

King, Boise, Humboldt Neighborhoods Street Safety Action Plan: APPENDIX

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APPENDIX A. Vision Zero Neighborhood Safety Analysis and Selection

The Loci Group followed a three-phase process to decide on a neighborhood to engage as a pilot project for Vision Zero Oregon. The ideal neighborhood candidate would be one with high incidence of roadway fatalities, be a traditionally underserved community, and contain supportive neighborhood structures and expressed interest to help support the Vision Zero mission.

The first phase of our analysis narrowed down the 95 recognized neighborhood associations in the City of Portland to a list of eight neighborhoods based on analysis of crashes and environmental equity indicators. The second phase focused on qualitative measures of neighborhood involvement and interest. The final stage involved collaborating with the Bicycle Transportation Alliance to choose the most promising neighborhood. The selected neighborhood was a set of three adjacent areas in NE Portland consisting of the King, Boise and Humboldt neighborhoods.

Phase 1A: Fatality and Injury Analysis

All parts of Portland have experienced traffic fatalities, although some areas suffer disproportionately more than others. The Loci group is interested in working in communities that are in the most need of safety solutions. The objectives of the first phase of our neighborhood selection process is to understand and quantify the intensity of traffic safety risks within each neighborhood, as well as to understand the demographics and equity context of these communities.

Our source data are geolocated records of all reported crashes in the City of Portland from 1995 to 2009¹ supplied by researchers at Portland State University. This data set is extensive, classifying all crashes by mode (Auto, Bicycle, Pedestrian) and by type (Fatality, Injury, Property Damage). It is worth noting that low severity pedestrian and bicyclist crashes involving motor vehicles are generally under-reported. Crashes between only bicyclists and pedestrians are not reported at all. Because of this, these incidents were not included in our

Table 1. Top 10 Neighborhoods by Incidence of Bike/Ped Fatalities (1994-2009)

| Neighborhood Name | Bike/Ped Fatalities | Auto Fatalities |
|----------------------------|---------------------|-----------------|
| DOWNTOWN | 21 | 4 |
| LENTS | 13 | 14 |
| FOSTER-POWELL | 12 | 6 |
| POWELLHURST-GILBERT | 12 | 16 |
| BUCKMAN | 10 | 7 |
| KERNS | 10 | 9 |
| HAZELWOOD | 10 | 28 |
| KENTON | 10 | 12 |
| OVERLOOK | 9 | 9 |
| CRESTON-KENILWORTH | 8 | 4 |

analysis. Also excluded from our analysis were property damage only (PDO) crashes, as well as crashes that took place on interstate freeways. Crashes on freeway ramps or freeway intersections were included however, as these situations interact with surface streets.

Using GIS, each crash data point was assigned to adjacent City of Portland neighborhoods² to determine those neighborhoods with high numbers of traffic injuries and fatalities. The neighborhood boundaries were buffered by 100 feet in order to properly assign crashes that occurred on boundary streets between neighborhoods. Because of neighborhood overlap along these corridors, these individual crashes were counted multiple times; once for each adjacent neighborhood. This double counting resulted in an artificially high number of overall crashes; however, this higher crash level better reflects the relationship neighborhood residents have with adjacent roadways. Table 1 displays some data from this initial step, listing the top 10 neighborhoods with bicyclist and pedestrian fatalities. Auto crashes are included in the table to show that high bicyclist and pedestrian fatalities are not always associated with high levels of auto fatalities.

With the assigned totals of crashes, we applied an evaluation formula to compensate for uneven mode shares between driving and active transportation modes. Our criteria also assigned more weight to the injuries and fatalities of vulnerable road users, based off the idea that strategies to improve conditions for those users would be most beneficial to all. The final safety analysis calculation applied was:

$$(\text{AutoFatality} + \text{BikePedFatality} * 20)^2 + \text{AutoInjury} + \text{BikePedInjury} * 20$$

Not all neighborhoods are the same size, which makes the comparison of crash totals difficult. To adjust for the higher incidence of crashes in larger neighborhoods, we normalized the evaluation index by the neighborhood area.

Table 2. Top Ranked Neighborhoods by Vision Zero Oregon Evaluation Criteria

| Neighborhood Name | Traffic Risk Rank | Environmental Equity Rank | Phase 1 Rank* |
|----------------------------|-------------------|---------------------------|---------------|
| FOSTER-POWELL | 3 | 28 | 3 |
| KING | 17 | 2 | 5 |
| HUMBOLDT | 26 | 4 | 14 |
| MT. SCOTT ARLETA | 7 | 37 | 15 |
| ELIOT | 33 | 5 | 16 |
| BOISE | 38 | 3 | 18 |
| SOUTH TABOR | 14 | 35 | 20 |
| POWELLHURST-GILBERT | 16 | 34 | 21 |
| LENTS | 11 | 46 | 22 |

*Unlisted neighborhoods are inner areas well served by previous traffic calming and safety measures or otherwise incompatible with our goals.

Phase 1B: Demographic Context

In addition to measuring injury and fatality risk, demographic characteristics were analyzed using 2010 census estimate data³ to understand the environmental and geographic equity issues of our candidate neighborhoods.

We looked at the percentage of households earning under \$35,000 per year and the percentage of ethnic minorities in each neighborhood.⁴ Using GIS, we geometrically apportioned block group level data on race and household income to neighborhoods. This methodology assumes that race and income level are distributed evenly throughout a block group. We then calculated how many standard deviations from the mean for the entire city each neighborhood was, with respect to minority populations and households earning less than \$35,000. These numbers were added together. The resulting number, plus one, was multiplied by the crash index for each neighborhood.

Using this adjusted crash index, we selected nine of the neighborhoods with the high levels of traffic risk and high ranks in our equity evaluation. We excluded inner west and east neighborhoods (such as Downtown, Goose Hollow, and Sunnyside) as these districts have received a great deal of traffic calming already and have less potential for safety intervention. Table 2 displays the remaining neighborhoods, which were centered in northeast (King, Humboldt, Eliot, and Boise) and southeast (South Tabor, Mt. Scott Arleta, Foster-Powell, Lents, and Powellhurst-Gilbert). Those neighborhoods include their respective rankings for Traffic Risk (1 is the most dangerous neighborhood) and environmental equity (1 has the highest percentage of minority populations and those households earning less than \$35,000).

Phase 2: Feasibility Analysis

The second phase of analysis included the evaluation of qualitative data, to gauge the level of neighborhood interest, planning context, and political feasibility. This process included contacting neighborhood associations to understand the level of interest and involvement that is present in the neighborhood, for the Vision Zero Oregon project and traffic safety in general.

Our team also considered the planning context of each neighborhood. Neighborhoods with recently adopted or in-progress transportation planning efforts were considered to have less potential for influence with our Vision Zero plan. Those neighborhoods with older or inadequate plans were considered to be more viable candidates.

The final criterion analyzed in this phase was the issue of equity. If the neighborhood had experienced low levels of representation in roadway improvements or had been historically excluded from receiving funding benefits, compared to other areas of the city, then those neighborhoods were more likely to continue to the final phase.

Based on this analysis, the eight neighborhoods were narrowed to four: Foster-Powell, Lents, South Tabor, and King. These neighborhoods are mapped in Figure 1, attached at the end of this memo. Figure 2, also attached, illustrates photos of the major streets in each of the candidate neighborhoods.

Phase 3: Neighborhood Selection

The Bicycle Transportation Alliance (BTA) and the Loci Group, with input from the Portland Bureau of Transportation (PBOT), selected the King Neighborhood, in addition to adjacent neighborhoods, Humboldt and Boise. Humboldt and Boise were added to develop a study area with a wider range of street typologies and street safety issues. This selection was based on the willingness of the neighborhood to participate, as well as the political interest from the City and BTA to invest energy in the area over the next six months. A brief profile of each candidate neighborhood is attached.

References

1. Office of Neighborhood Involvement. "The Neighborhood Network." Available online at <http://www.portlandonline.com/oni/index.cfm?c=29020&a=22827>
2. Portland Bureau of Transportation. "Crash Data."
3. SimplyMap. "2010 Census Estimate Data"
4. Greater New Orleans Data Community Center. "Are Census numbers accurate?" Available online at <http://www.gnocdc.org/articles/censustrust.html>

A map of the Foster-Powell area in Atlanta. The map shows several streets including SE Clinton St, SE Kelly St, SE Tabbetts St, SE 67th Ave, SE 80th Ave, SE 82nd Ave, SE 85th Ave, SE 88th Ave, SE Woodstock Blvd, SE 21st Ave, SE 22nd Ave, SE 23rd Ave, SE 24th Ave, SE 25th Ave, SE 26th Ave, SE 27th Ave, SE 28th Ave, SE 29th Ave, SE 30th Ave, SE 31st Ave, SE 32nd Ave, SE 33rd Ave, SE 34th Ave, SE 35th Ave, SE 36th Ave, SE 37th Ave, SE 38th Ave, SE 39th Ave, SE 40th Ave, SE 41st Ave, SE 42nd Ave, SE 43rd Ave, SE 44th Ave, SE 45th Ave, SE 46th Ave, SE 47th Ave, SE 48th Ave, SE 49th Ave, SE 50th Ave, SE 51st Ave, SE 52nd Ave, SE 53rd Ave, SE 54th Ave, SE 55th Ave, SE 56th Ave, SE 57th Ave, SE 58th Ave, SE 59th Ave, SE 60th Ave, SE 61st Ave, SE 62nd Ave, SE 63rd Ave, SE 64th Ave, SE 65th Ave, SE 66th Ave, SE 67th Ave, SE 68th Ave, SE 69th Ave, SE 70th Ave, SE 71st Ave, SE 72nd Ave, SE 73rd Ave, SE 74th Ave, SE 75th Ave, SE 76th Ave, SE 77th Ave, SE 78th Ave, SE 79th Ave, SE 80th Ave, SE 81st Ave, SE 82nd Ave, SE 83rd Ave, SE 84th Ave, SE 85th Ave, SE 86th Ave, SE 87th Ave, SE 88th Ave, SE 89th Ave, SE 90th Ave, SE 91st Ave, SE 92nd Ave, SE 93rd Ave, SE 94th Ave, SE 95th Ave, SE 96th Ave, SE 97th Ave, SE 98th Ave, SE 99th Ave, SE 100th Ave. Parks shown include Creston Park, Woodstock Park, Mt Scott Park, and Essex Park. School zones are labeled as WOODSTOCK, SCOTT-ARLETA, FOSTER-POWELL, SOUTH TABOR, and SOUTHEAST UPLIFT. A large black triangle highlights the Foster-Powell area, which is bounded by SE Powell Blvd to the north, SE Foster Rd to the east, and SE Woodstock Blvd to the south. The number 26 is visible near SE Powell Blvd and the number 213 is visible near SE Woodstock Blvd.

Area: 2.3 km²

dangerous intersections of Powell & Foster & 82nd.

als make up the bulk of the fatalities at these facilities. Foster Road is under PBOT jurisdiction in the area. Foster Road is included in the 20k Average Daily Traffic (ADT) Port of

nsportation & Streetscape Plan. (2006)

ethics, operations, and safety, but have not. The neighborhood has pushed to see this plan implemented. There is a lot of concern regarding traffic safety concerns.

for 2030 and the Streetcar System Plan. It is about permitting bike lanes, and a streetcar alignment. It is a great opportunity to extend this plan to the future. This plan was discussion of lane reduction and crossings.

Transportation Planning Context:

This plan for Foster Road is designed partially implemented since adoption for years, with high levels of activity

This plan is out of date. Since adoption identified Foster Road as a multimodal unimagined in the original planning take it further than the original. Notable proposals for additional or enhanced

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This plan is out of date. Since adoption, the Bike Plan for 2030 and the Streetcar System Plan have identified Foster Road as a multimodal corridor, permitting bike lanes, and a streetcar alignment unimagined in the original planning process. There is a great opportunity to extend this plan and take it further than the original. Notably absent in this plan was discussion of lane reduction, or proposals for additional or enhanced pedestrian crossings.

Potential: High potential for public engagement, and clearly an area suffering from real traffic safety problems in multiple locations. While ODOT facilities are a major piece of the traffic safety problem in the neighborhood, Foster Road is a city street with many similar characteristics of the ODOT streets (ie. wide, multi-lane, high speed, with pedestrian access needs). Solutions for Foster Road have a high degree of replicability in other locations in Portland and the rest of the state.

Lents

Population: 15,576

Area: 7.9 km²



Initial Evaluation Results: Lents had a large number of traffic fatalities between 1994-2009, earning a #11 rank on our traffic risk score. Fatalities were split evenly between automobiles, bicyclists, and pedestrians. The ranking for the neighborhood is lower than might be expected because of the large area of the neighborhood.

Street Typology and Safety Issues: Lents contains the most diverse range of street types of all candidate neighborhoods, from local streets to an interstate freeway. The busy arterials make up the bulk of the fatalities in Lents. 82nd Avenue, Powell Boulevard, and I-5 are ODOT facilities.

The town center is centered on the intersection of 92nd Avenue with Foster Road and Woodstock Boulevard. These are all locally controlled streets (PBOT jurisdiction). Speeding on 92nd Avenue has long been a neighborhood concern. Lents and Woodstock are feeders onto and off of the freeway ramps, and drivers do not always adapt from the high-speed freeway to the low-speed town center.

Foster Road - 15 - 20k Average Daily Traffic (ADT) Powell Boulevard - 30 - 39k ADT

Transportation Planning Context: Holgate Buffered Bike Lanes (2009) –This treatment upset many residents, Lents Urban Renewal Area (Ongoing), Foster/Woodstock Transportation & Streetscape Plan, Foster/Woodstock Couplet Analysis – Determined that a decoupling would lead to added congestion.

Potential: An area suffering from real traffic safety problems in multiple locations, though the lower overall ranking is due to the neighborhood's large geographic size. Solutions for Lents have a high degree of replicability in other locations. Lents is more than twice as big as any of the other neighborhood candidates and this massive scale will make comprehensive analysis more difficult.

There are many active planning projects in the area, perhaps a limiting factor for Vision Zero Oregon to fit in with the parallel, possibly competing efforts.

A map of the South Tabor area in Kansas City, Missouri. A black rectangular box highlights a specific region. The box's northern boundary is SE Division St, its eastern boundary is SE 85th Ave, its southern boundary is SE Powell Blvd (which also features a highway shield for 26), and its western boundary is SE 67th Ave. Within this boxed area, labels include 'MT. TABOR' at the top, 'Clinton Park' in the center, and 'SE Tibbetts St' at the bottom. To the north of the box, 'Mt. Tabor Park' and 'Warner College' are visible. To the south, 'SE Boise St', 'SE 65th Ave', 'SE 70th Ave', 'Essex Park', and 'SE 82nd Ave' are labeled. Further south, the map shows 'FOSTER POWELL', 'MT. ARLETA', 'SCOTT-ARLETA', and 'WOODSTOCK'. Other streets shown include SE 60th Ave, SE 50th Ave, SE 42nd Ave, SE Clinton St, SE Kelly St, SE 86th Ave, SE 51st Ave, SE 87th Ave, SE 90th St, and SE 90th Ave. A green area at the top represents 'Mount Tabor'. A highway shield for 26 is located on SE Powell Blvd. A highway shield for 213 is located on SE 82nd Ave. A highway shield for 26 is located on SE Powell Blvd. A highway shield for 26 is located on SE Powell Blvd. A highway shield for 26 is located on SE Powell Blvd.

Area: 2.1 km²

Street Typology and Safety Issues: 82nd Avenue and Powell Boulevard are ODOT facilities. Division Street is under PBOT jurisdiction. Division Street expands from 2 to 4 lanes in this neighborhood. Powell Boulevard - 30 - 39k ADT

Division Main Street (2006) - This plan covers a small portion of Division (between 14th and 50th avenues) in South Tabor.

Vision Zero Oregon- NSSAP Appendix

King

Population: 5,979 Area: 1.7 km²



Initial Evaluation Results: The King Neighborhood ranks #17 on our traffic risk analysis, and is a highly ranked on our environmental equity evaluation.

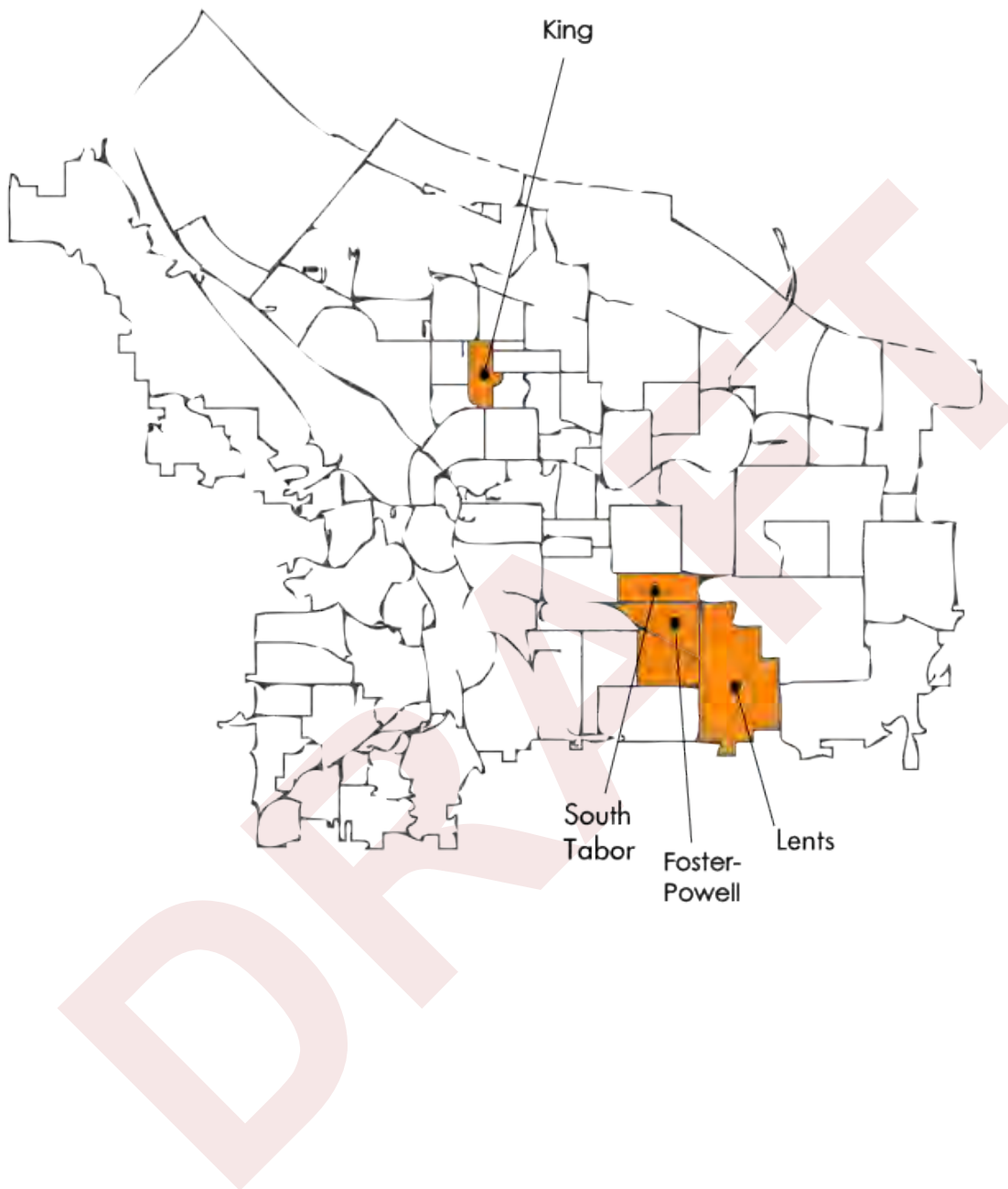
Street Typology and Safety Issues: This is the most centrally located neighborhood in our candidate selection. King's streets are established as a well-connected grid. Most streets are locally owned and maintained by PBOT. Martin Luther King (MLK) Jr Boulevard is a median-separated arterial under ODOT jurisdiction. Killingsworth Street is a busy, 2-lane street that serves more local traffic. The popular pedestrian-focused Alberta Arts District begins in the King Neighborhood.

Transportation Planning Context: NE MLK Blvd Action Plan 2006 (economic development and transportation improvements)

Alberta Streetscape Plan 1999 – This section of Alberta is included in a small portion of the King Neighborhood.

Potential: MLK Boulevard is the most troublesome street in this neighborhood; this stretch of MLK is under control of PBOT. The neighborhood association is active, and offers a high potential for public engagement.

Figure 1. Final Candidate Neighborhoods



Foster-Powell



Lents



South Tabor



King



APPENDIX B. Road Safety Existing Conditions Report

Current Road Safety Conditions in the United States

The National Highway Traffic Safety Administration's *Traffic Safety Facts 2009* indicated the following trends:

- Fatal crashes decreased by 9.9 percent from 2008 to 2009.
- The injury rate for drivers of vehicles (including motorcyclists) decreased by 40.0 percent from 1992 to 2009.
- The fatality rate for pedestrians and bicyclists (outside of the vehicle) has declined by 60.2 percent from 1975 to 2009.
- The percent of alcohol-impaired driving fatalities has declined from 48 percent in 1982 to 32 percent in 2009.

Motor vehicle crashes are described as fatal (resulting in death), nonfatal injury, and property damage. Below are some common trends for crashes in 2009:

- More than 5.5 million vehicle crashes were reported to police.
- 28 percent of those crashes ended with an injury and less than 1 percent resulted in a death.
- Midnight to 3 a.m. on Saturdays and Sundays was the time with the highest number of fatal crashes
- 61 percent of fatal crashes involved only one vehicle. Half of all fatal crashes were on roads with posted speed limits of 55 mph or more; compared with 23 percent of injury crashes and 23 percent of property-damage-only crashes.
- Crashes with fixed objects (such as trees or light poles) represent 19 percent of all crashes, but 46 percent of fatal crashes.
- 32 percent of all fatal crashes involved alcohol-impaired driving. For fatal crashes occurring from midnight to 3 a.m., 66 percent involved alcohol-impaired driving.

Information about the drivers, passengers, pedestrians, and bicyclists involved in with vehicle crashes, that were reported police, is shown below.

- 33,808 people died in motor vehicle crashes in 2009. Another 2.22 million people were injured.
- The majority of persons killed or injured in traffic crashes were drivers (63 percent), followed by passengers (28 percent), motorcycle riders (4 percent), pedestrians (3 percent), and bicyclists (2 percent).
- Of these people who were killed in crashes, 32 percent died in alcohol-impaired driving crashes.

