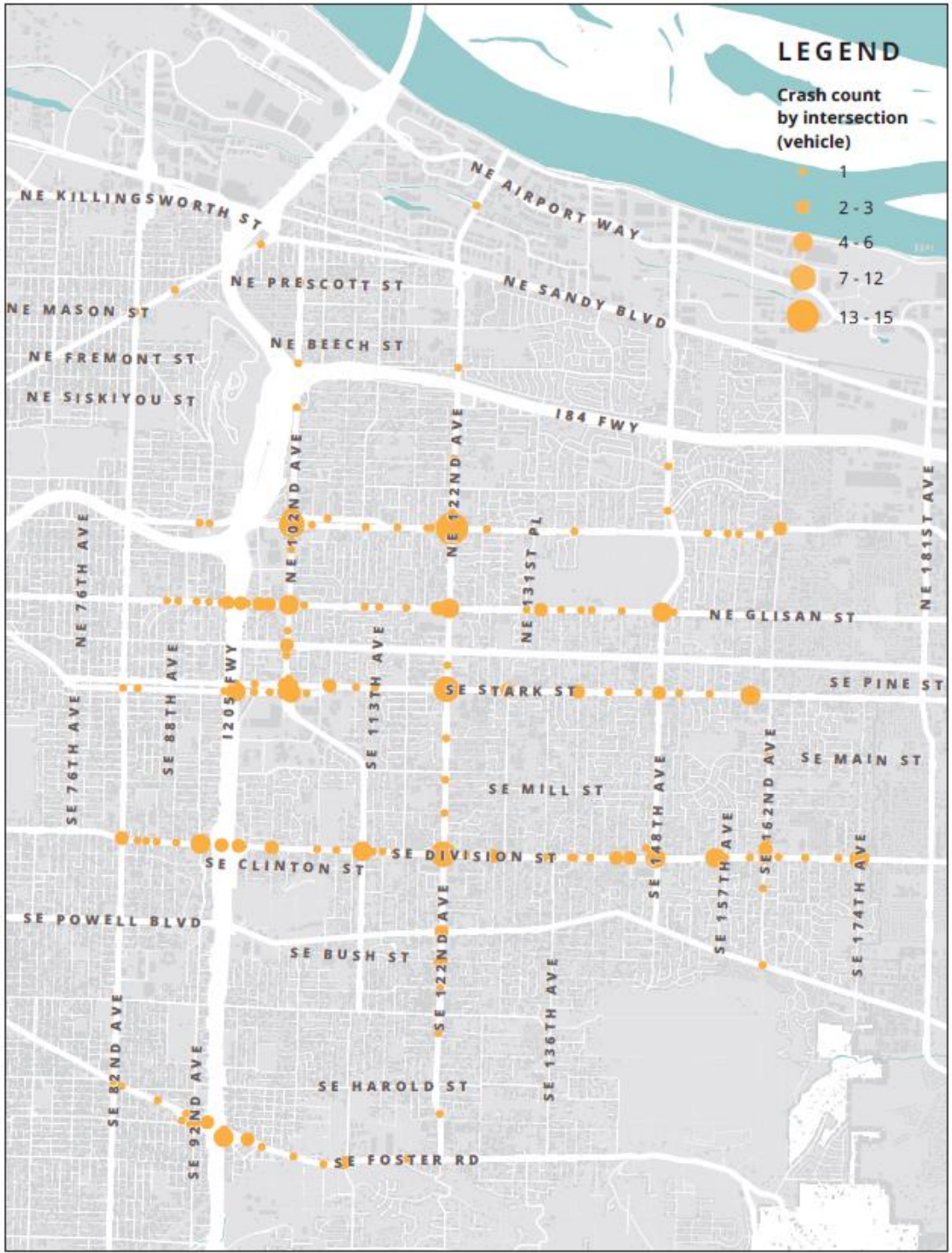
Pedestrian Crashes on EPASS Network

- Using our data method, crash types that most commonly involved pedestrians were rear-end crashes
- NE/SE 102nd and NE/SE 122nd had high frequency of turning movement crashes
- NE/SE 122nd, NE Glisan, SE Stark, SE Division had high frequency of straight movement crashes

Bicycle Crashes on EPASS Network

- SE 122nd has the highest number of bicycle crashes (70), followed by SE Division and NE Glisan
- Most common crash type is a turning movement
- Second highest crash type is angle crashes