Current Road Safety Conditions Oregon

Between 2008 and 2009 the number of deaths caused by motor vehicle crashes decreased by 9 percent (with a 33 percent decrease since 1975). About 20 percent of these deaths were caused when a vehicle flipped (and did not hit another vehicle), 28 percent crashed into a fixed object (such as a light pole or tree), and 32 percent crashed into another vehicle. About 13 percent crashed into a pedestrian or bicyclist. Most fatal crashes took place on principal arterials, collectors, and minor arterials. About 52 percent of the people killed in vehicle crashes were drivers, 21 percent were passengers, 14 percent were motorcyclists, 9 percent were pedestrians, and 2 percent were bicyclists. Oregon is ranked number 32 in the nation for pedestrians killed by cars (with 35 pedestrians killed in 2009). The majority of all motor vehicle related deaths took place on streets with posted speeds of 45 mph or higher.

Current Road Safety Conditions in Portland

According to the *2010 Draft Portland Plan*, 2008 had the fewest recorded fatalities in the city's history. In the past ten years, "342 Portlanders were killed on Portland streets. Sixty-five percent of fatal crash victims were motor vehicle occupants, 6% were bicyclists, and 29% pedestrians. In addition, traffic safety improvement is not consistent across the entire city." The report indicates a desire to decrease collisions of all modes through safety improvements and education. "The community expressed strong concerns that a failure to avoid crashes has the potential to dramatically increase congestion and lack of reliability for the transportation network. This concern is validated by findings that a significant amount of traffic congestion is caused by crash events." The following to tables are from the City of Portland's Transportation System Plan (TSP).

Table 3.16 High Auto Crash Intersections⁸⁶

| | | |
|------------------------------|----------------------------------|-------------------------------|
| SE 39th at Powell | SE Duke St at 82nd Ave | NE Glisan St at 102nd Ave |
| NE Sandy at 82nd Ave | SE Stark St at 102nd Ave | NE Marine Dr at 33rd Ave |
| SE Powell at 122nd Ave | N Weidler St at Vancouver Ave | N Broadway at Williams Ave |
| SE Powell at 92nd Ave | NE Fremont St at MLK Blvd | E Burnside at 82nd Ave |
| NE Halsey at 122nd Ave | SE Foster Rd at 96th Ave (I-205) | SE Foster Rd at 122nd Ave |
| SE Stark St at 122nd Ave | SE Division St at 162nd Ave | W Burnside St at 23rd Ave |
| NE Columbia Blvd at MLK Blvd | SE Stark St at 148th Ave | NE Glisan St at 82nd Ave |
| NE Glisan St at 122nd Ave | SE Washington St at 96th Ave | SE Washington St at 102nd Ave |
| SE Holgate Blvd at 82nd Ave | N Broadway at Vancouver Ave | NE Sandy Blvd at 39th Ave |
| SW Washington St at 2nd Ave | SW Jefferson Rd at Canyon Rd | |
| SE Foster Rd at 82nd Ave | SE Foster Rd at 92nd Ave | |

Intersections with more than six crashes over a four-year period are termed 'major intersections.' Major intersections typically carry through-moving traffic on non-local streets. At the time of the 1996 inventory, Portland had 1,327 major intersections.

Table 3.17 Fatal and Injury Crashes per Thousand Capita (1996-2007)⁸⁷

| Year | Population | Fatal Crashes | | Injury Crashes | |
|------|------------|---------------|---------------|----------------|---------------|
| | | Number | Crashes/1,000 | Number | Crashes/1,000 |
| 1996 | 503,000 | 55 | 0.11 | 6,271 | 12.47 |
| 1997 | 508,500 | 45 | 0.09 | 5,938 | 11.68 |
| 1998 | 509,600 | 44 | 0.09 | 4,981 | 9.77 |
| 1999 | 512,395 | 37 | 0.07 | 4,439 | 8.65 |
| 2000 | 531,600 | 35 | 0.07 | 5,107 | 9.61 |
| 2001 | 536,240 | 36 | 0.07 | 5,582 | 10.41 |
| 2002 | 538,180 | 40 | 0.07 | 6,001 | 11.15 |
| 2003 | 545,140 | 47 | 0.09 | 5,905 | 10.83 |
| 2004 | 550,560 | 37 | 0.07 | 5,480 | 9.95 |
| 2005 | 556,370 | 34 | 0.06 | 5,250 | 9.44 |
| 2006 | 562,690 | 31 | 0.06 | 5,816 | 10.34 |
| 2007 | 568,380 | 36 | 0.06 | 4,691 | 8.25 |

The 2007 City of Portland Citizen Survey indicated that perceptions of pedestrian safety vary widely by neighborhood. “In 2007, just over half of residents rated their neighborhood streets as good or very good for pedestrian safety.” Residents in inner neighborhoods considered their local streets safer pedestrians than residents in central northeast. The draft Portland Plan indicates that “per capita cyclist injury rates have remained relatively constant, with the exception of a large drop in 2008. However, the percentage of people cycling has increased dramatically over the same period, resulting in significant declines in the crash rate among cyclists.” The most common bicycle/car crashes were when a “car turned right or left (15.5%) or the bicyclist or motorist ran a stop sign or signal (25%).” The Portland Citizen Survey showed that across the city, 44 percent of residents felt that their local streets were “good or very good for bicyclist safety.” The following

tables and figure were from the City of Portland's TSP.

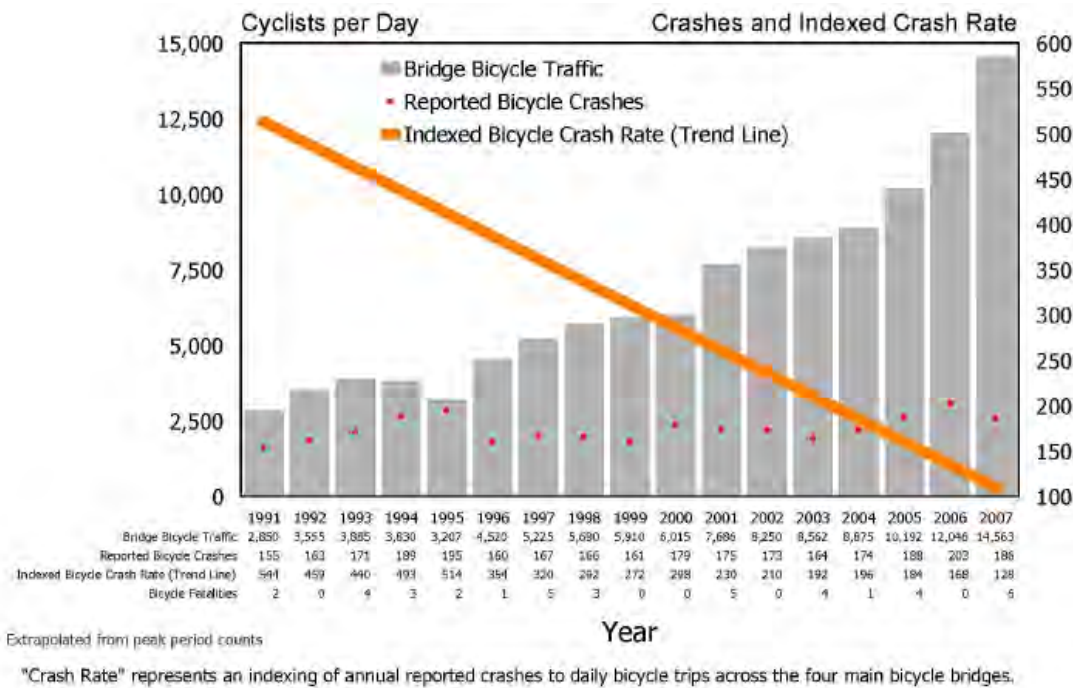
Table 3.22 Pedestrian Injuries and Fatalities, 1999-2007⁹²

| Year | Population | Pedestrian Injuries | | Pedestrian Fatalities | |
|------|------------|---------------------|-------------------------|-----------------------|-------------------------|
| | | Total Incidents | Rate per 100,000 people | Total Incidents | Rate per 100,000 people |
| 1999 | 512,395 | 238 | 46 | 15 | 2.9 |
| 2000 | 531,600 | 202 | 38 | 10 | 1.9 |
| 2001 | 536,240 | 198 | 37 | 10 | 1.9 |
| 2002 | 538,180 | 189 | 35 | 11 | 2.0 |
| 2003 | 545,140 | 192 | 35 | 15 | 2.8 |
| 2004 | 550,560 | 149 | 27 | 10 | 1.8 |
| 2005 | 556,370 | 162 | 29 | 8 | 1.4 |
| 2006 | 562,690 | 191 | 34 | 6 | 1.1 |
| 2007 | 568,380 | 123 | 22 | 10 | 1.8 |

Table 3.23 High Pedestrian Crash Intersections⁹³

| Northeast | Northwest | Southwest |
|------------------------------|---------------------------|--------------------------------|
| NE Broadway at 26th Ave | NW Burnside at Uptown Ter | SW Barbur at Troy St |
| NE Broadway at 35th Ave | NW Burnside at Maywood Dr | SW Barbur at Luradel St |
| NE Killingsworth at 57th Ave | NW Hwy 30 at Harbor Blvd | SW Barbur at SW 30th Ave |
| NE Sandy at 59th Ave | NW Hwy 30 at 56th Ave | SW Barbur at 11240 |
| NE Sandy at 85th Ave | NW Hwy 30 at 112th Ave | SW Beav.-Hills Hwy at 35th Ave |
| NE Sandy at 64th Ave | Southeast | SW Beav.-Hills Hwy at 42nd Ave |
| NE Halsey Ave at 114th Ave | SE 82nd Ave at Ash St | SW Beav.-Hills Hwy at 50th Ave |
| NE Halsey at 126th Ave | SE 82nd Ave at Cooper St | North |
| NE Halsey at 140th Ave | SE 82nd Ave at Main St | N Lombard at Chase Ave |
| NE 82nd at Thompson | SE 82nd Ave at Lambert St | N Lombard at Russet St |
| NE 102nd Ave at Davis St | SE 82nd Ave at Pacific St | N Rosa Parks at Newcastle |
| NE 102nd Ave at Oregon St | SE 82nd at Francis St | N Willamette at Harvard |
| NE 102nd Ave at Hancock St | SE Foster Rd at 107th Ave | N Willamette at Woolsey |
| NE 102nd Ave at Shaver St | SE Foster at 116th Ave | N Willamette at Washburne |
| NE 122nd at Stanton | SE Division at 45th Ave | |
| NE 122nd Ave at Holladay St | SE Division at 66th Ave | |
| | SE Division at 87th Ave | |
| | SE Division at 105th Ave | |

Figure 3.11 Bicyclist Crash Rates⁹⁶



Three critical issues were identified in the draft *Portland Plan*, when examining the City's TSP. Most important to Vision Zero Oregon is the "lack of right of way to accommodate multiple modes onto a single street. The City may have to consider other measures such as reducing on-street parking, removing travel lanes and prioritizing pedestrians, bicycles and transit." Also identified was the need for the TSP to create a policy that would allow for streets to be improved to give priority to one mode type or to make improvements by order of priority. "Policy 6.4, Objective C does not allow improvements for one mode that will prevent improvements for another mode and states, 'All of a street's classifications must be considered in designing street improvements and allocating funding. While a proposed project may serve only one classification, improvements should not preclude future modifications to accommodate other classifications on the street.'" The Street Design Classification policy gives some direction "For example, if a street is classified at the highest level for Traffic, Transit and Bicycle, all elements need to be addressed within a usually limited right of way."

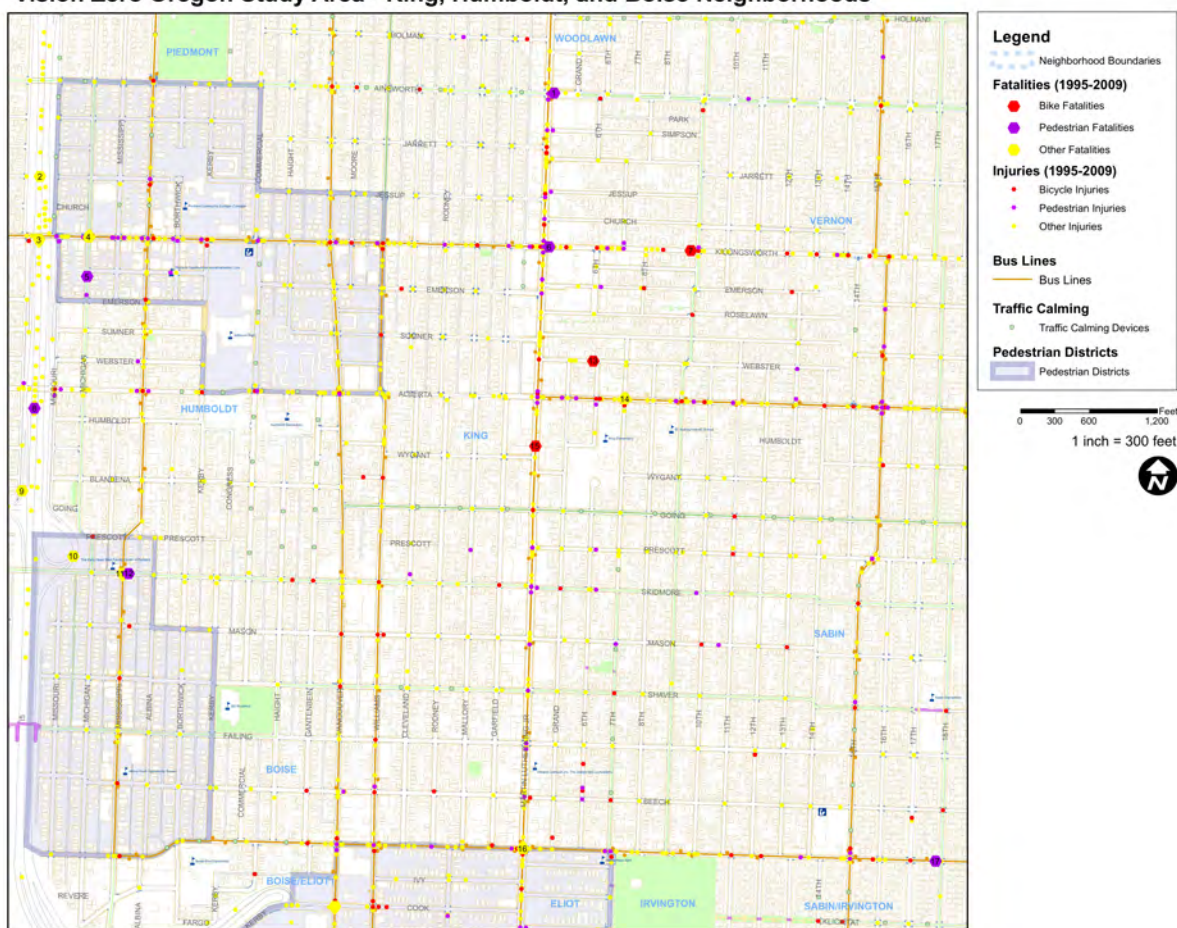
Study Area- King, Boise, Humboldt: Existing Conditions

Study Area Boundaries

NE Ainsworth bounds the study area on the north and NE Fremont on the south. While most of the study area is located within the King Neighborhood boundaries, some of the roadways extend into the Boise and Humboldt neighborhoods to the west. The study area roughly extends between Interstate 5 (I-5) and NE 15th Avenue. Most of the project study area will be focused around the King Neighborhood, since it is completely incorporated in the study area; however, the Boise and Humboldt neighborhoods will be examined as necessary to incorporate a wide range of street types into the final report and toolkit.

The area is well served by public transportation, including bus lines 6 (on MLK), 8 (on 15th), 24 (on Fremont), 44 (on Vancouver and Williams), and 72 (Killingsworth west of MLK and Alberta east of MLK), as well as the Yellow Line MAX (on Interstate Avenue). It is near I-5 and I-84 highways, as well as a short distance from downtown, the Oregon Convention Center, and the Rose Quarter.

Vision Zero Oregon Study Area - King, Humboldt, and Boise Neighborhoods



In 1996, ODOT gave control of MLK (OR 99E) to the City of Portland. Below is a map and table for the project area, showing the crashes that resulted in injuries (smaller dots) and deaths (larger dot with a number that corresponds to the table). Most of the deaths in the area were caused either when a car was hit by another car or hit a fixed object (such as a light pole or barrier), when a car turned left or right into a pedestrian or bicyclist, or when a car rear-ended a bicyclist.

From 1993 to 2009, 17 people have lost their lives in traffic crashes on the roads shown on this map

1 Tuesday, June 8, 1993

A person walking was killed at dusk crossing MLK Blvd when a truck traveling west on NE Ainsworth turned north onto MLK Blvd and struck them.

3 Monday, September 4, 1995

A person in a car was killed in broad daylight in a head-on collision on the I-5 to North Alberta Street ramp.

5 Friday, August 25, 2000

A person walking was killed at night when a person driving a car turned left off N. Michigan Avenue into a driveway and struck them.

7 Wednesday, January 10, 2001

On a clear, dry day, a person on a bicycle was killed when a person driving a car struck them while traveling westbound on N. Killingsworth.

9 Monday, June 2, 2008

A person driving collided with a fixed object on the I-5 entrance ramp and was killed.

11 Tuesday, January 6, 1998

A person in a car was killed when two vehicles t-boned at this intersection on a rainy day.

13 Monday, May 17, 2004

A person traveling by bicycle was struck during the day by a person in a car traveling westbound on Webster.

15 Saturday, September 3, 2005

On a clear, dry day, a person on a bicycle was rear-ended by a person driving a car northbound on MLK and was killed.

17 Monday, January 8, 1996

A person walking was killed on a rainy night when the driver of a car struck them while turning left from northbound 18th Avenue to westbound Fremont.

2 Thursday, February 1, 1996

A person in a car was killed on a sunny day when their vehicle stalled on the exit ramp from northbound I-5 to North Alberta Street and they were rear-ended by another vehicle.

4 Thursday, October 31, 2002

On Halloween day, a person in a car traveling north on N. Michigan Avenue was killed when they collided with a fixed object.

6 Monday, August 31, 1998

A person walking was killed during the day at this intersection when a person driving too fast westbound on N. Killingsworth hit them.

8 Friday, August 23, 2002

A person walking was killed when struck by a person driving a car near the Going Street ramp of I-5.

10 Monday, December 29, 2009

A person in a car was killed when the car they were in struck a fixed object on the I-5 ramp here.

12 Wednesday, November 15, 2006

On a rainy day, a person walking was killed when a car traveling west on Skidmore skidded into them.

14 Friday, October 7, 1994

A person driving was killed when their vehicle experienced mechanical difficulties.

16 Thursday, January 1, 2001

On this rainy day, two drivers of cars collided at an angle at this intersection and one person in those cars was killed.

History - Boise, Humboldt, and King Neighborhoods

The Boise, Humboldt, and King Neighborhoods are located in Northeast and North Portland; typically referred to as Albina, since this is the site of the historic town of Albina that was later incorporated into the City of Portland. Albina was originally composed of immigrants, including Germans and Russians.



Union Avenue (now MLK Jr. Boulevard) in the early 1900s. Oregon Historical Society.

NE Martin Luther King (MLK) Jr. Boulevard was an active main street, with a pedestrian-oriented development between 1900 and 1960.¹ The area was well served by streetcar lines until 1948, replaced by buses. With the 1948 Vanport flood, thousands of African American residents were relocated into the Albina community (including the Boise, Humboldt, and King neighborhoods).² The major African American commercial district was located on Vancouver and Williams streets.

Demographic changes were followed by radical, physical changes, including the construction of Interstate 5 (I-5), Memorial Coliseum, and Emanuel Hospital. Much of this new development divided the community or, in the case of Emanuel Hospital, removed much of the existing community institutions. From the 1960s through early 1990s, the area saw little physical investment and a decline in housing stock. By the 1990s, gentrification was beginning to occur as wealthier individuals, often white residents newly arriving in Portland, purchased housing and displaced lower income residents.

While there have been demographic changes to the area, there are still considerable equity considerations for the area. Specifically of concern, is providing travel options for low-income individuals, including cars, bikes, buses, and walking.

Attractions and Services- Boise, Humboldt, and King Neighborhoods

There are four elementary schools in the neighborhood, King, Humboldt, and Sabin (Portland Public pre-Kindergarten through 8th grade schools), as well as a private school, St. Andrews Nativity. Three of these schools are within five blocks of MLK. The Albina Head Start is located at the corner of Skidmore and MLK. Jefferson High School is located on Killingsworth, near Albina across the street from the Portland Community College (PCC) Cascade Campus. The Cascade Campus hosts the Cascade Festival of African Films in February and has an art gallery, while also housing the home

¹ Fremont/MLK Vision Study (2001).

² Killingsworth Street Improvements Planning Project (2003).

court for the men's and women's basketball teams, attracting a wider audience from around the city. The campus provides "job training, college transfer and self-improvement courses. The campus is home to a number of unique programs offered nowhere else in the PCC system." The Cascade Campus served "more than 21,000 students during the 2009-2010 academic year."³

The North Portland Library is also located on Killingsworth. The library offers free Internet access for residents, as well as free public events catered to the neighborhood. The Portland Police Department is located off Killingsworth and MLK. The Muslim Community Center, Multnomah County Health Clinic, Miracles Club, Planned Parenthood, and other service providers are located in the area.

There are eight City owned parks in the study area: Boise-Eliot and Patton Community Gardens; Unthank, Roselawn, Sumner-Albina, Two Plum, Mallory Meadows City Parks; and King School Park. Directly outside of the study area are Irving, Alberta, and Peninsula parks (which also includes a Community Center and offers swimming, fitness classes, and other recreational classes for residents), as well as Vernon Tank Playground.⁴

Current Demographic Information - Boise, Humboldt, and King Neighborhoods

The King Neighborhood roughly corresponds with Census Tracts 3301, 3302, 3401, 3402, 3601, and 3702. According to the American Community Survey (ACS) the demographics for these tracts between 2005 and 2009 were as follows.

| Census Tract | White | Black | Hispanic | Asian | Other | Population estimates* |
|--------------|-------|-------|----------|-------|-------|-----------------------|
| 3301 | 49% | 28% | 18% | 1% | 4% | 3,125 |
| 3302 | 61% | 24% | 11% | 2% | 3% | 2,488 |
| 3401 | 55% | 28% | 10% | 2% | 6% | 2,404 |
| 3402 | 48% | 31% | 17% | 2% | 2% | 2,426 |
| 3601 | 51% | 24% | 19% | 0% | 6% | 3,529 |
| 3702 | 61% | 18% | 11% | 3% | 6% | 2,385 |

** Because these figures are based on samples, they are subject to a margin of error, particularly in places with a low population, and are best regarded as estimates.*

³ PCC website, <http://www.pcc.edu/about/locations/cascade/>

⁴ City of Portland. "Portland Parks and Recreation Department." Available online at <http://www.portlandonline.com/parks/finder/index.cfm?ShowResults=yes&SubAreas=1&SubAreas=3>

This indicates that the King Neighborhood is roughly half white and half other ethnicities (with the largest group being African American).

Median Household income for the same area is shown in the table below. Between 56 and 29 percent of the total households earned below \$30,000 per year (which is a rough equivalent for low-income households). Since 2000, the median monthly rent has increased in all but one census tract.

| Census Tract | Median Household Income | Change since 2000 | Households earning under \$30,000 | Median monthly rent | Change since 2000 | Household estimates* |
|--------------|-------------------------|-------------------|-----------------------------------|---------------------|-------------------|----------------------|
| 3301 | \$39,600 | + 17% | 43% | \$792 | + 10% | 1,250 |
| 3302 | \$46,528 | + 7% | 35% | \$793 | - 3% | 1,152 |
| 3401 | \$28,787 | - 18% | 53% | \$702 | + 14% | 1,111 |
| 3402 | \$24,310 | - 25% | 56% | \$702 | + 4% | 1,088 |
| 3601 | \$48,401 | + 11% | 29% | \$964 | + 26% | 1,508 |
| 3702 | \$51,884 | 0% | 30% | \$814 | + 18% | 985 |

School Demographics - Boise, Humboldt, and King Neighborhoods

Demographics for schools are collected every year and are often a better reflection of the neighborhood than census data. For that reason, the demographic information was collected for the three public schools in the area. The 2009 data is shown in the tables below.

| School | Asian | Black | Hispanic | Native American | White | Multiple Races | Unspecified |
|---------------------|-------|-------|----------|-----------------|-------|----------------|-------------|
| Humboldt Elementary | 2.9% | 54.9% | 21.5% | 3.3% | 12.7% | 2.5% | 2.2% |
| King Elementary | 3.3% | 52.4% | 26.8% | 0.6% | 8.3% | 3.0% | 5.7% |
| Sabin Elementary | 3.2% | 36.8% | 12.6% | 1.1% | 35.1% | 6.0% | 5.2% |
| Jefferson High | 6.5% | 53.2% | 15.6% | 0.8% | 19.6% | 2.9% | 1.5% |

| School | Neighborhood students attending neighborhood school | Neighborhood students attending different school | Free & Reduced Lunches | English Language Learners |
|--------|---|--|------------------------|---------------------------|
|--------|---|--|------------------------|---------------------------|

| | | | | |
|---------------------|-----|-----|-------|-------|
| Humboldt Elementary | 48% | 29% | 99.6% | 13.1% |
| King Elementary | 41% | 35% | 99.4% | 16.4% |
| Sabin Elementary | 47% | 32% | 51.1% | 2.9% |
| Jefferson High | 23% | 25% | 70.5% | 8.4% |

Street Designations - Boise, Humboldt, and King Neighborhoods

Every street in the state of Oregon and City of Portland has a designation, or classification, assigned that relates to their intended purpose and use. Below are the streets that will be examined in greater detail by Vision Zero Oregon, for use of the Guides and Neighborhood Street Safety Action Plan. The project has tried to capture a wide variety of street types and transportation services (bike streets and freight routes). The tables listed below are from the City of Portland's Transportation System Plan (TSP).

- **MLK (OR 99E)** – Principal Arterials Main Street, Major Truck Street, City Bikeway, Regional Main Street, Major Emergency Response Route, City Walkway, Major Transit Priority Street, Major City Traffic Street,
- **Vancouver/Williams** – Urban Collector couplet, City Bikeway, Community Corridor, City Walkway, Transit Access Street, Neighborhood Collector,
- **Killingsworth** – Minor Arterial, Community Main Street, Truck Access Street, City Walkway (parts included in a Pedestrian District), Major Transit Priority Street, District Collector,
- **Alberta** – Urban Collector, Community Main Street, Truck Access Street, City Walkway (parts included in a Pedestrian District), Community Transit Street, Neighborhood Collector (east of MLK)
- **Skidmore** – Urban Collector, Major Emergency Response Route, City Walkway (west of MLK), City Bikeway, Transit Access Street (west of MLK), Neighborhood Collector (east of MLK)
- **Shaver/Failing** – Local Street
- **Going** – Local Street, Bike Boulevard, Neighborhood Greenway

Table 3.3 Traffic Classification Descriptions

| | |
|-------------------------------|---|
| Regional Trafficways | Regional Trafficways are intended to serve interregional district movement that has only one trip end in a transportation district or to serve trips that bypass a district completely. |
| Major City Traffic Streets | Major City Traffic Streets are intended to serve as the principal routes for traffic that has at least one trip end within a transportation district. |
| Traffic Access Streets | Traffic Access Streets are intended to provide access to Central City destinations, distribute traffic within a Central City district, provide connections between Central City districts, and distribute traffic from Regional Trafficways and Major City Traffic Streets for access within the district. Traffic Access Streets are not intended for through-traffic with no trip ends in the district. |
| District Collectors | District Collectors are intended to serve as distributors of traffic from Major City Traffic Streets to streets of the same or lower classification. District Collectors serve trips that both start and end within a district. |
| Neighborhood Collectors | Neighborhood Collectors are intended to serve as distributors of traffic from Major City Traffic Streets or District Collectors to Local Service Streets and to serve trips that both start and end within areas bounded by Major City Traffic Streets and District Collectors. |
| Local Service Traffic Streets | Local Service Traffic Streets are intended to distribute local traffic and provide access to local residences or commercial uses. |

Table 3.21 Pedestrian Classification Descriptions

| | |
|----------------------------|---|
| Pedestrian Districts | Pedestrian Districts are intended to give priority to pedestrian access in areas where high levels of pedestrian activity exist or are planned, including the Central City, Gateway regional center, town centers, and station communities. |
| Pedestrian-Transit Streets | Pedestrian-Transit Streets are intended to create a strong and visible relationship between pedestrians and transit within the Central City. |
| City Walkways | City Walkways are intended to provide safe, convenient, and attractive pedestrian access to activities along major streets and to recreation and institutions; provide connections between neighborhoods; and provide access to transit. |
| Off-Street Paths | Off-Street Paths are intended to serve recreational and other walking trips. |
| Local Service Walkways | Local Service Walkways are intended to serve local circulation needs for pedestrians and provide safe and convenient access to local destinations, including safe routes to schools. |

Table 3.24 Bicycle Classification Descriptions

| | |
|------------------------|---|
| City Bikeways | City Bikeways are intended to serve the Central City, regional and town centers, station communities, and other employment, commercial, institutional, and recreational destinations. |
| Off-Street Paths | Off-Street Paths are intended to serve as transportation corridors and recreational routes for bicycling, walking, and other non-motorized modes. |
| Local Service Bikeways | Local Service Bikeways are intended to serve local circulation needs for bicyclists and provide access to adjacent properties. |

Table 3.35 Transit Classification Descriptions

| | |
|---------------------------------|--|
| Regional Transitways | Regional Transitways are intended to provide for interregional and interdistrict transit trips with frequent, high-speed, high-capacity, express, or limited service, and to connect the Central City with all regional centers. |
| Major Transit Priority Streets | Major Transit Priority Streets are intended to provide for high-quality transit service that connects the Central City and other regional and town centers and main streets. |
| Transit Access Streets | Transit Access Streets are intended for district-oriented transit service serving main streets, neighborhoods, and commercial, industrial, and employment areas. |
| Community Transit Streets. | Community Transit Streets are intended to serve neighborhoods and industrial areas and connect to citywide transit service. |
| Local Service Transit Streets | Local Service Transit Streets are intended to provide transit service to nearby residents and adjacent commercial areas. |
| Transit Stations | Transit stations are locations where light rail vehicles or other high-capacity transit vehicles stop to board and unload passengers. |
| Intercity Passenger Rail | Intercity Passenger Rail provides commuter and other rail passenger service. |
| Passenger Intermodal Facilities | Passenger Intermodal Facilities serve as the hub for various passenger modes and the transfer point between modes. |

Table 3.41 Freight Classification Descriptions

| | |
|-----------------------------|--|
| Freight Districts | Freight Districts are intended to provide safe and convenient truck mobility and access in industrial and employment areas serving high levels of truck traffic and to accommodate the needs of intermodal freight movement. |
| Regional Truckways | Regional Truckways are intended to facilitate interregional and movement of freight. |
| Priority Truck Streets | Priority Truck Streets are intended to serve as the primary route for access and circulation in Freight Districts, and between Freight Districts and Regional Truckways. |
| Major Truck Streets | Major Truck Streets are intended to serve as principal routes for trucks in a Transportation District. |
| Truck Access Streets | Truck Access Streets are intended to serve as access and circulation routes for delivery of goods and services to neighborhood-serving commercial and employment uses. |
| Local Service Truck Streets | Local Service Truck Streets are intended to serve local truck circulation and access. |
| Railroad Main Lines | Railroad Main Lines transport freight cargo and passengers over long distances as part of a railway network. |
| Railroad Branch Lines | Railroad Branch Lines transport freight cargo over short distances on local rail lines that are not part of a rail network and distribute cargo to and from main line railroads. |
| Freight Facilities | Freight Facilities include the major shipping and marine, air, rail, and pipeline terminals that facilitate the local, national, and international movement of freight. |

Plan and Policy Review

Federal Plans

American with Disabilities Act (1990)

The American with Disabilities Act (ADA) sets guidelines for accessibility to places of public accommodation and commercial facilities by individuals with disabilities. These guidelines are to be applied during the design, construction, and alteration of the building or facility.

State Plans

Statewide Planning Goals

Oregon's 19 planning goals provide the foundation for the state's land use planning program. Goals directly applicable to Vision Zero Oregon are Goal 11: Public Facilities Plan and Goal 12: Transportation

Transportation Planning Rule

The Transportation Planning Rule (TPR) implements Goal 12 (see above plan). The TPR has a provision to reduce vehicle miles traveled per capita by "10 percent over the next 20 years" and to improve "opportunities for alternatives to the automobile."

Oregon Revised Statutes

ORS 366.514 mandates the expenditure of funds for bicycle and pedestrian facilities when roads are being 'constructed, reconstructed, or relocated' using state highway funds. Not less than one percent of the total amount of highway funds received must be spent on bicycle and pedestrian facilities.

Oregon Vehicle Code

The *Oregon Vehicle Code* regulates bicyclists (and motorists when bicycles are present) in several ways. The regulations address failure of motorists to yield to bicyclists, vehicle laws that pertain to bicyclists, and vehicle equipment requirements, including the bicycle helmet law. The *Portland Bicycle Master Plan* contains the complete text of the state regulations and Title 16 regulations.

Regional Plans

Region 2040 Growth Concept (1995)

MLK Blvd is classified as a Main Street in Metro's *2040 Growth Plan*. This means that there is a strong commercial identity for the area, but with a focus



Main streets



Similar to town centers, main streets have a traditional commercial identity but are on a smaller scale with a strong sense of the immediate neighborhood. Examples include South-

east Hawthorne in Portland, the Lake Grove area in Lake Oswego and the main street in Cornelius. Main streets feature good access to transit.

Recommended average density for housing is 39 persons per acre.

on the immediate neighborhood. They feature good access to transit with a mix of employment and housing.

Fundamental 4 in the *2040 Growth Plan* is to “provide a balanced transportation system including safe, attractive facilities for bicycling, walking and transit as well as for motor vehicles and freight.” The plan predicts that freight volume is expected to “more than double by 2040.” The plan outlines continued support for transit projects and an increase in bicycle, pedestrian, and boulevard projects (compared to the *2000 Growth Plan*) that will result in one third of all projects being bike/pedestrian projects.

Below are some additional tables and figures from the *2040 Growth Plan* that are relevant to the Vision Zero project, since they are focused on the decreased reliance of single occupant vehicles (SOV) and increasing the other transportation mode shares to make the area more walkable, bikeable, and friendly for transit riders.

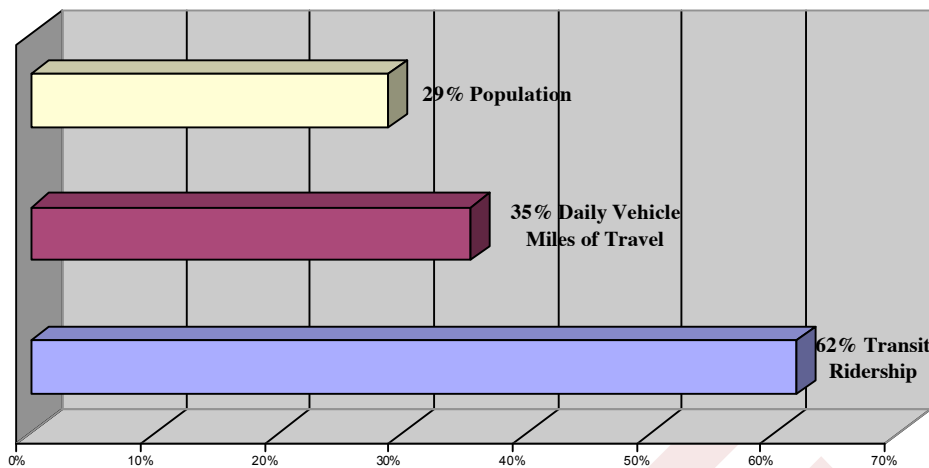
Table 4.2: Distribution of Financially Constrained System Projects in 2000 RTP and 2004 RTP Federal Update

| | Based on cost | | Based on count | |
|--|---------------|------|----------------|------|
| | 2000 | 2004 | 2000 | 2004 |
| 2040 Policy Emphasis | | | | |
| Projects in Central City & Regional Centers | 39% | 60% | 36% | 37% |
| Projects in Industrial Areas and Ports | 34% | 17% | 24% | 18% |
| Projects in Town Centers, Main Streets & Station Communities | 16% | 16% | 24% | 29% |
| Projects in Other Areas | 11% | 7% | 16% | 16% |
| Total | 100% | 100% | 100% | 100% |

| | Based on cost | | Based on count | |
|--|---------------|------|----------------|------|
| | 2000 | 2004 | 2000 | 2004 |
| Balancing Modes of Transportation | | | | |
| Road & Bridge Projects | 26% | 34% | 43% | 40% |
| Freeway & Highway Projects | 9% | 13% | 5% | 6% |
| Bicycle & Pedestrian Projects | 4% | 7% | 35% | 33% |
| Transit Projects | 55% | 40% | 4% | 9% |
| Boulevard Projects | 3% | 4% | 6% | 7% |
| Other Projects | 3% | 2% | 7% | 5% |
| Total | 100% | 100% | 100% | 100% |

Source: 2004 Federal Update to the Regional Transportation Plan (11/11/03)

Figure 4.2: Growth in Ridership Exceeds Average Daily Vehicle Miles Traveled and Population (1990-2002)



Source: Metro Data Resource Center; TriMet; State Highway Performance Monitoring System (HPMS)

Designing for Truck Movements

The Metro *Designing for Truck Movements* document says that the “key to street design in Center and Main Street areas is balancing the needs for truck access with the need for pedestrian safety and convenience.” The preferred lane width is 12 feet, with 11 feet acceptable. Intersections are the most challenging locations for truck operations.

Suggested designs that accommodate truck movements include pedestrian median refuge islands, curb extensions, mountable curbs (used only where pedestrians are not expected to be present), and intersection STOP bar locations (which can aid in increasing pedestrian visibility at a crosswalk).

Regional Transportation Plan (2000)

The *Regional Transportation Plan* was adopted by Metro in 2000. This plan focuses on streets with regional significance, includes multimodal classifications, street design classifications, and includes a list of major system improvements. See earlier classifications for the streets in the study area.

Tri-County Elderly and Disabled Transportation Plan (2001)

This plan identifies ways that the existing services and facilities used by elderly and disabled populations can be improved. Five areas were identified as needing improvement, those relevant to Vision Zero include: service delivery is not well planned; transportation is not well integrated with social service plans, transportation plans, or land use plans; and the needs exceed available resources. Improvements in the plan focus on improving land uses to increase density of customers to “provide the highest level of service to the area where the highest concentration of elderly and people with disabilities are located.” Pedestrian network improvements are suggested, as are encouraging a mix of uses, compliance with the American’s with Disabilities Act, providing

pedestrian crossings with pedestrian-scale lighting and amenities, development of walkable blocks, moderate or slow vehicle speeds, on-street parking to buffer pedestrians, and pedestrian medians on wide streets.

City Plans

Comprehensive Plan

While the City is currently undergoing an update of the *Comprehensive Plan* (known as the *Portland Plan*), the existing plan outlines goals, policies, objectives and a plan map for the city. Major development decisions must be consistent with the Comprehensive Plan, according to State law.

Transportation Element of the Comprehensive Plan

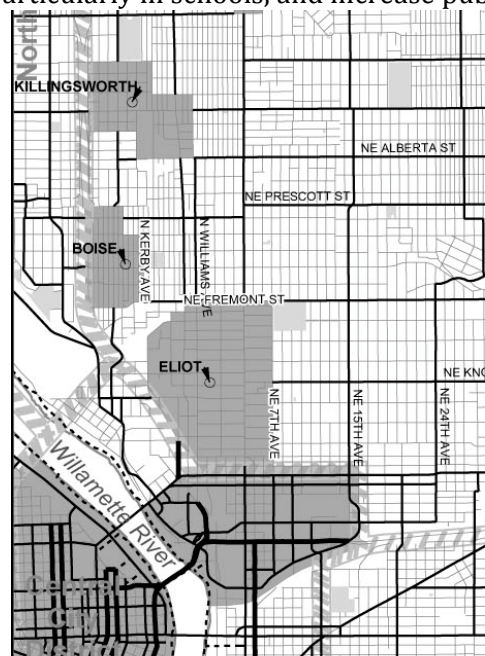
The Transportation Element of the City's comprehensive Plan includes two goals: Goal 6, Transportation and Goal 11B, Public Rights-of-Way, which includes the Central City Transportation Management (CCTMP) Goal. The following goals are most appropriate for Vision Zero. Policies listed can be either aspirational ("should") or mandatory ("will").

Goal 6 Transportation: "Develop a balanced, equitable, and efficient transportation system that provides a range of transportation choices; reinforces the livability of neighborhoods; supports a strong and diverse economy; reduces air, noise, and water pollution; and lessens reliance on the automobile while maintaining accessibility."

Policy 6.3 Transportation Education: "Implement educational programs that support a range of transportation choices and emphasize safety for all modes of travel." Objectives include publicizing resources and facilities to promote multiple modes, encouraging walking by educating motorists and pedestrians, create education plans aimed at youth particularly in schools, and increase public awareness of the benefits of biking and walking.

Policy 6.4 Classification Descriptions: "Street classification descriptions and designations describe the types of motor vehicle, transit, bicycle, pedestrian, truck, and emergency vehicle movement that should be emphasized on each street." Objectives include creating descriptions that describe how the streets should function, not how they currently work. Other objectives state that all modes should be considered when improvement funding is allocated, but that funding should be withheld when the street doesn't comply with its classification.

Policy 6.8 Pedestrian Districts, as Identified in the Transportation System Plan, are "intended to give priority to pedestrian access in areas where high levels of pedestrian activity exist or are planned." Streets in these pedestrian districts should encourage walking as the mode of choice by providing sidewalks on both sides of the street, providing access



to transit, making improvements according to the *Pedestrian Design Guide*, which may include “widened sidewalks, curb extensions, street lighting, street trees, and signing. Where two arterials cross, design treatments such as curb extensions, median pedestrian refuges, marked crosswalks, and traffic signals should be considered to minimize the crossing distance, direct pedestrians across the safest route, and provide safe gaps in the traffic stream.”

Policy 6.13 Traffic Calming: “Manage traffic on Neighborhood Collectors and Local Service Traffic Streets, along main streets, and in centers consistent with their street classifications, classification descriptions, and desired land uses.” Objectives include supporting the local land use and enhancing neighborhood livability through enforcement, engineering and education efforts to calm traffic, without pushing traffic to streets to lower or the same classification. Focus on reducing speeds along main streets to a level that is comfortable for bicyclists and pedestrians.

Policy 6.20 Connectivity: “Support development of an interconnected, multimodal transportation system to serve mixed-use areas, residential neighborhoods, and other activity centers.” Objectives include connecting “local and collector streets to ensure safe, efficient, and convenient pedestrian, bicycle, and vehicle access,” creation of shorter or smaller blocks with increased density and a mix of uses, and safe ways for pedestrians and bicyclists to reach schools, parks, and transit routes, preferably through the use of Green Streets.

Policy 6.22 Pedestrian Transportation: “Plan and complete a pedestrian network that increases the opportunities for walking to shopping and services, schools and parks, employment, and transit.” Objectives include promoting “walking as the mode choice for short trips;” make it easier to walk to transit by providing safe crossings at transit stops and other amenities that make walking more enjoyable (particularly along main streets and in pedestrian districts); and make it safer to walk by analyzing collision locations, making physical improvements, and updating codes and statutes to enhance pedestrian safety.

Policy 6.23 Bicycle Transportation: “Make the bicycle an integral part of daily life in Portland, particularly for trips of less than five miles, by implementing a bikeway network, providing end-of-trip facilities, improving bicycle/transit integration, encouraging bicycle use, and making bicycling safer.” Objectives to reach this goal include creating a network of paths that served daily needs and reach destinations; increase safety by “removing physical hazards such as dangerous storm grates, and supporting changes to adopted statutes and codes that would enhance the safety of bicyclists;” increase the access to short- and long-term bike parking; and make it safer to bike to school.

Policy 6.24 Public Transportation: “Develop a public transportation system that conveniently serves City residents and workers 24 hours a day, seven days a week and can become the preferred form of travel to major destinations, including the Central City, regional and town centers, main streets, and station communities.” Objectives include expanding service for work and non-work trips and addressing “the special needs of the transportation disadvantaged and provide increased mobility options and access.”

Policy 6.28 Travel Management: “Reduce congestion, improve air quality, and mitigate the impact of development-generated traffic by supporting transportation choices through demand

management programs and measures and through education and public information strategies.” This policy aims at reducing the number of single occupant vehicles and increasing the use of other travel modes for local trips by developing “neighborhood-based programs to promote and support multimodal strategies and trip reduction strategies and programs;” and have institutions, such as PCC, regulate parking to encourage short-term parking for visitors to decrease long-term parking and encourage transit or other mode choices.

Policy 6.36 Northeast Transportation District: “Support the efficient use of land in Northeast Portland by focusing development and redevelopment where there will be a reduction in reliance on the automobile.” Objectives to reach this policy include encouraging cars and trucks to use major arterials; enhancing pedestrian facilities and improving transit; and developing east/west and north/south bike routes.

Transportation System Improvements included in the *Comprehensive Plan* provide a set of recommended improvements that should be considered if there is funding available in the future. Generally construction of improvements requires that the project is listed in the *Comprehensive Plan* or the *Transportation System Plan* along with a priority for the improvement (generally in 5 year increments).