Injury A and Fatal Vehicle Crashes on EPASS Corridors

Most common crash type:

- Turning movements on 102nd, 122nd, NE Sandy, NE Glisan, SE Stark
- Rear-end on SE Division
- Fixed object on NE Airport Way
- Angle on SE Foster, SE Stark

Crashes per Mile for all Modes

- SE Division has the highest crash rates for both pedestrians and vehicles, and the second highest for bicycles
- NE/SE 122nd has the highest number of bike crashes
- The combined crash rate for SE Division is more than twice as high as the next highest corridor

	NE/SE 102nd	NE/SE 122nd	NE 148th	SE 162nd	NE Airport	NE Sandy	NE Halsey	NE Glisan	SE Stark	SE Division	SE Foster
Corridor Length (mi)	3.47	6.20	1.03	1.64	3.77	0.99	4.80	4.01	5.34	4.65	2.66
Ped Crashes	14.42	22.57	-	4.88	0.79	23.19	5.83	18.19	20.23	56.77	16.18
Bike Crashes	3.17	11.28	-	4.27	1.32	6.05	4.38	6.73	5.62	10.54	8.28
Vehicle Crashes	4.04	3.06	2.91	3.66	3.97	3.02	6.25	9.47	8.80	15.70	9.41
Total Crashes	***21.63***	***36.92***	***2.91***	***12.80***	***6.09***	***32.26***	***16.46***	***34.39***	***34.65***	***83.01***	***33.86***

Speeding

- On 4 corridors, over 60% of vehicles are traveling over the posted speed
- Lower density areas tend to see higher speeds (162nd, Airport Way)

	NE 102nd	SE 102nd	NE 122nd	SE 122nd	NE 148th	SE 162nd	NE Airport	NE Sandy	NE Halsey	NE Glisan	SE Stark	SE Division	SE Foster
Number of Speed Counts	8	-	11	15	2	4	4	4	5	17	21	27	-
Most Recent	12/3-7/2018	-	11/13-15/2017	4/10-13/2018	4/27-29/2015	5/1-4/2018	5/27-29/2015	9/28-29/2017	2/26-3/1/2018	6/20-22/2018	11/5-9/2018	5/17-18/2018	-
Posted Speed	35	35	35	35	35	40	45	35	35, 45	35, 40	30, 35	30,35	35
70th Percentile	28-39	-	33-45	33-39	38	38-40	42-47	36-38	33-39, 42-44	35-46, 38-43	33-39, 32-39	30-38, 32-39	-
85th Percentile	31-42	-	36-49	36-42	40	40-43	44-50	38-40	35-41, 44-47	38-49, 40-45	35-42. 32-42	32-41, 35-42	-
90th Percentile	33-43	-	37-51	37-43	41-42	42-44	46-52	39-41	36-43, 45-48	39-51, 42-46	36-43, 36-43	33-42, 36-43	-
Average % over posted	43.01%	-	39.75%	28.87%	51.80%	61.65%	29.03%	42.93%	45.33%, 18%	61.75%, 28.03%	76.4%, 45.58%	61%, 39.24%	-
Intersections	NE Shaver, NE Sacramento, NE Holladay, NE Glisan	N/A	NE Inverness, NE Beech, NE Stanton, NE Broadway, NE Holladay, NE Davis	SE Morrison, SE Tibbetts, SE Liebe, SE Raymond, SE Ramona	NE 148th Pl (not EPASS)	SE Taylor St, SE Sherman St	122nd, 148th	86th, 91st	106th, 114th, 153rd	85th, 92nd, 113th, 125th, 136th, 143rd, 155th, 157th	86th, 99th, 111th, 126th, 135th, 153rd	84th, 90th, 104th, 109th, 116th, 129th, 141st, 152nd, 165th, 171st	N/A

Multimodal Infrastructure & Lighting

- Conditions vary widely across the EPASS network
- Street lighting is not uniform, and most typically only on one side of the roadway
- Most of the EPASS network has sidewalk, but they are often not built to PBOT standards
- Few EPASS corridors meet PBOT crossing spacing guidelines
- Bicycle facilities are varied, with none to standard parking adjacent bike lanes. A few small segments have buffered bike lanes

Next Steps

Next Steps

- Modeling tasks
  - Calibration
  - Existing network analysis
- 162nd Project Open House (April 29th)
- Outreach to community based organizations
- E-Bulletins (please sign up!)

Thank you!

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