- 30028 Killingsworth, N (Interstate – MLK Jr Blvd): Street Improvements to improve pedestrian connections to interstate MAX and to establish a main street character promoting pedestrian-oriented activities. (Years 1-5)
- Between Denver and Williams: Construct improvements to establish a main street character promoting pedestrian-oriented activities. (Years 1-5)
- 40017 Killingsworth Frequent Bus, NE/SE: Provide capital improvements that enhance new frequent bus service along Killingsworth from Swan Island to the Clackamas regional Center. (Years 6-10)
- 40040 Fremont, NE (Vancouver – 7th: Bikeway): Retrofit bike lanes to existing street. (Years 11-20)
- 40051 Killingsworth Pedestrian District, NE: Plan and develop improvements to the pedestrian environment including sidewalks, lighting, crossings, bus shelters, and benches (6-10 years). From 33rd to Williams (40053) enhance the main street character and increase opportunities to walk. \$900,000.
- 40057 MLK NE (Ainsworth to Tillamook): street improvements, including on-street parking, new sidewalks, curb extension, and small medians. Strip bike lanes between Broadway and Lombard. (Years 1-5)
- 40058 MLK N (Columbia Blvd – CEID): ITS – CCTV at Fremont, Killingsworth, and other intersections. (Years 6-10)
- 40065 Prescott, NE (47th to I-205): pedestrian and bicycle improvements. Construct bike lanes, sidewalks and crossing improvements for pedestrian and bike safety and to improve access to transit. (Years 6-10)
- 40077 Fremont/MLK NE: Intersection Improvement – add right-of-way on east leg of intersection and left turn lane to facilitate safe left-turn access from Fremont to MLK. (Years 1-5)

- 40083 Albina /Skidmore NE: intersection Improvement – straighten intersection. (Years 11-20)

Policy 12.4, Provide for Pedestrians: “Recognize that auto, transit and bicycle users are pedestrians at either end of every trip and that Portland’s citizens and visitors experience the City as pedestrians. Provide for a pleasant, rich and diverse experience for pedestrians. Ensure that those traveling on foot have comfortable, safe and attractive pathways that connect Portland’s neighborhoods, parks, water features, transit facilities, commercial districts, employment centers and attractions.” Objectives to achieve this policy include ensuring that the “safety and convenience of pedestrians are not compromised by transportation improvements aimed at motor vehicle traffic.” Other objectives include buffering sidewalks from cars, providing trees, making the sidewalks wide enough for future development, connect sidewalks to destinations, make sure that children, seniors, and the disabled are safe.

Portland Transportation System Plan (Adopted 2007)

The *Portland Transportation System Plan* (TSP) was finished in 1997, with updates in 2004 and 2007 (Green Street Policy). As with the *Comprehensive Plan* projects need to be listed in these documents to ensure that they can receive funding if it becomes available in the future. Improvements for the study area are listed below.

2006 Safety and Livability project list included:

- Ainsworth, N/NE, Willamette Blvd to 37th - Provide bike lane I-34 (outlined in the Bicycle Master Plan)
- Ainsworth, NE - Provide greenstreet 912 (outlined in the Pedestrian Master Plan)
- On the Active Complex Local Service Streets list the following streets were listed as needing to be calmed:
- NE Fremont Street (between Vancouver and MLK): The posted speed is 25 mph but 85% of traffic travels at 33 mph.
- NE 7th Avenue (from Prescott to Alberta): The posted speed is 25 mph but 85% of traffic travels at 36 mph.
- N Alberta Street (from Interstate to Vancouver): The posted speed is 30 mph but 85% of traffic travels at 35 mph.
- N Albina Avenue (from Killingsworth to Skidmore): The posted speed is 30 mph but 85% of traffic travels at 35 mph.
- NE Going Street (from Williams to MLK): The posted speed is 25 mph but 85% of traffic travels at 24 mph.

Signal intersection in critical need of replacement (2001):

- N Albina and Alberta (intersection age - 1961)
- N Williams and Alberta (intersection age – 1952)
- NE Alberta and 15th Avenue (intersection age – 1965)
- NE Alberta and 7th Avenue (intersection age – 1972)
- NE Prescott and 7th Avenue (intersection age – 1972)

In 1997, PDOT issued the *Transit Preferential Streets Program report*. The report identified ways to improve transit travel times. NE Martin Luther King, Jr. Boulevard (from the Hawthorne Bridge to North Lombard) was listed as one of the corridors that should be improved based on existing travel times, ridership, and delay factors.

Tri-Met and the City of Portland received federal grants to implement transit preferential treatment. Line 72 (Killingsworth/82nd) was one of the lines improved to provide signal priority, queue jump, queue bypass lanes, and signal timing changes. Physical changes, such as curb extension, low-floor buses, and right-turn only lane exemption were also included

Portland Bike Plan (adopted 2010)

Strategic implementation recommendations and key strategies outlined in the plan that are also relevant to Vision Zero include:

- Amend the TSP to adopt recommended policies and classifications for bicycle transportation.
- Develop a street design guide that includes bicycle design guidelines.
- Expand encouragement programs that provide services and equipment, support behavior changes, raise awareness, and provide incentives that increase bicycling.
- Introduce safe, comfortable and attractive bikeways that can carry more bicyclists and serve all types and all ages of users.
- Construct a dense network of bikeways.
- Create a cohesive network with direct routes that take people where they want to go.

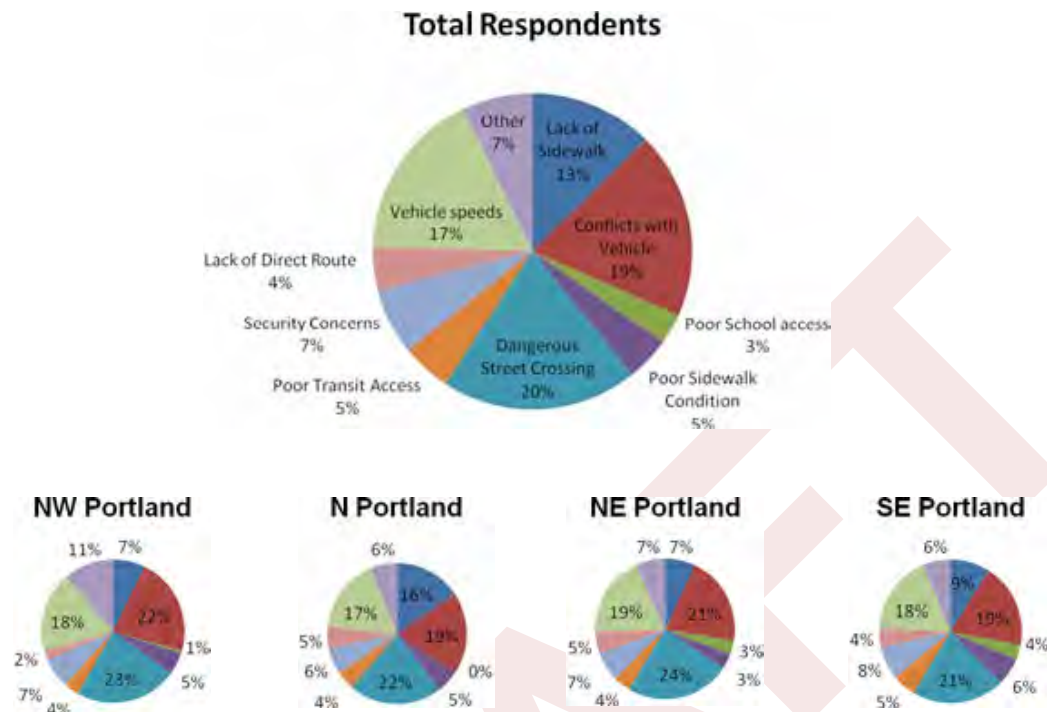
Appendix A of the *Bicycle Master Plan* contains the detailed engineering and design guidelines dependent upon the type of bicycle facility to be implemented (off-street path, bicycle lane, bicycle boulevard, or shared roadway), based on a street's classification and motor vehicle traffic speed and volume.

Getting Around on Foot (2010)

Developed by the Willamette Pedestrian Coalition, *Getting Around on Foot* includes several case studies and countywide pedestrian issues. The most important concerns and biggest barriers to walking identified in this plan were “dangerous street crossings, vehicle conflicts, and vehicle speeds” (see figure below). Actions suggested in the plan include:

- Include an evaluation component for walking and cycling into all projects, to collect information about the effects of transportation projects on all traffic modes.
- Integrate TriMet's Pedestrian Network Analysis findings into Transportation System Plans. Prioritize and fund projects that improve pedestrian access to transit.
- Coordinate with public and private partners to use scarce resources to provide a seamless network that serves multiple purposes and maximizes community benefit.

**Figure 1:
Individual Surveys: Identified Problems**



Pedestrian Master Plan and Portland Pedestrian Design Guide (1998)

The *Portland Pedestrian Design Guide* provides direction for the development of sidewalks, street corners, crosswalks, and pathways and stairs. The Design Guide includes the appropriate location of elements in the sidewalk, including transit shelters in sidewalks and of transit signs. The location of shelters and transit signs is based on an intergovernmental agreement (*Bus Stop and Passenger Amenities Guidelines*, 1995) between TriMet and Portland. The *Pedestrian Design Guide* is consistent with the requirements of the Americans with Disability Act, including allowed slopes, curb ramps, and clear space. Below are the principles for pedestrian design that are outlined in the plan, that should be incorporated to some degree into every pedestrian improvement:

- The pedestrian environment should be safe. Sidewalks, pathways and crossings should be designed and built to be free of hazards and to minimize conflicts with external factors such as noise, vehicular traffic and protruding architectural elements.
- The pedestrian network should be accessible to all. Sidewalks, pathways and crosswalks should ensure the mobility of all users by accommodating the needs of people regardless of age or ability.
- The pedestrian network should connect to places people want to go.
- The pedestrian environment should be easy to use.
- The pedestrian environment should provide good places. Good design should enhance the look and feel of the pedestrian environment. The pedestrian environment includes open spaces such as plazas, courtyards, and squares, as well as the building facades that give shape to the space of the street. Amenities such as street furniture, banners, art, plantings

and special paving, along with historical elements and cultural references, should promote a sense of place.

- The pedestrian environment should be used for many things.

Neighborhood Traffic Safety Plan (NTSP)

The *Neighborhood Traffic Safety Plan* (NTSP) is a community-based education, enforcement, and engineering effort designed to reduce traffic safety problems. Developed by the City Council-appointed Traffic Safety Committee actions for residents and schools to implement in efforts to improve the safety of the neighborhood.

Designing for Truck Movements and Other Large Vehicles in Portland Report

MLK Blvd is classified as a Major Truck Street, according to *Designing for Truck Movements and Other Large Vehicles in Portland Report* (2008). This classification indicates that the street should “serve as principle routes for trucks in a transportation district. Provide truck mobility and access to commercial and employment uses along the corridor. Major Truck Streets should accommodate all truck types, as practicable.”

Fremont/MLK Vision Study

The *Fremont/MLK Vision Study* was conducted in 2001. This study examined the commercial district between Fargo and Shaver streets. While only Fremont to Shaver are included in our study area, this plan helped to identify a community-based vision for the future of the area along MLK. The study identified the need for further study of auto, transit, and pedestrian environment enhancements, in addition to monitoring the impact traffic from new development on the adjacent residential areas. The study was most concerned with guiding future investment to ensure that the area is safe for pedestrians and maintains the existing character and diversity, while addressing issues of concern regarding displacement and gentrification.

MLK Boulevard Transportation Project

Circulation concepts were developed for this plan, to enhance development and to be used in conjunction with the *MLK Boulevard Transportation Project*. Parts of the study area are included in two urban renewal areas (URA); the Oregon Convention Center URA and the Interstate Corridor URA. As part of the Albina Community Plan, the Portland Development Commission (PDC) extended the Convention Center URA to include MLK and Alberta Street.

MLK Jr. Boulevard Commercial Development Strategy

The PDC then developed the *MLK Jr. Boulevard Commercial Development Strategy* (1998) to build off of the vision of the *Albina Community Plan*. At the same time, the *MLK Jr. Boulevard Transportation Project* was developed by the MLK Action Committee. This plan includes a 10-year outline for improving the street and streetscape to enhance the pedestrian environment and parking access. A phased approach was implemented to address these improvements.

The PDC developed the *Martin Luther King, Jr. Boulevard Updated Action Plan* in 2008. The PDC, PBOT, and BDS developed a five-year action plan (2006-2011) to focus limited public resources to the redevelopment of MLK. The relevant components to the Vision Zero Oregon project include:

Strategy 4, Action 6: Implement Fremont/MLK Vision Study in the 12-block section of MLK between Fremont and Alberta Streets. This would be implemented before 2013 by PDC and BDS.

Strategy 6, Action 1: Develop a comprehensive study of traffic and pedestrian conditions on MLK. Implemented by 2013 by PBOT.

Strategy 6, Action 4: Identify areas and projects for implementation of street improvements consistent with the MLK Streetscape plan. PDOT and PDC are the implementers and \$50,000 was set aside between 2008 and 2013.

MLK Boulevard Revitalization Case Study

The *MLK Boulevard Revitalization Case Study* was written up for the National Policy Consensus Center in 2003. While the paper was focused on the collaborative effort that took part through the Governor's Community Solutions Team, the results of this effort were reflected in Metro's *2040 Growth Concept* and the NorthEast Economic Alliance's *Community Plan*. The collaborative process occurred in 1996 and resulted in several agreements made on the part of ODOT, DEQ, OECDD, and OHCS. Most relevant to the Vision Zero Oregon report; construction of a pilot project .5-mile MLK median and on-street parking, which was completed in a few months. ODOT design standards were modified to allow 10-foot travel lanes on MLK and other modifications.

Neighborhood Plans

Albina Community Plan (1993)

The Albina Community plan creates a framework for the larger study area, which encompasses the King, Humboldt and Boise neighborhoods (among others). According to the plan, "there is significant support for further improvement of the public transit services and improvements which encourage more pedestrian and bicycle use." Action items outlined in the plan that are relevant for Vision Zero, include:

- Identify bus stops with inadequate lighting; examine the need for more shelters and posted schedules at bus stops.
- Develop designated pedestrian and bicycle routes. When appropriate, clearly mark bicycle routes with striping and signage.
- Plan for alternative modes of transportation, including jitneys, bicycles, trolleys, and neighborhood minibus/van service.
- Install pedestrian signals on streets with high traffic volumes.
- Synchronize traffic lights on major thoroughfares.
- Consider the use of "traffic calming" techniques on collector streets in residential neighborhoods.
- Provide additional sidewalks to encourage walking
- Reduce maximum automobile speeds on local service streets by education, enforcement, and engineering actions
- Expand the number of wheelchair ramps in Albina
- Identify and provide traffic control devices and buffers between cars and sidewalks that increase safety

- Require commercial, industrial, institutional and multifamily developments to provide bicycle parking, which is protected and secure.

King Neighborhood Plan (1993)

The *King Neighborhood Plan* prepared a vision for neighborhood redevelopment and identified commercial nodes for increased economic activity, partially funded by the PDC. Both of this plan and the *Albina Community Plan* identified Alberta to Killingsworth along MLK as the primary commercial node in the community.⁵ The intersections of Killingsworth/MLK and Fremont/MLK are listed as serving as major focal points for the neighborhood. Action items outlined in the plan that relate to Vision Zero include:

- Scale street lights to pedestrians
- Create pedestrian areas in the neighborhood to foster a shared community, discourage through-traffic, reinforce travel corridors for pedestrians and bicyclists
- Replace highway style street lighting with cast iron ornamental lights along Alberta and MLK
- Plant street trees along the full length of MLK
- Enhance neighborhood livability by using street trees, furniture, and public art to create neighborhood gateways
- Establish a local community policing center in the King neighborhood (completed)
- Survey residents to identify areas that are in need of traffic safety controls
- Create a local transportation system for tourists and shoppers that will link the King neighborhood to the tourist and shopping attractions in the Central City

Humboldt Neighborhood Plan (1993)

The *Humboldt Neighborhood Plan* was also developed by the Bureau of Planning in 1993. Action items outlined in the plan that relate to Vision Zero include:

- Improve street lighting
- Establish police bike or foot patrols along the Killingsworth Street commercial district.
- Synchronize traffic signals in order to improve flow of traffic
- Establish left turn signals at the intersection of MLK and Killingsworth
- Straighten out right-of-way at the intersection of Albina and Skidmore Street.
- Identify specific locations in the neighborhoods where safety problems exist for pedestrians and bicyclists. Establish a neighborhood committee to work with the Portland Office of Transportation to address the problems.

Establish a program that will promote Killingsworth Street as a retail center, e.g. Main Street Program

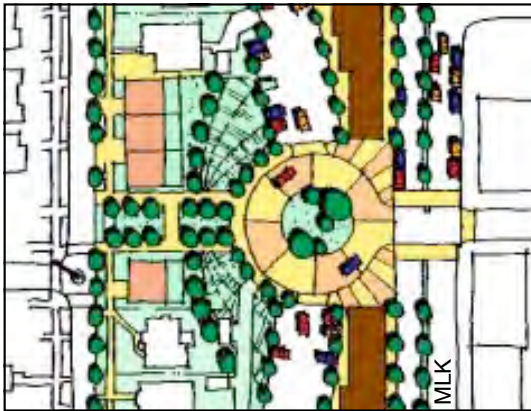


Humboldt Target Area/Jefferson Pavilion Project

The Humboldt Target Area/Jefferson Pavilion Project was the product of a partnership with the Humboldt Neighborhood association, the Bureau of Housing and Community Development (1997). The Jefferson Pavilion Project was scheduled for completion in the summer of 2003.

King Neighborhood Commercial Center

The King Neighborhood Commercial Center (2000) provided the framework for commercial development in the King Neighborhood. This plan built off of the King Neighborhood plan, developed in 1993. It focused on the three blocks between “NE Alberta and Killingsworth and Martin Luther King Jr. Boulevard and Garfield” as a way to develop block-by-block development strategies, within the larger vision for the community. The plan’s vision suggested on- and



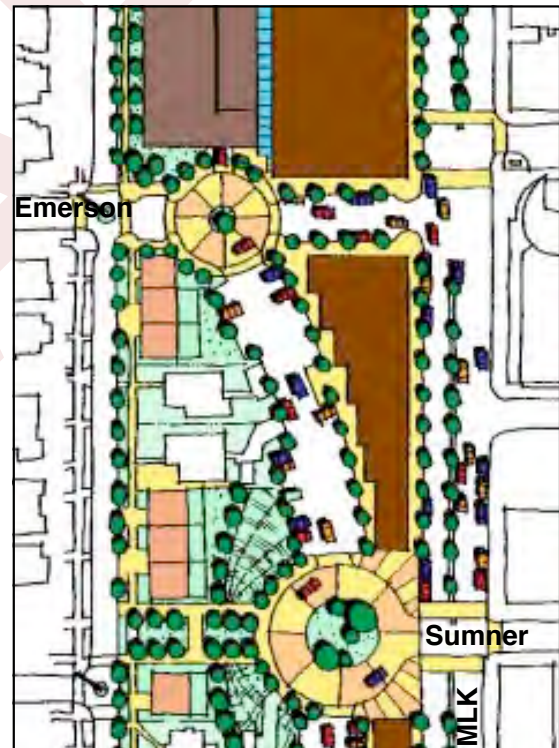
One “central focus” opportunity may lie within the vacated Sumner right-of-way where formal and informal open space could provide identity and contribute to the shared community.

off-street parking near the commercial centers, away from single-family residences. Ground floor uses along the street fronts were encouraged to increase pedestrian usage.

The plan called for the development of a central focus area to increase community cohesion and greater access to open space. The plan also encouraged development to activate the streets of MLK, Alberta, and Killingsworth with retail and commercial uses that are at the pedestrian scale.

There was also an emphasis on maintaining the neighborhood/pedestrian feeling of the residential areas and reducing commercial or truck traffic. This includes “providing increased opportunities for safe pedestrian crossings at intersections.” Planned actions, relevant to Vision Zero Oregon, include:

- Install pedestrian crossing at Summer and Emerson at MLK
- Improve MLK streetscape with single ornamental streetlights, trees, and special concrete scoring patterns



Create off-street parking with internal circulation that ultimately connects the entire three-block area. Create a central feature that provides traffic circulation and can also accommodate special events.

Street Plans

Alberta Streetscape Project (2000)

The *Alberta Streetscape Project* was developed in 1998 and 1999, then adopted by City Council in 2000. The project outlined a series of improvements on Alberta between MLK Boulevard and 33rd Avenue. The key elements of the project were to increase multiple travel options along the street; making it safer to walk, bike, use transit, and still maintaining car access and parking options. This is suggested with curb extensions, new trees, and streetlights to visually narrow the street, which also helps to reduce the distance for crossing the street. The project also called for cultural elements into the streetscape and neighborhood entries to the street, including at the intersection of MLK and Alberta. New traffic signals were suggested to slow the traffic and improvements to transit and transit stops were outlined.

A school and pedestrian crossing improvement was suggested at 6th Avenue, for safer student crossings to King School. Below is the rendering from this project.

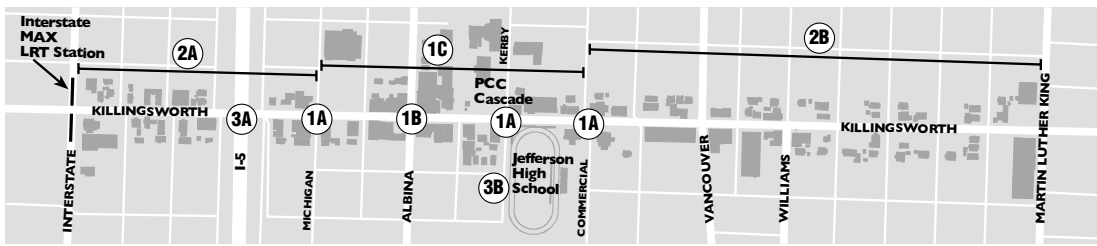


Improvements to the King School crossing, shown above, will include two flashing yellow signal beacons at the side of the road to mark the school zone between Grand and 8th. The beacons will be timed to turn on when children are arriving in the morning and leaving in the afternoon.

Killingsworth Street Improvements Planning Project

The *Killingsworth Street Improvements Planning Project* was finished in 2003. Prepared by the city of Portland, the improvements were connected with the MAX line and the Portland Community College (PCC) Cascade campus expansion. The plan addresses streetscape improvements to improve the quality of the street for businesses and residents, while also strengthening the connection between Killingsworth, the Yellow MAX line, the residential neighborhood, and the PCC.

KILLINGSWORTH PROJECT PHASES



PHASE I \$2.2M

- 1A. Crossing improvements at N Kerby, N Commercial, N Michigan and N Missouri
- 1B. Sidewalk and bus stop improvements at the N Killingsworth/N Albina intersection
- 1C. Sidewalk improvements N Michigan to N Commercial (the Main Street and Campus District)

PHASE II \$2.8M

- 2A. Sidewalk improvements N Interstate to N Michigan
- 2B. Sidewalk improvements N Commercial to N Williams and streetlights and trees to NE MLK Jr. Blvd

OTHER LARGE PROJECT ELEMENTS (requiring a targeted funding strategy)

- 3A. I-5 Overcrossing \$1.7M – \$5.5M
- 3B. Kerby Promenade \$400K

Street light standards and design guidelines were established, setting a new city standard for streetlights. “New private development will be required to complete site improvements to the is new standard.” These improvements include 15-foot sidewalks, ornamental streetlights, street trees, and decorative pavers; all of these improvements are required with new buildings. Protected pedestrian intersections were suggested for “every corner or at 400-foot intervals whichever is less.”

Public materials were translated into Spanish, Cantonese, Korean, Vietnamese, and Mandarin. The public worked with the team to produce objectives and criteria for evaluating street design concepts.

TSP street classifications for Killingsworth are:

- Traffic = District Collector
- Transit = major transit priority street
- Bikeway = local service bikeway
- Pedestrian = city walkway and pedestrian district
- Truck = minor truck street
- Emergency Response = major emergency response street
- Street Design = Community Main Street



Albina Before



Albina After

Vancouver/Williams Corridor Infill Strategy

The *Vancouver/Williams Corridor Infill Strategy* was developed in April 2000. Public investment strategies (most relevant to Vision Zero Oregon) included creating a strategy for physical improvements in the public right-of-way to reinforce the pedestrian-friendly environment. This included street furniture, trees, lighting, signage, traffic pattern/safety, bike lane realignment, and pedestrian enhancements.

References

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APPENDIX C. Public Involvement Plan

Introduction

The Public Involvement Plan (PI Plan) is The Loci Group's strategy for public involvement in the creation of the King, Boise, Humboldt Neighborhood Street Safety Action Plan (NSSAP). The PI Plan includes how we will listen to and engage the public in problem solving of road safety problems and how we will develop road safety actions and solutions together.

Background

One of the main purposes of the Vision Zero Oregon project is to create the (NSSAP) for the King, Boise and Humboldt neighborhoods. The NSSAP will give direction to community members that will foster the conditions necessary for zero roadway deaths in the neighborhood. We recognize that one major barrier to implementing traffic safety solutions in neighborhoods has been resident skepticism and resistance to the proposed interventions. To achieve a Vision Zero goal, it will be necessary to engage the wider community in a discussion of safety and potential solutions for reducing deaths on roadways. The outreach will include bicyclists, pedestrians, wheelchair users, freight drivers, auto drivers, and all other users of the streets within the neighborhood.

The creation of the NSSAP and the required engagement of the residents represent a pilot project for the BTA. The lessons learned and experiences gained will be compiled for use by the BTA to expand this pilot project into wider implementation within other Portland neighborhoods.

Study Area

The study area is located in NE Portland and includes the King, Humboldt, and Boise neighborhoods. The study area was selected because it has a high incidence of roadway fatalities, it is has traditionally underserved communities, and contains supportive neighborhood structures that expressed interest to help support the Vision Zero mission. For more details on study area selection, please reference the Neighborhood Selection Memo.

Public Involvement Plan Goals

The Loci Group is committed to an approach that:

- Provides early and ongoing opportunities for stakeholders to raise issues and concerns that can be considered through equitable and constructive two-way communication between the project team and the public. These goals will be achieved by offering multiple opportunities, in a variety of mediums, to participate in the project. Success will be measured by the neighborhood's support for the implementation of the final safety plan.

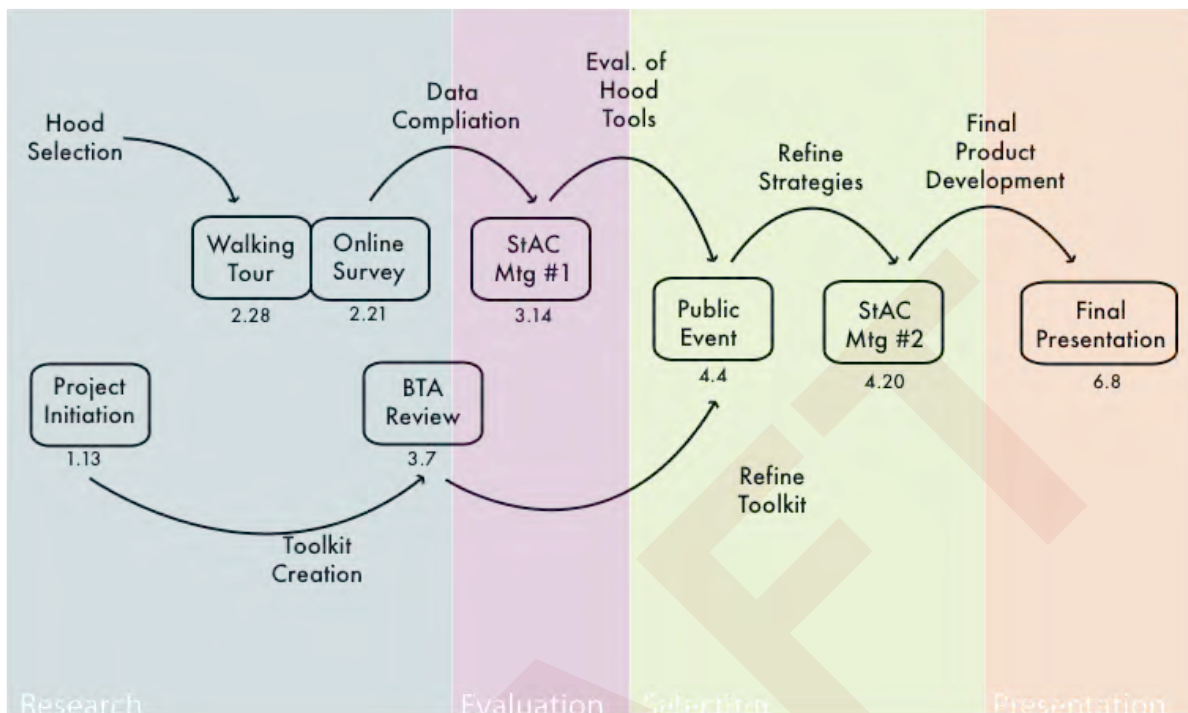
- Provides opportunities for meaningful and constructive public input to support development of a community-supported Vision Zero Neighborhood Street Safety Action Plan. These goals will be achieved by offering a variety of opportunities to participate in the project. Success will be measured by the neighborhood's support for the implementation of the final safety plan.
- Encourages the participation of all stakeholders regardless of race, ethnicity, age, disability, religion, or income. A review of neighborhood demographics will be conducted to understand the concentrations of low-income, disabled, elderly and limited-English proficient residents so that those groups can be served to the best of Loci's abilities. Members of all of these groups will be invited and encouraged to participate in the planning process. To engage these communities, the PI team will employ the following strategies: advertise events to groups that advocate for or serve as networking places for these traditionally under-served communities, identify neighborhood businesses to deliver materials and talk to local residents, identify partner organizations that promote open house events to traditionally underserved communities, and advertise events in a variety of online event calendars. We will strive to provide multiple venues and means for community involvement and engagement.
- Involves as many people as possible.

Key Project Messages

Key project messages will be developed and refined as the project progresses. Key project messages include:

- Roadway deaths and major crashes are unacceptable and preventable. Preventing roadway deaths is one of City of Portland's top priorities.
- We all know someone who has been affected by or know someone who has been involved in a crash. This project aims to stop that trend.
- Neighborhoods can advocate for roadway improvements to city officials, and other implementation partners, and succeed in making real change to the safety of their neighborhood.

Key phases



Project Stakeholders

The project includes a range of stakeholders that will require different levels of engagement at different points in the process. The list below has some initially identified stakeholders. Table 1 below presents some of the project stakeholders or interests and our strategies for involving them.

- Business Organizations (Reflections Coffee House, Old Town Pizza, Oregon Association of Minority Entrepreneurs)
- Neighborhood Associations (King, Humboldt, and Boise Neighborhood Associations)
- Community/Civic Organizations (Portland Community College, Q Center)
- Religious Organizations (St. Andrew Catholic Church, Maranatha Church of God, Irvington Covenant Church, Church of Christ, New Hope Baptist Church, Kings Temple, Church of Zion)
- Community Health (Children's Community Clinic, North by Northeast Community Medical Center, Legacy Hospital)
- Willamette Pedestrian Coalition
- Community Cycling Center
- Portland Bureau of Transportation
- Neighborhood Residents; Neighborhood Employees
- Youth/ Students (King School, Jefferson High School, Portland Community College)
- Wheelchair/Mobility Device users.

Stakeholder Advisory Committee (StAC) and Public Meetings

Two Stakeholder Advisory Committee (StAC) and Public Meetings will be a primary means of ensuring that the public has opportunities to provide meaningful input into the planning process. StAC members represent key stakeholder interests that will guide the NSSAP planning effort.

The role of StAC members is to report back to and solicit input from their stakeholder groups and constituencies, represent the broader interests of those groups and promote public involvement in project events.

The StAC meetings will be open to the public and have opportunities for all attendees to comment and participate.

Public Involvement Tools

The Vision Zero Oregon Neighborhood Roadway Safety Plan includes major public involvement tools, listed below.

Public Communication and Information

- Loci will develop information in various forms to keep interested parties informed about the safety plan process, and to invite participation at key points in the process. Public information for the NSSAP will include the following:
- Project website providing on-going information about the project and opportunities for participation and comments
- Media advisories to be distributed to local media outlets
- Tweets about relevant events and news
- Public comments will be encouraged and collected at all public events, meetings, on the website and through email.

Community Events

Walking tour

A walking tour through the identified neighborhood with community members will provide means for gathering background information about the neighborhood, personal stories, perceived safe and unsafe areas, and photo documentation of the neighborhood. A map of the neighborhood will be provided to each person on the tour that will allow them to mark safe and unsafe crossings. This data will be collected and used as a basis for the creation of the proposed safety alternatives.

Community Event

A community event will be scheduled based on the neighborhood selected. This event could take the form of canvassing, tabling at a grocery store, or going to a local school or church.

Discovery or Alternatives Review

A discovery or alternatives review session will be held to give opportunity for the public to respond to suggested safety alternatives that have been developed by Loci and the StAC/public meetings. A list of available safety tools will be documented that address concerns heard during the community

walk, focus group, and interviews. Each tool will be evaluated based on evaluation criteria by the StAC members and the public.

Stakeholder Interviews

Several interviews will be conducted with representatives of key interests that will be identified through BTA, Loci, the neighborhood association, and local businesses. Interviews will have an informal structured approach, with key topics identified beforehand. Questions (open ended, not leading) will be prepared in advance. After each interview, a written summary will be compiled highlighting the key findings.

Survey

A survey will be available on the project website, and links will be emailed to participants that attend events and identified stakeholders. The survey will gather quantitative and qualitative data on key problem areas in roadways within the neighborhood and perceived safety.

Accountability and Evaluation

StAC meeting minutes will be posted on the project website and public input from events and the website will be summarized and posted on the project website.

The project team will evaluate the PI Plan from time to time to determine if changes are needed to achieve the stated goals and objectives. Debriefs with project staff and BTA after meetings and events will be held to discuss outcomes and agree on improvements for future activities. Loci will seek informal feedback from stakeholders and interested parties about the process.

The PI Plan will remain a working document to ensure that new ideas and approaches can be incorporated as needed throughout the planning process.

APPENDIX D. Neighborhood Walking Tour Summary

The March community walking tour was the first public event held by the Vision Zero Oregon (VZO) team. It kicked off the community outreach for the VZO project in creating a neighborhood based Roadway Safety Action Plan.

Location

The King Neighborhood. Met and ended walk at Reflections Coffee and Books, 446 NE Killingsworth Street



Participant of the walking tour discuss street dimensions, speed limits, and access for walkers, bicycle riders, and drivers.

Participants

General public (three attendees) and three VZO team members

Date/Time

Saturday, March 5, 2011 from 10:00am-11: 30am

Format

A 1.25-mile walk that highlighted a variety of road types, road safety issues and some solutions already implemented in the neighborhood.

Intent

To hear from people that live in and travel through the King, Humboldt, and Boise neighborhoods, what makes them feel safe and unsafe on roadways in their neighborhood. The walk provided an opportunity for community members to point out specific dangerous locations and also brainstorm specific ideas on how to improve the problem areas.

What We Heard

- Crossing MLK can be difficult and scary because cars do not stop and even if they do, only one lane stops at a time
- The bushes in the median make it hard for cars to see pedestrians trying to cross
- Considering MLK is a highway, it is pretty easy to cross

- Speed limits need to be enforced on MLK- some cars going over 50mph
- Greenway routes for bicyclists and pedestrians feel safe and are easy to use
- Neighborhood streets are best to use as a bicyclist for commuting
- Greenway routes should have 20mph speed (hopefully it is passed in legislature)
- The converted parking lot on MLK into a pedestrian friendly zone feels protected and safe for walking in

Materials

- Handout- Map of walk route with notes about each stop and space for comments
- Hardcopies of the Road Safety Survey
- Large map of study area
- Laminated maps of roadway fatal crashes and injuries in study area
- Detailed outline of fatal crashes
- Other: First Aid kit, water, snacks, umbrellas, nametags, camera, sign-in sheet

Advertising

Sent emails to about 800 people through personal, work, Northeast Coalition of Neighborhoods, King Neighborhood Association, and BTA contacts and mailing lists

Announced at two Northeast Coalition of Neighborhoods subcommittee meetings (2/21/2011 and 2/23/2011)

Posted on six Online Community Calendars: Neighborhood Notes, BTA, King Neighborhood Association, Vision Zero Oregon, Portland Tribune and The Oregonian

Sent Media advisories to 10 outlets: Skanner, Asian Reporter, Portland Observer, Neighborhood Notes, Office of Neighborhood Involvement, Mercury, Willamette Week, Portland Tribune, Oregonian- How We Live Editor, and Oregonian- Portland Section.

Posted Flyers about the event at eleven locations: Whole Foods (3535 Northeast 15th Avenue), Starbucks (3507 Northeast 15th Avenue), Starbucks (5920 Northeast Martin Luther King), Portland Community College Cascade Campus- Student Center and Art Building (705 N Killingsworth St), Concordia University- Student Center (2811 Northeast Holman Street), North Portland Library (512 N Killingsworth St.), Albina Library (3605 Northeast 15th Avenue), Northeast Coalition of Neighborhoods Office (4815 NE 7th Ave.), State of Oregon: Community Human Services Office (30 N Webster St), and Backspace (115 Northwest 5th Avenue).

Sent Twitter updates for followers and on the VZO website

Announced on personal Facebook pages

Lessons Learned

Despite the outreach and advertising efforts, only three community members came to participate in the community walk around the neighborhood. While we appreciated the inputs of those three people, we were hoping for a better turnout because the more people that get involved, the stronger our final product will be. Our online survey has been viewed almost 100 times and our website has hundreds of hits daily, so we know that people are interested, but a community walk is not the way to get those people involved. The low turnout may be a reflection of the topic- that roadway safety does not excite community members enough to spend a Saturday morning talking about. Rainy weather and a short time frame may have also been culprits in the low turnout.

The people that did attend the walk had direct, in-person contact with a Loci member. Personal contact, as opposed to contact via the Internet, is a stronger way to get people involved.

The Loci Group recommends that future outreach for Vision Zero, look to existing groups with related goals to incorporate outreach within already planned events, for example, Safe Routes to School groups. The Loci Group plans to attend the Safe Routes to School Walks with the King Elementary School in late March and early April.

The King Neighborhood Association recommended making the walk or bike ride based around a fun event or activity as a way to get people interested, and then talk to the attendees who participate about roadway safety.

APPENDIX E. Road Safety Survey Summary and Results

Survey Methodology

VZO conducted a survey in order to better understand the safety concerns in the King-Boise-Humboldt (KBH) area. The survey was distributed both online and in hard copy. The online form was open from February 28, 2011 to April 20, 2011. It was publicized through the Bicycle Transportation Alliance listserv, neighborhood association list serves, nine community website calendars, personal contacts, nine media advisories, and twitter. The paper survey was distributed at the North East Coalition of Neighborhoods (NECN), Concordia College, the North Portland Library, Office of Minority Entrepreneurs,

Portland Community College (2 locations) and Oregon Human Services office. The survey was anonymous, though respondents that opted to identify themselves had a chance to win a Fred Meyer gift certificate.

Table 1

| What gender are you? | | |
|----------------------|----|-------|
| Male | 42 | 50.6% |
| Female | 36 | 43.4% |
| Other | 1 | 1.2% |
| Decline to respond | 4 | 4.8% |
| N | 83 | |

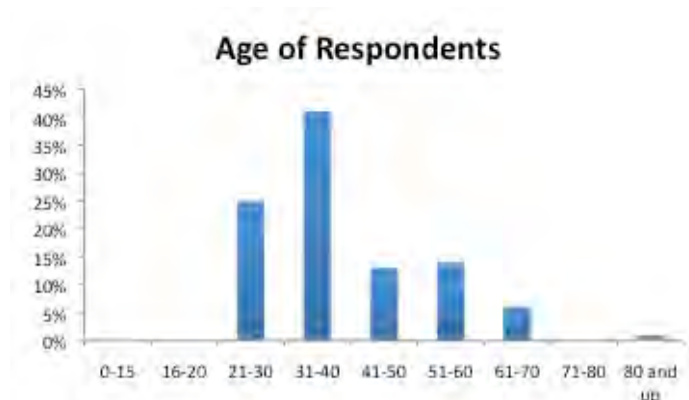
Overall, 122 people responded to the survey. Several survey takers indicated that they had problems completing the survey because of software issues; 87 of the respondents fully completed the survey. As only one question was mandatory in the survey, many of the questions had 80 to 85 answers. The open-ended questions had fewer answers.

Demographics

As the survey was open to anyone, only 45 of the respondents lived or worked in the KBH area. However, many respondents lived near the KBH area or traveled through it regularly. One respondent reported living outside of Portland, in Sherwood. Of the 83 respondents reporting their gender, 51% identified as male and 43% identified as female (see Table 1).

Of the 85 respondents that reported their age, 66% were between 21 and 40 years of age. None were under 20 and only one was above 80 (see Figure 1). Youth and the elderly, both major stakeholders in a road safety campaign, were underrepresented. As one of the goals of the survey was to identify areas where vulnerable road users perceived safety threats, the lack of young and elderly respondents limits the usefulness of the survey.

Figure 1



This was not a representative survey. The survey was publicized through the BTA and NECN, which would be expected to lead to over representation by people already interested in neighborhood or bicycle advocacy issues. As this survey did not use random sampling techniques, the results cannot be meaningfully compared to city-level data.

Table 2

Safety in King Boise Humboldt

Respondents were asked how safe they felt in the study area by mode (Table 2). Driving had the highest mean (7.49) and mode (8). Respondents felt least safe bicycling, with a mean of 6.59 and a mode of 6.

| Please tell us how safe you feel in KBH (Scale of 1-10) | | | | |
|---|----|------|---------------|------|
| | N | Mean | Std Deviation | Mode |
| Driving | 75 | 7.49 | 2.42 | 8 |
| Walking | 79 | 6.90 | 1.89 | 7 |
| Bicycling | 73 | 6.59 | 2.05 | 6 |

Respondents were also asked if they had ever been in a crash in the KBH area. Fourteen responded yes and 77 responded no. Of these crashes, 11 involved at least one car, with 4 of the crashes being car-on-car and another 4

Table 3

| In the crash, you were: | In the crash, the other person was: | | | |
|-------------------------|-------------------------------------|-----------|---------------|--------------------------------|
| | Driving | Bicycling | Skateboarding | I was the only person involved |
| Driving | 4 | 1 | | |
| Walking | 1 | 1 | | |
| Bicycling | 4 | | 1 | 1 |
| Passenger in a car | 1 | | | |

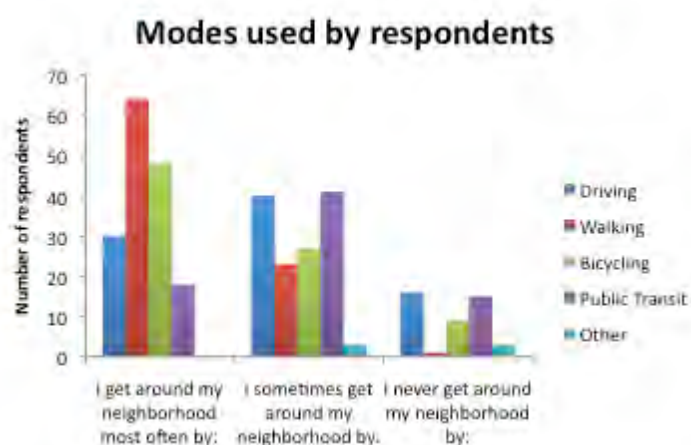
being car-on-car and another 4 being car-on-bike. There were a total of 8 crashes involving bicycles, including one where the bicyclist was the only person involved. Only 2 crashes involving pedestrians

were reported- one was with a car and the other was with a bicycle. Several near misses were also reported in the accompanying open-ended question. One of the purposes of the survey was to collect data on locations that road users perceived as dangerous. The information is shown on Threat Map.

Travel by Mode

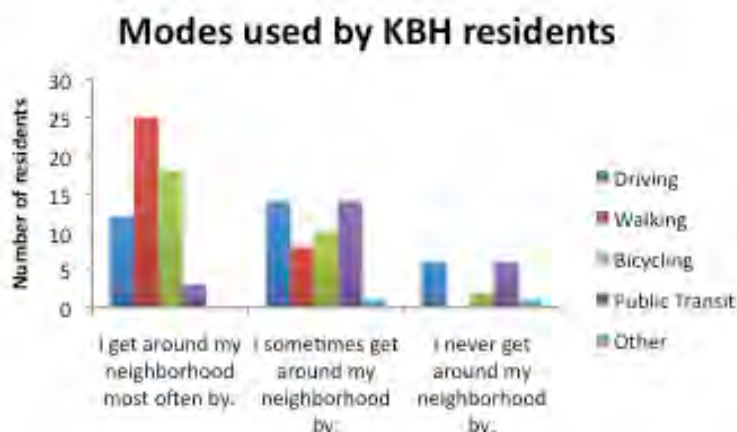
Respondents were asked which modes they used to travel within their neighborhoods (Figure 2). As most of the respondents do not live in KBH, this does not necessarily reflect the mode that respondents use in the study area. As respondents were able to include as many modes as they liked in each category, the number of modes used in each category well exceeds the number of respondents. For modes often used in the neighborhood, walking and bicycling were the most common, with 93% of respondents indicating that they used at least one of these modes to travel around their neighborhood. Only 1 respondent reported never walking around

Figure 2



their neighborhood. The results indicate that survey respondents frequently used active

Figure 4



transportation, in addition to driving and transit. One respondent also used a mobility scooter. Nine respondents (8%) reported never using a bicycle to get around their neighborhood. In addition, 13% of respondents report never driving in their neighborhoods, while 13% report never using public transit in their neighborhood.

Of the 39 KBH residents that responded, 25 reported getting around their neighborhood by walking most often, and 18 reported using a bicycle often. Six of the KBH residents reported never

driving, while another six reported never using public transit in their neighborhood. Overall the KBH mode distribution was very similar to that of the larger group of respondents (see Figure 3).

The survey was distributed through the BTA, along with VZO social networks, which probably led to the high number of respondents that bicycle. However, the question shows that respondents use a variety of modes, which indicates that they are aware of street safety issues from the perspective of multiple modes.

Safety and Priorities

When asked what is most important on roadways in their neighborhood, the majority of respondents valued slower, safer streets the most. As Table 4 shows, respondents who reported driving around their neighborhood most often were the least likely to rank slower, safer streets as the most important. Only 6 respondents chose fast travel speeds as the most important, regardless of the mode they used most often. Safety and direct access were overwhelmingly favored in comparison to fast travel speeds, as Figure 3 illustrates. This key finding underlines the importance of Vision Zero objectives, showing support for prioritizing safety and accessibility over travel time.

Figure 4



Table 4

| | | What is most important to you on the roadways in your neighborhood? | | | | | | | |
|--|---------|---|--------|----------------------------|--------|-----------------------|--------|-------|---------------------|
| | | Fast Travel Speeds | | Direct Access to Locations | | Slower, Safer Streets | | Other | Number of responses |
| Mode most often used to get around neighborhood | Driving | 3 | 10.71% | 8 | 28.57% | 14 | 50.00% | 3 | 28 |
| | Walking | 2 | 3.33% | 11 | 18.33% | 41 | 68.33% | 6 | 60 |
| | Biking | 0 | 0.00% | 9 | 19.57% | 33 | 71.74% | 4 | 46 |
| | Transit | 1 | 5.56% | 5 | 27.78% | 11 | 61.11% | 1 | 18 |

Vulnerable road users and safety

The survey asked respondents to rate what made them feel safe when walking or bicycling on a busy roadway. A list of six common safety improvements was provided for both modes. Tables 5 and 6 display the average rankings for each mode. Signalized crosswalks were the highest rated safety improvement for pedestrians.

As the ratings were not constrained, it was possible to rank all of the safety improvements very high. The mode for each improvement was 10, and all had means above 6. Signalization, separation from traffic, and lighting made the respondents feel safer than reductions in car speed or volume.

When bicycling, respondents ranked slow traffic very highly, with a mean of 7.55. The safety improvements listed for bicyclists were not as highly rated, specifically Green Bike Boxes, with a mean of 4.99 and a mode of 5. Preliminary bike box evidence supports the respondent's view- while bike boxes do improve safety, they do not have a very large impact. Separated bike lanes had a slightly

lower mean than painted bike lanes, along with a lower mode and larger standard deviation. As cyclists in Portland have few opportunities to use separated bike lanes, or cycle tracks, the more varied evaluation of these lanes could reflect individual familiarity. Street lighting was less important to respondents when they were bicycling. Overall, all of the improvements that were looked at increased user perception of safety, with the possible exception of bike boxes.

Table 6

If you are walking, what makes you feel safest on a busy road? (Scale from 1-10)

| | N | Mean | Std Deviation | Mode |
|-------------------------------------|----|------|---------------|------|
| Signalized crosswalks | 91 | 8.42 | 2.15 | 10 |
| Well lit streets | 91 | 7.93 | 2.24 | 10 |
| Sidewalk separated from moving cars | 90 | 7.88 | 2.49 | 10 |
| Slow traffic | 88 | 7.15 | 2.82 | 10 |
| Fewer cars | 87 | 6.60 | 3.18 | 10 |
| Sidewalk ramps | 84 | 6.05 | 3.10 | 10 |

If you are bicycling, what makes you feel safest on a busy road? (Scale from 1-10)

| | N | Mean | Std Deviation | Mode |
|----------------------|----|------|---------------|------|
| Slow traffic | 84 | 7.55 | 2.31 | 10 |
| Painted Bike Lanes | 83 | 7.49 | 2.60 | 10 |
| Separated bike lanes | 80 | 7.48 | 3.09 | 9 |
| Signalized crossing | 80 | 7.06 | 2.21 | 7 |
| Well lit streets | 83 | 6.75 | 2.68 | 7 |
| Green Bike Boxes | 76 | 4.99 | 2.70 | 5 |

Open-ended questions on safety

Respondents were also able to write in what made them feel safe and unsafe when using roads, without specifying modes. The open-ended sections had a lower response rate than many questions, with 79 responses for what makes you feel safe, and 78 for unsafe. For both questions, several themes emerged, and were broken into categories (See Table 5). While this is not an exhaustive list of all topics mentioned in the open-ended questions, it covers the most frequently mentioned safety improvements. Both visibility (improved lighting and clear line-of-sight), and level of bicycle and pedestrian traffic can contribute to traffic safety along with individual safety. The survey stated that it applied to street safety only. However, several responses to these questions were vague, and implied that the respondent was considering personal safety as well. During the Vision Zero Oregon project, the study area has experienced gun violence, and is considered a less-safe part of Portland.

Outside of the ambiguity of these answers, concern over the speed of cars was a clear trend. Twenty-four respondents reported that slower traffic made them feel safe, while 34 respondents reported that high auto speeds made them feel unsafe. Physically separating modes, especially bicycles, was mentioned in 17 of the 79 responses to what made respondents feel safe. While traffic calming infrastructure was mentioned by only 6 of the respondents, the results of traffic calming, such as slower, reduced auto traffic and separation of modes, were mentioned by many more.

Crossings were a major concern for respondents. Ten respondents mentioned that they contributed to a feeling of safety, while 17 people responded that poor-quality crossings made them feel unsafe. Crossings are the most direct interaction that happens between modes on the road, and are also a highly contentious issue for neighborhood activists and traffic engineers. While marked crossings contribute to a perception of safety, the evidence that increase safety is hotly contested.

Table 5

If you are bicycling, what makes you feel safest on a busy road?

(Scale from 1-10)

| | N | Mean | Std Deviation | Mode |
|----------------------|----|------|---------------|------|
| Slow traffic | 84 | 7.55 | 2.31 | 10 |
| Painted Bike Lanes | 83 | 7.49 | 2.60 | 10 |
| Separated bike lanes | 80 | 7.48 | 3.09 | 9 |
| Signalized crossing | 80 | 7.06 | 2.21 | 7 |
| Well lit streets | 83 | 6.75 | 2.68 | 7 |
| Green Bike Boxes | 76 | 4.99 | 2.70 | 5 |

If you are walking, what makes you feel safest on a busy road?

(Scale from 1-10)

| | N | Mean | Std Deviation | Mode |
|-------------------------------------|----|------|---------------|------|
| Signalized crosswalks | 91 | 8.42 | 2.15 | 10 |
| Well lit streets | 91 | 7.93 | 2.24 | 10 |
| Sidewalk separated from moving cars | 90 | 7.88 | 2.49 | 10 |
| Slow traffic | 88 | 7.15 | 2.82 | 10 |
| Fewer cars | 87 | 6.60 | 3.18 | 10 |
| Sidewalk ramps | 84 | 6.05 | 3.10 | 10 |

Signalization is also fraught with controversy with concerns over cost, traffic throughput, and the risk of attracting car traffic to signalized intersections. Overall, the open-ended questions echoed the previous responses on the survey. One respondent underlined that lack of ramps forced those in mobility devices to travel in the roadway until they came to a private driveway, placing them in danger.

Street Safety Knowledge and Empowerment

Finally, respondents were asked to rate how much they agreed or disagreed with a series of statements on road safety, knowledge of road safety issues, and empowerment. Table 6 shows the statements and the mean, mode and standard deviation of the answers. Respondents agreed with the statement about wanting their neighborhood's roads to be safer. The mean response was 8.67, with a standard deviation of 1.79 and a mode of 10.

Despite the desire for safer roads, respondents did not agree with the statement that they had influence over road safety in their neighborhood. For this statement, the mean was 4.59 and the mode was 5. As many of the respondents learned about the survey through NECN and the BTA, they were likely to already be involved with some level of neighborhood or transportation activism. Only 25 of the 80 people that

Figure 6

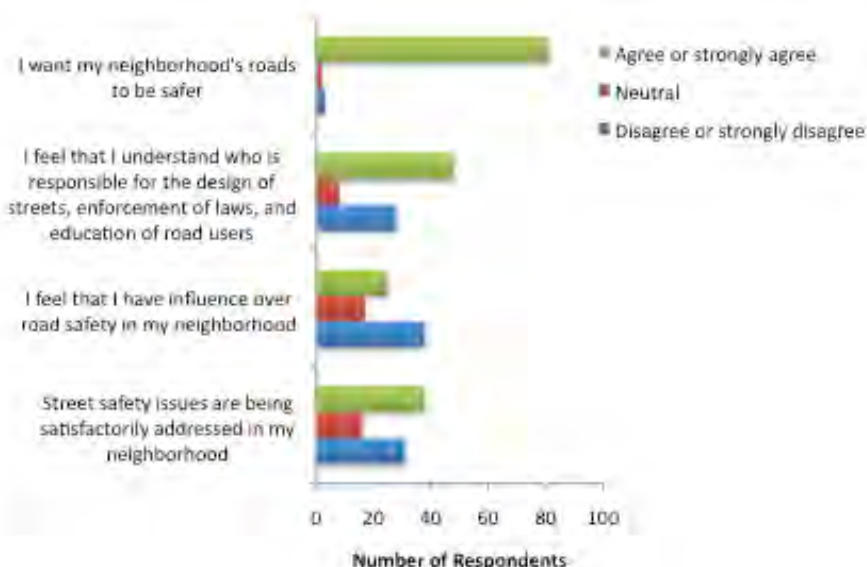


Table 7

Please tell us how much you agree or disagree with the following statement:

| | N | Mean | Std Dev | Mode |
|---|----|------|---------|------|
| Street safety issues are being satisfactorily addressed in my neighborhood | 85 | 5.14 | 2.55 | 5 |
| I feel that I have influence over road safety in my neighborhood | 80 | 4.59 | 2.65 | 5 |
| I feel that I understand who is responsible for the design of streets, enforcement of laws, and education of road users | 84 | 6.00 | 2.91 | 10 |
| I want my neighborhood's roads to be safer | 86 | 8.67 | 1.79 | 10 |

answered the question agreed that they had influence over road safety in their neighborhood. The respondents gauged their knowledge of who is responsible for the street safety at a higher level- 48 of 84 people answering the question agreed or strongly agreed with the statement (Figure 6).

DRAFT

APPENDIX F. Formal and Intercept Interview Summaries

Interviews

- Laura Koch, Program Director, Community Cycling Center
- Grant Moorehead, King Resident
- Greg Raisman, Traffic Safety Coordinator, Portland Bureau of Transportation
- Steph Routh, Willamette Pedestrian Coalition
- Alan Silver and Trace Salmon, King Neighborhood Association
- Sharon White, Community and School Traffic Safety, Portland Bureau of Transportation
- Intercept Interviews on Martin Luther King Jr. Blvd

Interview Summary with Laura Koch, Community Cycling Center

Who: Laura Koch – Program Director, Community Cycling Center

When: Wednesday, March 2 – 8:30am

Where: CCC Office

Interviewers: Marielle Brown, Ben Weber

Additional Contacts

- Kim Whitney – CCC Youth Coordinator
- Marjorie Harris-Shakier, Humboldt Gardens Marjorie@hapdx.org
- Ty – Urban League (Laura will put us in contact with him via Michael at CCC Shop)
- Social services locations at MLK/Killingsworth
- Self Enhancement, Inc- includes a middle school and a large number of programs supporting the African American community
- Karen Gibson- can help us to better understand the history of the neighborhood
- African American Walking Groups would be an excellent contact, though she didn't seem to have any specific information on how to contact them

Connections

Less important than where exactly problems are where are people going to and from and what is inhibiting them from getting there?

The transportation groups are probably already on board – they are important for building overall capacity, but non-transportation organizations are more important to contact for raising overall awareness

Explore programming as a way of getting people involved. (i.e. CCC runs workshops that (1) help people fix their bike and (2) serve as a forum for people to talk and network about other issues

Larry Wallick's approach: Nail the message, hit people on their values, and tell them what they can do. Don't waste time discussing the background; people already know this stuff.

King Elementary School has had weak support in the Bike Club- in her experience; the school does not yet have a well-established parent organization network

The Interim Report on CCC's focus groups is available, but the full report probably won't be before our project is complete

Interview Summary with Grant Moorhead, King Resident

Who: Grant Moorehead, King Resident and Portland Bureau of Transportation

When: Wednesday, March 2, 2011 – 2:00pm

Where: Seattle's Best, 1742 Southwest 6th Avenue, Portland, OR

Interviewer: Michelle van Tijen

Living in King Neighborhood

- 6 years
- There is a sense of community
- Grant bikes, drives, takes transit and walks through the neighborhood and to work downtown. He is multimodal.
- He feels safest on quieter roads with lower driving speeds and pedestrian scale lighting. He especially likes the Going Street improvements.
- He feels the least safe crossing Martin Luther King Blvd because of the tall bushes. He never bikes on MLK, always takes Vancouver/Williams instead.
- Grant has never been in a crash, but did almost hit a pedestrian at night on MLK, near Going. He couldn't tell if they wanted to cross or not.

Barriers and Priorities to Roadway Safety

- The median on MLK is an impediment to crossing, it create shadows and trees. Many people jaywalk.
- Trees sometimes block stop signs
- Cars park too close to curb, hard to see if cars are coming at an intersection
- MLK traffic should move in platoons with signals (like downtown). MLK should be a thoroughfare, need to have through traffic. All streets can't be slow.

Tools to Reduce Roadway Deaths and Injuries

- More traffic signals
- Safer alternative bike routes, with signs for bikeways on major streets

- Rebrand drivers license- for bikes and cars, dedicate some money to bike infrastructure. Retake test years when license renews.

Next Steps

Will be a part of the StAC as a King resident representative

Interview Summary with Greg Raisman, Traffic Safety Coordinator, Portland Bureau of Transportation

Who: Greg Raisman – Traffic Safety Coordinator, PBOT

When: Monday, Feb 28, 2011 – 3:30pm

Where: PBOT offices

Interviewers: Marielle Brown, Nick Falbo, Ben Weber

Meaningful Citizen Involvement

When a citizen is told “no” to a particular request, does that mean that they are still not meaningfully informed? (I.e. A citizen brought a matter to PBOT’s attention and PBOT determined it is not a priority issue – it may be frustrating to the citizen because they don’t see “action” even though a process was followed)

- Need for further definition of Vision Zero concept
- 823-SAFE (Ilene staffs it): Thousands of annual calls, only some of which are followed up on
- Priority
- Traffic engineer review
- History of other requests
- Statute of limitations

If we are looking at an intersection that has been in operation for 100 years, unless there is a major systematic change suggested, many minor improvements are deemed unnecessary

- Due to cost, time, lack of data, lack of evidence that it’s a problem
- Many street improvements are tied in with a larger capital improvement project
- System level projects (Neighborhood Greenways) are the more vital program
- Planning efforts – TSP
- Greg feels that Portland has one of the most open and transparent processes out there
- Workshops
- Channels through which people can contact the city
- Open and engaging planning process
- “If anything, Portland over processes” – too much involvement?
- NYC Broadway closure story – they just DID IT

In Portland my experience so far is people that don't want things to happen say you're not doing enough process, what can I do to stop you? I don't think we suffer from lack of process...it doesn't mean that it's not meaningful public involvement it just means that that individual didn't get their way"

Vision Zero first steps

- "What does Vision Zero mean?" – it's not part of anyone's reality to achieve zero death/injury, so it needs to be reframed as a practical approach to reducing death/injury
- "What can I do with the way I choose to travel that can influence this?"
- The biggest change that can happen is we can change the way we use our streets"
- I'm going to drive more slowly
- I'm going to ride my bike more carefully
- I'm going to cross the street and look both ways
- Use public education as a way to make the public's input more informed
- Neighborhoods need to be more supportive of the good things that happen and advocate for them, not just react against things they don't like – proactively

Effective Neighborhood Assoc. Action

- Have been supportive of many programs (specifically photo radar – all N.A. wrote a letter of support)
- Safe Routes
- Public forum
- However, much of this may be reactionary support, not proactive support
- Tend to be composed of people who are caring, involved, and have time
- N.A.s are the best available channel for PBOT and others to engage the public because they simply can't go door-to-door

Systems and specific interventions

A project like a woonerf is useful but is impossible and undesired on a system-wide approach – it's a nice picture postcard but it's not a way to build a system

What can we do to reduce speed and volume, provide safe crossings, and inform people how to use the network and the different street typologies? Much more vital than a "gold-plated" thing

"Speed bumps are the most important" – and the Utrecht engineers agree – low maintenance, cheap, easy, very few external problems, and they demand compliance or your car is wrecked

See also Green Channelized Speed bumps.

What about non-Neighborhood Greenway streets?

"Fuck 'em, just fuck 'em, you can write that down"

Greg's emphasis seems to be on providing an overall system network of safer routes – not so much on tackling any single problem area.

“I’m not convinced that it doesn’t give them love to do Neighborhood Greenways” – ultimately it provides a dedicated (safe) route nearby most people.

We are at a starting point – 70% of streets are residential and we can’t tackle them all right now or ever.

Phasing: Neighborhood Greenways → Home Zones

Velocitization

Roughly five years ago PBOT was planning a whole network of speed bumps on a fairly comprehensively built out scale. Some were built during one construction season but it would take several years to build the rest. However, during the second construction season, PBOT found that speed violations (85% of speed limit) had dropped not 10% but 50%. Greg attributes this to “velocitization” – the idea that people get used to traveling slower on a just a few streets (the ones that had speed bumps) and carry that slow behavior over to even non-calmed streets. Pretty cool stuff

What can activists do?

- “[Looking at themselves and changing their own behavior] is the most important”
- Get involved in neighborhood
- Attend meetings and open houses
- Provide praise for good actions, not just derision of things you don’t agree with
- “823-SAFE as a great resource for a lot of City/public interfacing”
- Don’t waste the City’s time, don’t game the system – it distracts attention from real problems

Specific Details

Curb extensions are \$20K-30K

Next Steps

City can’t go door-to-door on many things, but what are some of the small-scale things that you could nearly go door-to-door on? And who would be doing the dooring?

System approach to safety versus specific local intervention (local control of speed limits system wide or localized woonerf treatment)

I (Ben) am starting to come around to this VZO Toolkit as more of an educational document in it’s own right. Providing guidance and direction for action is important, but perhaps using the TK more as a medium to keep ordinary people apprised of the many things already happening. Especially on the design-level, it is very important for people to know why a treatment or network is occurring, not so much how to pursue it specifically.

Interview Summary with Steph Routh, Willamette Pedestrian Coalition

Who: Steph Routh, Director of the Willamette Pedestrian Coalition

When: Monday, March 7 – 9:00pm

Where: Concordia University Library

Interviewers: Ben Weber, Marielle Brown

Engagement/Awareness/Involvement Techniques

- Steph asks where is there a need to get beyond just talking with the wonky transportation people who already get it.
- Disadvantaged and minority communities have been “engaged” extensively but they don’t see results emerging, so are thus jaded with the process.
- It is important for an advocacy group (like WPC) to be able to say that the public feedback they received actually amounted to something – i.e. Steph is proud that WPC has been able to use the *Getting Around on Foot Action Plan* to beat the bully pulpit. “I took this to Metro Council!”
- People have to be called to participate by the groups or people they already trust – a new organization can’t simply step in and expect that people will willingly step in
- How to deal with low turnout: It happens all the time; people are busy and getting them to come to your is always a challenge
- Engage businesses and organizations in spreading the word
- Safety playing cards at restaurant tables
- Games at churches
- You need cookies
- They can be real cookie or they can be figurative (like safety playing cards)

Role of advocacy groups

WPC as a sort of policy institute – highlighting legislative and top-down approaches

Visioning Vision Zero

People need a way to understand what the benefits of Vision Zero can be for them; understanding must come before engagement, must come before action

What? Why? What is VZO? Why should neighborhoods care?

The team needs to go to neighborhood associations and frame out what improved safety could be and see if N.A.s want to be a part of the process.

Vision Zero is hyperbolic – it’s not absolutely realistic by any measure, but the thought of it could be compelling

The Vision: It’s not just safety; it’s the complete package of land use, livability, destinations, community, etc.

What are the key things/tools right now?

Top three: Safe crossings; walkable destinations; universal access

Safe crossings on high crash corridors – because it's where the land use and transit is already supporting destinations (in most cases)

Crossing distance

Multiple threat issues: multi-lane traffic stopping or not

Marked/unmarked; signalized/unsignalized

98% compliance for red lights; 80% for rapid flash beacon; 20% for marked crosswalk; very low for unmarked crossing

Universal access

Sidewalk building is a very piecemeal approach right now

Need to look at improvements from a network standpoint

Metro is pursuing a TGM Grant for a Regional Active Transportation Plan – hoping it looks at doing an E.C. analysis of the network and developing prioritization recommendations for sidewalks and other multimodal facilities

Education: New policy and design requires new awareness and enforcement

Instead of Drivers' Education, have Multimodal Education

More multimodal questions on the drivers test

PSAs on the radio during commute hours

Educational warning enforcements, instead of purely punitive actions

Sustainable funding mechanisms

WashCo: MSTIP Major Street Transportation Improvement Program

Not based on gas tax, based on property tax

However, it is required to build capacity on a regional scale, which WashCo interprets as just more road widening, not as much on multimodal

\$550M over 20 years; dwarfs RFF (Regional Flexible Funds)

Messaging to ALL audiences, all modes

- Framing safety for people who primarily drive

- 50-75% of people with suspended licenses still drive because they claim to have no other option.
- Providing trans. options will keep unsafe drivers out of cars
- “Those scofflaw cyclists, those aggressive pedestrians, all those unsafe people, do you want them behind the wheel of an Escalade?”
- Equity
- People spend the same on car ownership as health care.
- Talking about the externalities of driving – although this can be a fuzzy subject to talk about
- Options: What about when you are temporarily injured and driving is not an option – temporary incapacitation

Next Steps

Steph believes that NAs are the appropriate audience because they are the wonky folks; is this something we want to grasp hold of? Do we take advantage of the existing neighborhood capacity versus true attempts at engagement of the Joe Public? How is the Vision framed for each audience?

Explore innovative outreach options; where can a LOT of people be reached

Oregon Crash Book Summary

When we talk about this vision, we need to expand the range of topics that get rolled into the utopian ideal. It’s the only way to make the vision compelling for lots of people

Sense of place, we need it: “Do you go to New York to visit the New Jersey turnpike?”

Getting people to talk: churches, schools, go where people are – like the lines for brunch

“After ten seconds of talking. “Thanks so much, you’re awesome, have a sticker””.

You don’t need more money to build this stuff, just take it from other places

Convince municipalities to build these treatments into their standard design guidelines (i.e. Tualatin Hills P&R pushed WashCo to approve midblock crossings)

Partnerships both within and without the transportation genre -

Interview Summary with Alan Silver and Trace Salmon, King Neighborhood Association

Who: Alan Silver and Trace Salmon, King Neighborhood Association

When: Friday, March 11, 2011 – 1:45pm

Where: Elevated Coffee, 5261 NE M L King Blvd, Portland, OR

Interviewers: Michelle van Tijen and Nick Falbo

Notable Unsafe Locations

- NE Killingworth at NE 7th Ave (by Post Office)
- MLK Blvd. and NE Failing (Resident gave presentation at meeting about this)
- Fremont and 9th Ave
- 8th Ave and Prescott (People driving into neighborhood streets to avoid light)
- MLK in general for bicycling (alternate routes available on Garfield and 9th)

Neighborhood Association and Safety

Right now the Neighborhood Association wants to find the best ways to help people when they call about roadway safety problems. Sometimes that means just hearing their problem and letting them figure out how to contact the city and sometimes that means getting them connected with committees within the Neighborhood Association to help them take action.

Implement rumble strips before crosswalks- textural warning instead of sign

Comment that materials should be available both online and in hard copy format for maximum distribution potential.

Ideas for Getting Involved with Residents

- Safe Routes to School Walk, every Wednesday in March and first to Wednesdays in April (talk to Trace)
- Group bike ride/ Fun ride
- Farmers Market- may be too early in the year
- Last Thursday on Alberta- may be too early in the year
- Focus less on existing conditions and more on what is the result of the project going to be – Presenting the ideas for the solutions will get more attention.
- Have examples/images of similar streets- what they could look like with changes
- Talk to churches (Maranatha Church of God, St. Andrew, Fremont United Methodist Church). Fremont Church has asked for a crosswalk in front on property.
- Talk to North Precinct. (Contact: Ryan.Bren@portlandoregon.gov)

Next Steps

- Will be a part of the StAC as a King Neighborhood Association Representatives
- VZO will be presenting at the King NA Meeting on April 13. Need to email Alan scope, outcomes, and time needed.
- Contact the person who presented at the NA about unsafe MLK and Failing. Get contact from Alan.
- Contact Paige Coleman, Executive Director of NECN and Boise/Eliot Resident (paige@necn.org)

Interview Summary with Sharon White, Community and School Traffic Safety, Portland Bureau of Transportation

Who: Sharon White, PBOT – Community and School Traffic Safety Partnership Program Specialist – Sharon.white@portlandoregon.gov – 503-823-7100

When: Friday, April 8 – 1:30pm

Where: PBOT Offices

Interviewer: Ben Weber

Sharon works on pedestrian Safety Outreach and Education; manages a grant application that helps pay for safety programs

Also works on High Crash Corridors

Likes about the brochures

- Good representation of most modes (no bias); perhaps more transit focus?
- Successfully avoids planner jargon – good content without patronizing language
- Continue to push the idea of transportation/health/equity/environment 0 opportunity to build this thread through all the documents

Room for improvement

- Definitely supports brevity – sees a need for a few of the brochures to possibly be tri-fold, simple, and to the point
- More info on costs, timelines, rather City has funding (give public a sense of feasibility)
- Should probably avoid illegal actions in DIY
- More discussion of enforcement (either public enforcement or police)
- PBOT/WPC Crosswalk Violation Notice Form Letter – education opportunity
- However, public enforcement can sometimes be overzealous – be safe, careful, and diligent
- Instead of PBOT, NAs could provide radar guns and other problem-identification resources
- Make sure to direct people to the existing planning resources
- PBOT Open Houses, Portland Plan, etc.

Safety Concerns

- Top public concerns: difficult crossings, requests for lights/beacons/crossings; crosswalk enforcement actions; high demand for speed reader boards; speeding
- “A lot of people don’t know who to talk to in the city, or even if they have those concerns I may never hear from them”
- Immigrants and people new to the city have a hard time adapting to some of the peculiar/unique traffic laws and designs in Portland

Challenges

- A few people don’t like the speed readers boards, the crosswalk enforcements, etc.
- The obvious “Us vs. Them” issues

Effective Neighborhood-led Advocacy

- SWNI (Stephanie Adams, Don Bock) great advocates for raising awareness – SWNI Safety Newsletter (we have this in Dropbox)
- Sharon working with Mother's District Coalition
- Lents has mobilized quite successfully lately
- PBOT produces ads/flyer that can be inserted in newsletters and bulk emails
- LOOK AT: ONIs neighborhood crime prevention drug task forces – uses public to identify drug houses and notify authorities

City Initiatives

- Surveys and emails fact-finding through the Mayor's office and other (i.e. "Are there locations in your neighborhood with traffic issues")
- 823-SAFE has been great as a single clearinghouse/switchboard for safety concerns
- From a management standpoint it really makes things efficient and more effective
- Public appreciates speaking to an actual voice
- However, limitations on capacity and limitations on getting input from non-English speakers
- Ped Pro – another version of a speed reader board that members of the public can use
- Secret pilot project to make temporary barriers and other calming devices available
- "Every Corner is a Crosswalk" and "Portland Walks! – Be Safe" videos
- About to release "Beacon Buddy" video

Overall Opportunities

- Sharon's biggest pedestrian concern is that people simply do not know the Oregon Crosswalk Laws
- Certainly room to have more education opportunity – Sharon has not really considered more stringent DMV laws, etc.
- Building community around the idea/pursuit of safety
- Safety CAN be a topic that people rally around, IF they understand it and the benefits
- Promote new and young driver education
- Partnerships with health/community/elderly organizations
- Outreach at existing events – Movies in the Park, Sunday Parkways
- Explore social attitude changes
- Attractiveness of streets – trees, activity, human-scale

Intercept Interviews with people on Martin Luther King Jr. Blvd.

What: Discussions and public feedback on Vision Zero

Where: Martin Luther King Jr Boulevard, Portland, OR

When: Sunday, April 17, 2011 – 10:00am-12:00pm

Interviewers: The Loci Group – Nick Falbo and Brandy Steffen

Background



Pedestrians crossing Martin Luther King Jr Boulevard Sunday morning.

The neighborhood focus of Vision Zero stresses the importance of validating strategies with the public, as well as collecting stories to illustrate the need for Vision Zero.

Intercept Interviews

For several hours on a busy Sunday morning, two members of the project team, Nick and Brandy, walked along Martin Luther King Jr Boulevard and interviewed pedestrians and bicyclists that were on the road.

The team members spoke briefly with nearly 10 people about their street safety priorities and what improvements they would like to see in the area. Most people interviewed were local residents, people working in the area, or people just passing through the area. Many people were interested in talking, though fewer were willing to be video taped or photographed. However, this was a successful way to reach out to general public members who may not attend other public events.

Below are some of the messages that the team heard:

- Need to slow cars near schools (PCC and King Elementary)
- Most people didn't feel unsafe, because they practiced defensive walking, giving traffic plenty of room and crossing at crosswalks
- Pedestrians need to do a better job of protecting themselves, since cars can get distracted. Some said that pedestrians just walk out into the road without looking for cars.
- Need to have more consistent and equitable enforcement of drunk driving laws
- Need to bring people together around key issues; build community and compassion for one another
- Bike on the sidewalk (along MLK) because it is the only safe way to get to the businesses on MLK
- There needs to be wider sidewalks on MLK

Observations

The team members saw several people biking on MLK, either on the sidewalk or in the car lanes. Most of these people were not wearing helmets. The noise level was still very high on Sunday morning; despite the reduced level of cars there were many more delivery and semi-trucks on the road increasing the volume. Many of the car drivers knew the people on the roads and would talk from their cars to the people working or walking on the street.

Conclusion

The vast majority of the people interviewed on Sunday along MLK were those people that do not attend typical public events; including low-income and minority residents. While the number of

people interviewed was relatively low, it was a cross-section of the community that did not know about the project and most often are not included in the planning process.

DRAFT

APPENDIX G. Stakeholder/Public Meeting

#1 Summary

Oregon Association of Minority Entrepreneurs (OAME) office – 4134 North Vancouver Ave.
Portland, OR

March 23, 2011, 5:30-7pm

Attendees

- Alexis Grant/ Self, Active Right of Way (AROW)
- Derek Abe/ Vernon Neighborhood Resident
- Gerik Kransky/ Bicycle Transportation Alliance (BTA)
- Grant Morehead/ King Neighborhood Resident
- John Beaston/ Bicycle Transportation Alliance
- Laura Koch/ Community Cycling Center
- Paul Anthony/ Humboldt Neighborhood Resident
- Rani Boyle/ Woodlawn Neighborhood Resident
- Steve Bozzone/ Willamette Pedestrian Coalition, AROW, Boise Neighborhood Resident
- Ted Buehler/ King Neighborhood Resident
- Terry/ King Neighborhood Resident

Welcome/Introduction

Twelve StAC members and public citizens attended the first StAC meeting on Wednesday, March 23 beginning at 5:30 pm. The event was publicized by posting over 50 flyers in local businesses and social service providers, online community calendars, as well as through project emails and a notification on the project website.

A short presentation by van Tijen helped to introduce the project and the purpose for creating roadways that reduce and eliminate roadway deaths for people who walk, bike, or drive. The presentation also covered the results of the survey, which will close at the end of March.

Issue Identification

After van Tijen discussed the issues raised during stakeholder interviews and the current results outlined in the public survey, the group was asked to think about other issues in the area that affect road safety. Steffen led the group in discussion of these ideas. The group identified the following list of issues; those with an asterisk were identified for further group discussion:

- Traffic speeds on Martin Luther King Jr. Boulevard (MLK) and barriers (both physical and mental)*

- Pedestrian visibility on MLK (parking at intersections)
- ADA (American's with Disabilities Act) compliance, aka curb ramps, along Alberta Street
- Williams Avenue bike lane width and occurrence of "dooring" [when a car door is opened in front of an on-coming bike, causing a crash]*
- Alberta Street overpass
- Crossing on Killingsworth*
- Enforcement of laws
- Traffic speeds on neighborhood streets*
- PBOT (Portland Bureau of Transportation) system of approval process for projects
- Cars block intersection at rush hours (car lines or queues back up into the intersection)
- Upkeep of roads and sidewalks

How to use the Vision Zero Brochures

The group was told that two products for local neighborhood association, Bicycle Transportation Alliance (BTA), and local citizens use would be developed through this process. The first product is a set of "brochures" that will cover various topics aimed at reducing road deaths. Four draft brochures were presented to the StAC members for their review and comment. The initial four topic areas included, "Talking to the Government," "Building Community," "DIY Traffic Calming," and "Design for Street Safety." Additional brochures will be produced and distributed to the StAC and the general public to collect comments on the effectiveness of the brochures. Brown explained how to use the brochures during the group break out session and encouraged StAC members to review the brochures, providing comments and questions to the Loci Group via email through the website.

The second product will be a neighborhood safety action plan. The StAC will help to develop this plan based around the four main issues identified above: MLK Jr. Boulevard, Crossing at Killingsworth and MLK, traffic speeds on neighborhood streets, and Williams Avenue bike lanes.

Group work

After deciding on these four topic areas, the group was divided up, with three participants discussing each topic area problem, defining the situation, and developing possible solutions to improve the problem. Below are the problems and solutions as brainstormed by the groups:

Problem 1: MLK speeds and barriers

- Literal physical and speed barriers
- On-street parking versus trees down the center of the road
- Visibility of bikes and pedestrians
- Feels most dangerous as a driver, with a potential to get in a crash with other cars, bikes, or pedestrians
- Need to go slower
- Long light cycle for bikes and pedestrians (at Shaver and Skidmore) creates a barrier. Need to have more pedestrians walking with the green vehicle light (automatic).

- The turn lane (from the side streets onto MLK) are not clearly painted, this causes long delays for cars trying to get onto MLK.
- Call 823-SAFE whenever you feel unsafe on a road; get people to call every time and have the city make improvements
- Take photos of poorly marked roads and crosswalks. These can be sent to the city.
- Reduce the speed to 25 mph [it was noted later that creating a 20 mph speed limit may be easier based on current street and development designations for MLK]
- Going Street crossing is a good example of a high visibility crossing without a signal. There is a crosswalk and island, as well as a lot of signage (that includes icons of both pedestrians and bikes).
- The bus doesn't have pull out locations, which causes cars to swerve quickly around buses without checking for other cars, pedestrians, or bikes.
- Don't feel comfortable or safe riding a bike on MLK and it is designated as a bike facility, but there is no support for bikes. It is hard to patronize businesses on MLK for bike riders.
- Crossing signals (fully signalized) should be added between the current lights. Possibly at Prescott/Alberta (see map) and should be pedestrian activated to reduce illegal and dangerous crossings.
- Bulldoze gaps in the planter barrier to allow bikes and pedestrians to cross at certain points. Like the trees and the feeling it brings to the pedestrians. Like trees on the side of the street and the middle.
- Create more transparency and interest of the businesses along MLK to slow traffic (if it is interesting to look at, people will drive slower).
- The bus line has kept MLK a pedestrian friendly environment
- Have bamboo sticks (or helium balloons) at both sides of the street that can be used by pedestrians to increase visibility when crossing (provide holders at the unmarked crossings to store the sticks/flags).
- Create parks at the parking spots at intersections. There aren't many parks in this area. Put in dummies to make it look like people are using the parks and cause cars to slow down.

Problem #2: Williams Street

- Dooring is an issue
- 28% of cars are traveling over 38 mph: signals are timed for 35 mph but the posted speed limit is 30 mph. Posted speed and signal timing are very different, cause confusion in drivers.
- Business district should be 20 mph
- Cycle track, with bump outs on corners
- Left lane bike lane?
- Parking on one side only?
- What about elderly populations and their ability to cross streets?
- Bumpouts cost a lot of money
- Bioswales
- Land uses
- Enforcement of speeding and traffic laws

- The less residential areas, where there are fewer buildings, create an area for increased car speeds. How to retain the slower speeds from business/residential areas in these other areas?
- Bike lane alignment, buffered, wider, parking on one side only
- Reduce traffic to one lane

Problem #3: Intersection of Killingsworth and MLK

- There is a lot of stress on this intersection and it could be a lot more efficient if it was stripped with a through lane and a left turn lane.
- Add rumble strips or audible options to raise attention to the pedestrian areas
- Restrict right on red to improve pedestrian safety when crossing in the crosswalk
- Just adding a signal won't solve all of the problems, especially if there is a lot of car, bus, and pedestrian traffic.
- Bad lighting
- Pedestrian activated crossing (not automatic)
- There is a lot of cars that speed between 15th and MLK
- Try to keep people on MLK
- Over the last 6 months, there have been 3 crashes here, though none have resulted in deaths

Problem #4: Traffic speed on neighborhood streets

- Skidmore and MLK during rush hour, traffic diverts onto residential streets (east/north bound). Noted an increased volume and speeds.
- Keep through traffic on arterials
- Create disincentives for using the neighborhood roads
- Attractive options for cars on larger roads, design is not as large of an issue with neighborhood streets
- Going Street needs more stop signs and minor tweaks
- Visibility of pedestrians is an issue
- Uncontrolled intersections to/from the highway create opportunity for cars to "avoid" queues by diverting onto side streets to reach the highway.
- Inconsistency of traffic control
- Traffic island
- Prescott lights at 15th
- Mallory and Skidmore traffic signal could be changed to encourage cars to stay on the larger streets (MLK)

Next Events and Meetings

The group was encouraged to make edits to the brochures and to attend the next StAC meeting on April 20th. Other events will be announced as they are finalized. The group was encouraged to bring friends and neighbors to the next StAC meeting.

- Coffee Shop Talk or other public outreach event: Early April, TBD
- Stakeholder Meeting #2: Wednesday, April 20, 2011, 5:30-7:00pm

- Project Poster Session and Public Presentation: May 25, 2011

Van Tijen thanked the group and the meeting concluded at 7:00 pm.

DRAFT

APPENDIX H. Evaluation Criteria Public Outreach Summary

Discussions and public feedback on Vision Zero Oregon evaluation criteria

Saturday, April 16, 2011 from 12:30-4:30pm: Immaculate Heart Church - 2910 North Williams Avenue, Portland, OR

Sunday, April 17, 2011 from 10:00 to 12:45pm: The Fresh Pot coffee shop -

Attendees: 117 attendees, 50 participants in the evaluation criteria exercise, approximately 20 residents talked to us at the coffee shop, with around 14 participating in the evaluation.



Background

Evaluating alternative recommendations is an integral stage of many planning projects and can provide opportunities for project teams to solicit feedback from the public about their priorities and values. As The Loci Group has been proposing a range of street safety strategies, evaluation criteria addressing factors such as cost, speed reduction, and technical feasibility have been internally analyzed. The neighborhood focus of Vision Zero stresses the importance of validating strategies with the public, which was done by seeking opinions and informal voting on the seven established criteria.

Saturday Outreach Event – N. Williams Open House

The City of Portland is currently undergoing a planning process to improve traffic operations on N.Williams- one of the identified unsafe locations by the Vision Zero Oregon Stakeholder Advisory Committee. The N Williams project held a public open house to explore options for traffic operations improvements. The Loci Group developed an agreement with the planners and public involvement consultants that Vision Zero Oregon could set up a table and use the common geographies of the project to get feedback on both projects from the public during the open house. The event was publicized by the City of Portland.

Four members of the project team, Marielle, Ben, Nick and Michelle, set up a feedback station at a table at the N. Williams Open House. In addition to flyers advertising our upcoming Stakeholder Meeting and other general Vision Zero promotional material, we asked for feedback on missing design solutions for increased street safety. Attendees wrote comments on sticky notes and posted them on top of a large poster depicting many design solutions. The focus of the table was a large matrix poster that we asked the open house attendees to vote by placing red dots on the three most important criteria of the seven listed, plus a space for “Other”. In total, we had 168 votes (about 56 respondents) with a specific breakdown of votes as follows:

Speed Reduction – (60)

Increased Visibility for all Road Users – (24)

Improve the Perception of Street Safety – (38)

Community Compatibility – (25)

Technical Compatibility – (10)

Time – (8)

Cost – (3)

Other – Car free streets for 1/10 of the grid (4); Minority contractors from this community should do any work (2); Signal communication clarity (1); Able to cross the street on foot without wait and minimal/no risk (4)

In addition to the voting activity, we were able to interview 4 people on video camera and ask them why they want safer streets. Stories came from a variety of age ranges, genders, and mobility needs. Common themes included the importance of marked crosswalks, separated facilities for bicyclists and motor vehicles, and frequent enforcement of traffic laws.

Sunday Outreach Event – The Fresh Pot

For several hours on a busy Sunday morning, two members of the project team, Marielle and Ben, set up a feedback station at an outdoor table at The Fresh Pot, a coffee shop on North Mississippi Avenue, a popular commercial district in the Boise neighborhood of our study area. In addition to

flyers advertising our upcoming Stakeholder Meeting and other general Vision Zero promotional material, the focus was a large matrix poster that we asked passers-by to vote by placing red dots on the three most important criteria of the seven listed, plus a space for “Other”. In all we had 60 total votes (about 20 respondents) with a specific breakdown as follows:

Speed Reduction – (10)

Increased Visibility for all Road Users – (10)

Improve the Perception of Street Safety – (15)

Community Compatibility – (10)

Technical Compatibility – (11)

Time – (1)

Cost – (3)

In addition to the voting activity, we were able to speak briefly with nearly 40 people about their street safety priorities and what improvements they would like to see in the area. We did speak with a trained urban planner, a law and urban design student, and two traffic engineers who were touring the city with Greg Raisman, the PBOT Traffic Safety Specialist, but the majority of participants were regular members of the public who had no special connection with street use issues.

Observation

The participants, as shown by the votes, were largely in favor of the less technical prioritization of street safety. *Speed reduction* and *visibility improvements* were often described as street use factors that improve the overall perception of an area as friendly, welcoming, and non-threatening.

Improving the perception of street safety and *community compatibility* were similarly important criteria for many people. The idea of community compatibility, in particular, though, was difficult for some people to understand or make a judgment about. It is a broad-ranging criterion that can be challenging to ascertain; there is an opportunity for the project team and client to better define this factor and help people understand the implications of safety strategies in their own neighborhood.

Conclusion

At the North Williams Open House we gained valuable feedback from a technical or self-selecting audience. Many of the people we spoke with had been in an accident in the neighborhood and were excited to hear about the Vision Zero project. In general they weighted quality of life criteria higher than the practical criteria of cost and time. It will be interesting to differentiate those weightings depending on who is in charge of making the change (the city vs. an individual). This project is about individuals effort to make change in their neighborhood, so the Loci Group must take this into consideration when developing the final weighting scheme for the evaluation criteria.

The coffee shop outreach allowed us to connect with a more representative sample of members of the larger public. The majority of people we spoke with on North Mississippi Avenue expressed legitimate concerns about street safety and seemed encouraged by the goal of Vision Zero to improve conditions and engage the public in the process. The emphasis on experiential and quality-of-life criteria by the public suggests a different, and equally important, set of priorities. A successful Vision Zero will result from combining the cost, time, and implementation priorities of city and technical partners with the compatibility and perception priorities of the public.



Special thanks are due to Grace, the Sheltie Collie, for making public outreach so inviting to the community

APPENDIX I. Stakeholder/Public Meeting

#2 Summary

Oregon Association of Minority Entrepreneurs (OAME) office – 4134 North Vancouver Ave.
Portland, OR

April 20, 2011, 5:30-7pm

Attendees

- Alexis Grant/ Self, Active Right of Way (AROW)
- Derek Abe/ Woodlawn Neighborhood Resident
- Laura Koch/ Community Cycling Center
- Rani Boyle/ Woodlawn Neighborhood Resident
- Steve Bozzone/ Willamette Pedestrian Coalition, AROW, Boise Neighborhood Resident
- Ted Buehler/ King Neighborhood Resident
- Teri Phillips/ King Neighborhood Resident
- Huita Xu/ Student
- Craig Adams
- Matt Hutchison/Humboldt Neighborhood Resident
- Jack Olsen/Boise Eliot Neighborhood Resident
- David Sweet/Sabin Neighborhood Resident and NECN
- Kevin Pozzi
- Alan Silver/King Neighborhood Resident
- Mark Person/Woodlawn Neighborhood Resident
- Allan Rudwick/Eliot Neighborhood Resident
- Barry Joe Stull/ Eliot Neighborhood Association
- Emily Lieb/ Woodlawn Neighborhood Resident
- Kathryn Doherty-Chapman/Kerns Neighborhood

Welcome/Introduction

Nineteen StAC members and public citizens attended the second StAC meeting on Wednesday, April 20 beginning at 5:30 pm. The event was publicized by posting over 50 flyers in local businesses and social service providers, online community calendars, as well as through project emails and a notification on the project website.

A short presentation by van Tijen helped to introduce the project and the purpose for creating roadways that reduce and eliminate roadway deaths for people who walk, bike, or drive. The presentation also covered the results of the evaluation criteria prioritization process that took place the weekend of April 16 at several events around the study area.

Evaluation Criteria

Steffen discussed the evaluation criteria and the goal of the second StAC meeting, which is focused on finding solutions for the four problem areas, as identified at the first StAC meeting.

- Martin Luther King Jr. Boulevard (MLK) as a barrier
- Killingsworth Main Street
- Traffic speeds on neighborhood streets
- Intersection of Skidmore and Mississippi (the N Williams bike issues were not studied, due to the current project being conducted by the City of Portland on this subject)

Group work

The group was asked to break out into four smaller groups to address the solutions for these problem areas. Each group was asked to clarify the problem and goal for the area to ensure that there were no changes. Then the facilitator led each group through a discussion to rate each of the solutions based on the community compatibility (how well the solution would be accepted by the neighborhood) and the perception of safety (how safe the solution would make you feel). These two criteria were selected for StAC review and input due to their basis in community values. Below are the notes taken at each group, solution ratings are included in the following matrices:

Martin Luther King Jr. Boulevard as a barrier

- Increasing the transparency of businesses is easy to implement for new buildings, but much harder to fund changes to already existing buildings. If there were available funding, this would be readily acceptable. Without funding, this may be opposed by business owners.
- There were concerns about theft and the feasibility of using solutions such as the crossing flags, which would be unmonitored.
- When discussing timing traffic signals for a constant speed and reducing the speed limit, there were concerns about auto traffic moving from MLK to a more residential street. The group felt that there would need to be other changes made to the residential streets, to make them less desirable alternatives for car travel.
- One solution suggested was complete removal of the median barriers. A few people opposed this, fearing greater vulnerability for pedestrians. A few thought that it would increase the amount of business activity and provide a more desirable commercial district for bikes/pedestrians/cars.

Mississippi and Skidmore

- Raised crosswalks are too rare and new to work
- Traffic circles are not safe for bicyclists
- Parking on the hill causes visibility problems

Intersection of Killingsworth and MLK

- There is a lot of stress on this intersection and it could be a lot more efficient if it was stripped with a through lane and a left turn lane.

Traffic speed on neighborhood streets

- Signs seem to clutter the roadway and are not effective
- Road diets weren't seen as effective on residential streets (since this would include repainting of parking and less to do with physical changes)
- Stop signs seemed to cause too much stop and go traffic (particularly on Commercial)
- The half signal on Alberta at Commercial didn't seem necessary if the other solutions were in place
- Speed bumps were well received by the group, as was daylighting or removing parking at the corners/intersections.
- Traffic circles seemed confusing for drivers and bicyclists
- The group was interested in creating quality spaces through the use of trees and other aesthetic treatments; however, shrubs were not encouraged.
- The group was also interested in community building activities such as the street painting solution on Commercial Avenue. There was a desire to include schools in this type of solution.

The group then reconvened and each smaller group facilitator reported to the larger StAC group the results of the discussion. Below are the solutions that were considered to be most important or short-term priority. The project encouraged StAC members and the public to add their name to the list if they were interested in learning more about any of the solutions. This will help the project develop materials and a better understanding of the interest surrounding the solutions.

Martin Luther King Jr. Boulevard as a barrier

- Automate pedestrian signals (time with car crossings)
- Increase transparency of businesses
- Cut crossings through the barriers
- Crossing guards program (at King Elementary)
- Improved enforcement
- Half signals (for bikes and pedestrians only)

Mississippi and Skidmore

- Daylighting at intersection
- Traffic calming along Skidmore
- Improved enforcement of 4-Way Stop

Intersection of Killingsworth and MLK

- Automatic pedestrian phase across MLK
- Audible pedestrian indicator
- Leading pedestrian interval with no right on red
- Mid block crossing 200 feet from MLK (where Grand would be)

- Waving at drivers when trying to cross
- Seek adjustments to road classification of MLK
- Marked crosswalks on both sides of the street at Garfield, 6th and 7th
- Raised crossing along side streets at Garfield, 6th and 7th
- Half signal use at Garfield, 6th, and 7th for speed management and to promote crossings (scramble)
- Crossing flags program
- Crossing guards program
- Signal configuration (add protected left in all directions)
- Sharrows on Killingsworth
- Bike lanes on Killingsworth
- Curb extensions at crossings with on-street parking

Traffic speed on neighborhood streets

- Raised Crosswalks/Speed humps
- Radar Speed gun enforcement
- Curb Extensions
- Road diet of Commercial
- Street trees and other aesthetic improvements
- City Repair/street painting on Commercial Ave.

Next Events and Meetings

The group was encouraged to attend the May King, Boise, and Humboldt Neighborhood Association meetings, where the final Neighborhood Street Safety Action Plan will be presented.

King Neighborhood Association Meeting: May 9

Boise Neighborhood Association Meeting: May 10

Humboldt Neighborhood Association Meeting: May 11

Safety and Livability Team (SALT) Meeting: Mid-Late May

Land Use and Transportation Committee (LUTC) Meeting: Mid-Late May

Project Poster Session and Public Presentation: May 31, 2011

Van Tijen thanked the group and the meeting concluded at 7:00 pm.

Actions

Create a list serve for the StAC members to communicate with each other, also create a contact email list for reference (if the list serve fails).

1. Martin Luther King Jr. Blvd: Creating Safer Connections

- Crossing Flags Program: Ted Beuhler
- Half Signal: Ted Beuhler

2. North Mississippi Avenue and North Skidmore Street: Safer Intersections

- None

3. NE Killingsworth Street: Supporting a Main Street

- Automatic Pedestrian Phase across MLK: Teri Phillips, Alexis Grant and Derek Abe
- Audible Pedestrian Indicator: Teri Phillips, Alexis Grant and Derek Abe
- Leading Pedestrian Interval and no right on red at Williams and Killingsworth: Teri Phillips, Alexis Grant and Derek Abe
- Mid block crossing 200 ft from MLK (where Grand would be): Alexis Grant and Derek Abe
- Marked crosswalks on both sides of the street at Garfield, 6th and 7th: Teri Phillips, Alexis Grant and Derek Abe
- Curb Extensions at crossings with on-street parking: Alexis Grant and Derek Abe
- Bicycle Lanes on Killingsworth: Alexis Grant
- Crossing guard program: Teri Phillips
- Crossing Flags Program: Teri Phillips
- Waiving at drivers when trying to cross: Derek Abe
- Seek adjustments to road classification East of MLK (from Community Corridor to Community Main Street): Derek Abe
- Raised crossings along side streets at Garfield, 6th, 7th: Derek Abe
- Half signal use at Garfield, 6th, 7th for speed management and to promote crossings (Scrambler): Derek Abe
- Signal configuration, Left on Killingsworth: Alexis Grant
- Sharrows on Killingsworth: Alexis Grant

4. Neighborhood Streets: Slow Speeds, Safe Crossings, & Space for Everyone

- Partial closure of Commercial at Alberta and/or Killingsworth: Matt Hutchison
- Traffic Counts (pedestrian and bike): Jack Olsen

APPENDIX J. Project Workplan Overview

Overview

Project Purpose

The purpose of Vision Zero Oregon is to create the foundational pieces of a statewide Vision Zero toolkit and to create a safety plan for a neighborhood with high levels of roadway deaths. This plan, when implemented, will result in the conditions necessary for zero roadway deaths in the selected neighborhood. We recognize that one major barrier to implementing traffic safety solutions has been resident resistance and skepticism to the proposed interventions. To achieve a Vision Zero goal, it will be necessary to engage the wider community in a discussion of safety solutions for reducing deaths on roadways. The outreach will be extended to people of all ages traveling by every mode, including cars, bicycles, walking, freight, mobility devices, etc.

The project will result in two deliverables: a statewide toolkit and a neighborhood safety plan. The statewide toolkit will compile at least 20 safety solutions for design, policy, and community actions. A template will be created for additional solutions to be added to the toolkit. The neighborhood safety plan will use the toolkit as a starting point for community involvement. The lessons learned and experiences gained through this process will be used by the Bicycle Transportation Alliance (BTA) to expand the project throughout Oregon over the next three years.

Project Area

While traffic fatalities have occurred in every neighborhood within the City of Portland, some neighborhoods have been disproportionately affected by these deaths. The primary selection criteria included roadway fatalities, geographic and social equity concerns, and neighborhood interest. See the Neighborhood Selection Memo for more information.

Project Objectives and Products

Through the Vision Zero Oregon project, the Loci Group will engage with neighborhood residents, roadway users, and local agencies to guide the development of street safety strategies. Additionally, a subset of these stakeholders will explore options for enhancing safety through a Stakeholder Advisory Committee (StAC).

The first product will be the development of a statewide toolkit. The toolkit will include:

1. Community actions, policy, and design solutions that will form the basis of the toolkit and be used for the Neighborhood Safety Plan.
2. Templates for the creation and accumulation of additional solutions (for wider implementation across the state).
3. Introduction and chapter for instructions on toolkit usage, from both the community and BTA perspective.
4. Recommendations for the BTA to expand the project to other neighborhoods in Portland and the rest of Oregon.

The second product will be a Neighborhood Safety Plan, which will include:

1. Identification and prioritization of existing conditions and problems in the neighborhood (identified in the Neighborhood Selection Memo), through collection of public stories, visuals, and project led walking tour.
2. Presentation of the toolkit solutions for reducing fatalities and generally improving safety. The StAC will help to create a well-rounded toolkit that is applicable to this neighborhood (as well as others around Oregon).
3. Evaluation and prioritization of solutions to address the identified safety concerns in the neighborhood.
4. Recommendation of solutions with implementation phasing suggestions. Phases will be divided by short-, medium- and long-term solutions, with a particular emphasis on innovative solutions.

Roles and Responsibilities

The Loci Group will sign a memorandum of understanding (MOU) with the BTA to outline the expectations between the parties with regard to tasks and responsibilities during the project period.

The BTA will have the opportunity to review printed deliverables before presentation to the public, unless otherwise specified. Other BTA responsibilities are outlined in the MOU.

The Loci Group will assemble a Stakeholder Advisory Committee (StAC), with assistance from the BTA. Our goal is for the StAC to be comprised of technical experts, representatives of all roadway modes, neighborhood representatives, and other stakeholders that will need to be involved throughout the development and implementation of future improvements. The StAC will provide the Loci Group with recommendations for the Neighborhood Safety Plan and Toolkit, but will not have decision-making authority.

Within the Loci Group, each team member will be responsible for one aspect of the project, while the project manager will oversee the entire process.

Brandy Steffen – Project Manager

Nick Falbo – Client Communications and Primary Author

Michelle van Tijen – Public Involvement Coordinator

Marielle Brown – Data Analysis and Research Coordinator

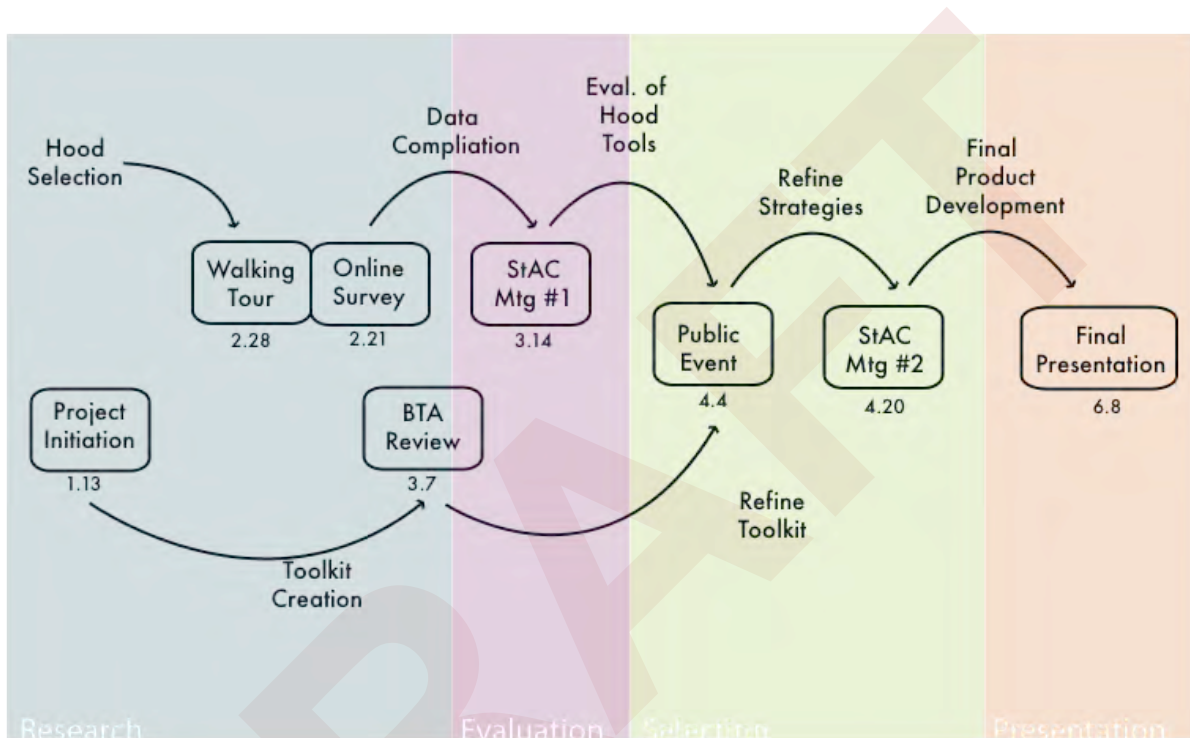
Ben Weber – Deliverables Production Coordinator

Key Assumptions

1. Roadway deaths are unacceptable.
2. Changes to design, policy, and community actions can reduce roadway deaths.
3. The neighborhood is a key constituency required for agreement and acceptance of any safety intervention proposal. Public involvement is a critical component of this project.

4. ODOT facilities pose significant challenges to the range of implementation solutions, due to state regulations. ODOT-owned facilities will not be included in either the Toolkit or Neighborhood Safety Plan.
5. The end product will aid the BTA in their outreach with the larger community in Portland and the rest of the state, but the majority of this project will be specific to the selected neighborhood.

Overview of Workplan



APPENDIX K. Evaluation Criteria

The Stakeholder Advisory Group (StAC) will review the draft Evaluation Criteria listed below during their second meeting to ensure that each solution from the Vision Zero Brochures are objectively and fairly compared against one another for the four problem areas and topics that were outlined during the first meeting. The four problem areas as identified during the first StAC meeting were:

Martin Luther King Jr. Boulevard (MLK) as a physical and community barrier

NE Killingsworth Street (from NE 7th Avenue to MLK Blvd)

Traffic speeds on neighborhood streets

North Williams Avenue bike lanes [*removed*]

However, the Loci Group decided that due to the Portland Bureau of Transportation's (PBOT) current planning effort to address the bike lanes on Williams Avenue, it would be better for Vision Zero Oregon to focus on a issue that is not currently being addressed. The intersection of Mississippi and Skidmore was selected due to the occurrence of two roadway deaths at this intersection in the last ten years. This intersection was also selected to address issues raised by the StAC and general public regarding the connections between neighborhood streets and the highway (Interstate 5). Therefore, the fourth problem area was changed to:

Intersection of NE Mississippi and NE Skidmore

Evaluation Criteria

The draft brochures presented during the StAC meeting outlined several solutions to roadway safety problems. Stakeholders suggested additional solutions during the meeting's small group discussions. Other problems and solutions were also identified through stakeholder interviews, the online survey, and through conversations with local residents and business owners. Based on these problems, goals for improving safety, and the potential solutions, the Vision Zero Oregon project developed a set of draft criteria to compare the solutions for each problem area outlined above.

Good evaluation criteria shows advantages and disadvantages between each of the solutions, helping the StAC members to decide which solutions should be their focus over the next year, next five years, and beyond. The criteria will help to determine a priority for the solutions as they are outlined in greater detail in the Neighborhood Safety Action Plan.

TABLE 1: DRAFT EVALUATION CRITERIA

| Criteria | Rating System |
|---|--|
| Speed reduction efficacy | <p>To what degree will the solution reduce vehicle speeds?</p> <p>0 – Solution has not been shown to reduce speeds (no research or research shows solution does not have significant effect on speeds).</p> <p>1 – Solution moderately effective at reducing speeds.</p> <p>2 – Solution proven highly effective at reducing speeds.</p> |
| Increased visibility for all road users | <p>To what degree does the solution increase visibility for all road users?</p> <p>0 –Solution does not increase visibility for any road users.</p> <p>1 – Solution increases visibility for one type of road user.</p> <p>2 – Solution significantly increase visibility for all road users.</p> |
| Improve the perception of street safety | <p>Does the solution create a feeling of increased safety for all transportation users? (Physical changes may not be required or widely tested. Behavioral changes may vary over time or by road user types.)</p> <p>0 – Citizens feel unsafe; the solution does not change the perception of safety or has no impact on perception.</p> <p>1 – Citizens feel moderately safe because of the solution.</p> <p>2 – Citizens feel very safe because of the solution.</p> |
| Community compatibility | <p>How readily would the larger community accept the solution, either immediately or with additional education?</p> <p>0 – Solution would not be acceptable to the larger community. Expect to encounter opposition from businesses or residents.</p> <p>1 – Solution would have mixed reaction from the community; some would oppose the solution while others may be supportive.</p> <p>2 – Solution would be met with broad support from the community.</p> |
| Technical compatibility | <p>How easy is it for this solution to be completed?</p> <p>0 – Difficult to implement or not currently allowed under city regulations.</p> <p>1– Can be hard to implement, but not impossible. Could take more effort,</p> |

| | |
|------|---|
| | <p>but can be achieved.</p> <p>2 – Easy to implement. Supported by through current city regulations and planning efforts.</p> |
| Time | <p>How long will it take to build, complete, or implement this solution?</p> <p>0 – Implementation could take over 2 years.</p> <p>1 – Implementation would take between 3 months to 2 years.</p> <p>2 – Implementation would take less than 3 months.</p> |
| Cost | <p>What is the expense for this solution?</p> <p>0 – Costs are prohibitive (over \$15,000).</p> <p>1 – Expensive to implement, but feasible. Not cost prohibitive for the City to implement (\$500-\$14,999).</p> <p>2 – Inexpensive to implement by individual residents/businesses/neighborhood associations (under \$500).</p> |

| | | Speed Reduction Efficacy | Improve the perception of street safety | Community Compatibility | Increases visibility for all road users | Technical Compatibility | Time | Cost | Total | Community Interest For Short-term? |
|-----------------------|---|--------------------------|---|-------------------------|---|-------------------------|------|------|-------|------------------------------------|
| Short Term Solutions | Audible Pedestrian Indicators | 0 | 2 | 2 | 0 | 2 | 1 | 1 | 8 | Yes |
| | Automate Pedestrian Signals | 0 | 1 | 2 | 1 | 2 | 2 | 1 | 9 | Yes |
| | Bicycle Lane | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 7 | Yes |
| | Bike Sharrows | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 7 | Yes |
| | Bulbouts and Curb Extensions | 2 | 2 | 2 | 1 | 2 | 2 | 0 | 11 | Yes |
| | Crossing Flags (DIY) | 0 | 2 | 2 | 1 | 2 | 2 | 2 | 11 | Yes |
| | Crossing Guards (Volunteer) | 0 | 2 | 2 | 1 | 2 | 2 | 2 | 11 | Yes |
| | HAWK/Hybrid Pedestrian Signals | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 7 | Yes |
| | Partial Closures | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 8 | Yes |
| | Pedestrian crossings | 0 | 1 | 1 | 1 | 2 | 2 | 1 | 8 | Yes |
| | Raised Crossing | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 7 | Yes |
| | Signal Timing and Phasing/Leading | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 12 | Yes |
| | Speed Control Signs/Stop Signs | 2 | 1 | 1 | 0 | 1 | 0 | 0 | 5 | Yes |
| | Street designation change for MLK (community corridor to main street) | 1 | 1 | 2 | 0 | 1 | 1 | 2 | 8 | Yes |
| | Traffic Counts | 0 | 1 | 1 | 0 | 2 | 2 | 2 | 8 | Yes |
| | Waving at Drivers | 0 | 1 | 2 | 1 | 2 | 2 | 2 | 10 | Yes |
| | Walking school bus or bike train | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 12 | |
| Medium-term Solutions | Center Diverter | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 10 | |
| | Pace car | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 10 | |
| | Bicycle Infra - including bikeways and signage | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 9 | |
| | Block Parties | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 9 | |
| | Block Party | 0 | 0 | 2 | 1 | 2 | 2 | 2 | 9 | |
| | Daylighting | 0 | 2 | 1 | 2 | 1 | 2 | 1 | 9 | |
| | Full Signal | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 9 | |
| | Increase Transparency of Businesses | 0 | 2 | 2 | 1 | 2 | 1 | 1 | 9 | |
| | Kidical-Mass | 1 | 0 | 1 | 1 | 2 | 2 | 2 | 9 | |
| | PBOT 823-SAFE | 0 | 1 | 2 | 0 | 2 | 2 | 2 | 9 | |
| | Pedestrian Scale Lighting | 0 | 1 | 2 | 2 | 2 | 1 | 1 | 9 | |
| | Pedestrian Scramble Signals | 0 | 2 | 1 | 2 | 2 | 1 | 1 | 9 | |
| | Personal Visibility | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 9 | |
| | Rapid Flash Warning Beacons | 1 | 2 | 0 | 2 | 1 | 2 | 1 | 9 | |
| | Road Diet | 2 | 2 | 1 | 2 | 1 | 1 | 0 | 9 | |
| | Street Banners | 1 | 1 | 1 | 0 | 2 | 2 | 2 | 9 | |
| | Crossing Island | 0 | 2 | 2 | 1 | 1 | 1 | 1 | 8 | |
| | Cut Crosswalks through medians | 0 | 2 | 2 | 2 | 1 | 1 | 0 | 8 | |
| | Park(ing) Day | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 8 | |
| | Plant Trees | 1 | 1 | 2 | 0 | 2 | 1 | 1 | 8 | |
| | Pledge to be better | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 8 | |
| | Public Events | 0 | 1 | 1 | 0 | 2 | 2 | 2 | 8 | |
| | Rumble Strips | 2 | 1 | 1 | 0 | 2 | 1 | 1 | 8 | |
| | Safe Routes to School | 0 | 1 | 2 | 1 | 2 | 1 | 1 | 8 | |
| | Soup Night | 0 | 0 | 2 | 0 | 2 | 2 | 2 | 8 | |
| | Speed Bumps | 2 | 1 | 1 | 0 | 2 | 1 | 1 | 8 | |
| Long-term Solutions | Attend Neighborhood Association Meeting | 0 | 0 | 1 | 0 | 2 | 2 | 2 | 7 | |
| | Bicycle Box | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 7 | |
| | Emergency Response Speed Bumps | 2 | 2 | 1 | 0 | 0 | 1 | 1 | 7 | |
| | Improved Enforcement | 1 | 1 | 1 | 0 | 2 | 2 | 0 | 7 | |
| | Intersection Painting | 0 | 1 | 1 | 0 | 1 | 2 | 2 | 7 | |
| | Reducing speeds | 1 | 1 | 1 | 2 | 0 | 1 | 1 | 7 | |
| | Walking Groups | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 7 | |
| | Yard Signs and Signage | 0 | 0 | 1 | 0 | 2 | 2 | 2 | 7 | |
| | Chicanes | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 6 | |
| | Letter Writing | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 6 | |
| | Education for Students | 0 | 1 | 1 | 1 | 2 | 0 | 0 | 5 | |
| | Traffic Circles | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 3 | |
| | No right on red | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | |