East Portland in Motion

A Five-Year Implementation Strategy for Active Transportation

FINAL REPORT

March 2012

CITY OF PORTLAND BUREAU OF TRANSPORTATION

Sam Adams, Mayor and Commissioner of Transportation

streetsmart go safe

East Portland in Motion

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First printing

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Abbreviations and Acronyms

ADT	Average daily traffic
ATF	Affordable Transportation Fund (PBOT fund for bikeway projects)
Ave	Avenue
BES	Portland Bureau of Environmental Services
Blvd	Boulevard
CDC	Community Development Corporation
Dr	Drive
EECBG	Energy Efficiency Community Block Grant
EPAPbike	East Portland Action Plan Bicycle Subcommittee
EPAT2T	East Portland Active Transportation to Transit (RFF grant)
EPIM	East Portland in Motion
EPLUTC	East Portland Land Use and Transportation Committee
EP	East Portland
FF	Flexible Funds (ODOT grant)
FY	Fiscal Year
GIS	Geographic Information Systems
GTR	General Transportation Revenue
HAWK	High-intensity Activated CrossWalK
HB 2001	Oregon House Bill 2001 (Oregon Jobs & Transportation Act of 2009)
HB 2001 CW	House Bill 2001 citywide funds
HB 2001 EP	House Bill 2001 funds dedicated to East Portland sidewalk infill
HCC	High Crash Corridor (PBOT safety program)
IGA	Inter-Governmental Agreement
MAX	Metropolitan Area Express (light rail)
MOU	Memorandum of Understanding
MTIP	Metropolitan Transportation Improvement Program
ODOT	Oregon Department of Transportation
PBOT	Portland Bureau of Transportation
PDC	Portland Development Commission
Ped	Pedestrian
Pl	Place
PPB	Portland Police Bureau
PPR	Portland Parks and Recreation
PWB	Portland Water Bureau
RFF	Regional Flexible Funds (Metro grant)
RTO	Regional Travel Options (Metro grant)
ROW	Right-of-Way
SAFETEA-LU	Safe Accountable Flexible Efficient Transportation Equity Act: a Legacy for Users
SDC	System Development Charges
SR2S	Safe Routes to School (PBOT program and ODOT grant)
St	Street
TC	Transit Center
TIF	Tax Increment Financing
TE	Transportation Enhancement (ODOT grant)
TSCD	Transportation System Development Charges
TSP	Transportation System Plan
URA	Urban Renewal Area
UPRR	Union Pacific Railroad

East Portland in Motion

A Five-Year Implementation Strategy for Active Transportation

Executive Summary FINAL REPORT • March 2012

Mayor Sam Adams

East Portland in Motion is a five-year implementation strategy for active transportation projects and programs east of 82nd Avenue in the City of Portland, Oregon. ***Active transportation*** is daily travel powered by human energy. Walking, biking and taking transit are all means of active transportation. Encouraging active travel means creating seamless networks of accessible sidewalks, crossings, bikeways and trails. A successful active transportation network can:

- provide equity and access to viable, affordable transportation options,
- help create safer streets and communities,
- help reduce the causes of global climate change,
- promote a healthy environment,
- limit adverse health impacts related to inactivity, and
- support local businesses.

East Portland – home to nearly 165,000 people – can be hard to navigate on foot or by bicycle or transit. Features that make active transportation attractive in other areas of Portland, like sidewalks, low-stress bikeways, and frequent transit, are harder to find east of 82nd Avenue. Not surprisingly, rates of walking, biking or taking transit to work or school are lower in East Portland than in the city as a whole. Still, many people who depend on active transportation choose to live in East Portland for its lower housing costs, and often must walk, bike or wait for the bus in substandard conditions.

Despite these challenges, East Portland has an active transportation framework that is well positioned for enhancement, with three light rail lines, TriMet's two highest ridership bus routes (lines 4 and 72), and 24 miles of paved multi-use trails.

PBOT undertook *East Portland in Motion* to expand opportunities for using active transportation east of 82nd Avenue. The strategy is also a response to several unique opportunities:

- The ***Portland Plan***, informing Portland's *Comprehensive Plan* update, specifically calls for an East Portland Active Transportation Plan to prioritize connections that improve access to neighborhood hubs, transit, schools, and parks. These efforts also build on the city's ***Safe, Sound and Green Streets*** policy objectives.

- City Council directed PBOT to reexamine and focus recommendations of the ***Portland Bicycle Plan for 2030*** in East Portland, in response to community concern over the proposed bikeway types.

- Mayor Adams pledged revenue from the **Oregon Jobs and Transportation Act** (Oregon House Bill 2001) to fund sidewalk infill projects in East and Southwest Portland. *East Portland in Motion* serves as a means of prioritizing sidewalk projects to be funded with $8 million of these state funds.

- The Multnomah County Health Department offered additional resources through a ***Communities Putting Prevention to Work*** grant from the federal Center for Disease Control. This grant helps public agencies increase the development and usage of active transportation facilities.

Engaging a Diverse Community

East Portland in Motion is based on community priorities and was developed in partnership with the people of East Portland. Community involvement included the following:

- PBOT collaborated directly with two East Portland neighborhood groups focused on transportation: the **East Portland Land Use & Transportation Committee** (EPLUTC) and the **East Portland Action Plan Bicycle Subcommittee** (EPAPbike).

- PBOT engaged residents by setting up *East Portland in Motion* **"stations" at 12 community events** and at open houses for related projects. Participants provided feedback by voting for potential sidewalk projects, taking a survey focused on sidewalk and bicycle policy priorities, and engaging directly with PBOT staff.

- PBOT partnered with Portland State University Master of Urban and Regional Planning (MURP) students, who performed **individual interviews of community stakeholders**, held **group interviews of typically underrepresented populations** (including members of diverse immigrant communities), and mailed an **East Portland Travel Survey** to 3,000 households. These activities provided valuable insight on people's transportation habits and attitudes in East Portland.

- PBOT received feedback from **other stakeholders and advisory groups**, including the Portland Commission on Disability Accessibility in the Built Environment Committee, Immigrant and Refugee Community Organization, Portland Pedestrian Advisory Committee, OPAL Environmental Justice Oregon, school districts, and many others.

- PBOT maintained a **website** throughout the course of the project to provide project updates, notice of community events, project materials such as maps and display boards, and an on-line survey. (www.portlandonline.com/ transportation/epim)

Major findings from the community involvement process include:

- **Importance of transit.** People want safer access to and from transit stops, including for both MAX and buses, particularly when crossing busy streets. For many people in East Portland who do not have access to a car, transit is more important than bicycling for daily travel.

- **Build multiple types of sidewalks in high demand areas.** Survey respondents support building a mix of sidewalk types, from wide sidewalks with room for landscaping, to more affordable curb-tight sidewalks. Sidewalk projects in densely populated neighborhoods like Powellhurst-Gilbert received particularly strong support.

- **Low-stress bikeways are most popular.** People gave highly favorable ratings to neighborhood greenways and paved trails, both of which minimize interactions with cars. Bicycle facilities that pose more potential conflict with cars, including advisory bike lanes and enhanced shared roadways, received the lowest ratings.

- **Focus on children.** People showed significant support for programs like *Safe Routes to School* that focus on engineering improvements, as well as education and encouragement, to promote safer walking and bicycling to school.

Examining Needs, Setting Priorities

East Portland in Motion prioritizes projects that have already been discussed, planned or scoped to some extent. Project sources for *East Portland in Motion* can generally be divided into three categories:

- **Planning documents** adopted by the City of Portland over the past several years, including the ***East Portland Action Plan***, the ***Portland Bicycle Plan for 2030***, the ***122nd Avenue Complete and Green Main Street Project,*** and the ***City of Portland Transportation System Plan,*** as well as the ***Safe, Sound and Green Streets*** planning effort.

- **Neighborhood priorities** stated by neighborhood associations and school districts, provided through their representatives on the EPNOLUTC, EPAPbike and urban renewal advisory committees.

- **Geographic analysis and field investigation** that revealed additional gaps in East Portland's network of sidewalks, bikeways, trails and street crossings.

PBOT refined the hundreds of projects identified in the above sources into a manageable number of projects that can be feasibly implemented over the next five years. PBOT considered several criteria while narrowing the list of projects:

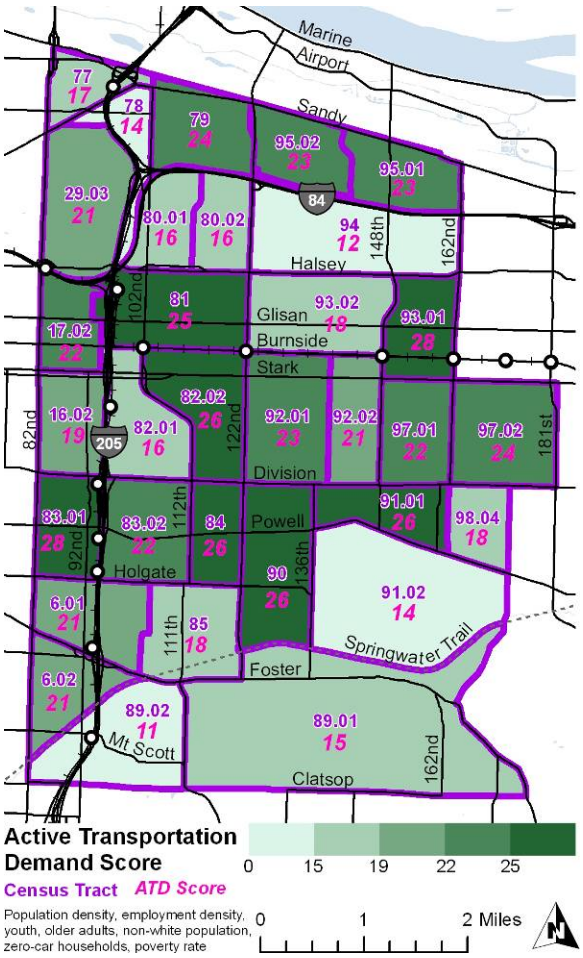
- **Community support**, including direct recommendations from EPNOLUTC and EPAPbike, public voting on sidewalk project candidates at community events, survey results from the *Sidewalk and Bicycle Priority Survey* and *East Portland Travel Survey*, and letters of support from other groups and individuals.

- **Transportation equity.** A major intent of *East Portland in Motion* is to recommend active transportation projects in communities that most need them. To help determine where these communities are, PBOT analyzed demographic indicators including population density, employment density, proportion of children, proportion of older adults, proportion of non-white residents, poverty rates, and prevalence of zero-car households. The map at right shows how areas between NE Halsey and SE Foster score highly in these regards.

- **Accessibility.** Projects that significantly improve access between destinations such as homes, businesses and transit stops have the greatest utility for daily transportation. PBOT examined accessibility in terms of potential **service areas** (how many residents are within reasonable walking distance of a new facility?) and **access to transit** (how many transit riders would be served by a new facility?).

- **Connectivity**. Which projects would fill a critical gap in the pedestrian network and result in a greater number of walking trips? Portland State University geography students assisted PBOT with this inquiry by building a digital model of the pedestrian network and forecasting the gains in pedestrian trips after a project is built.

- **Leverage**. Opportunities to leverage city funding with other sources make certain projects more feasible. Potential leverage sources include urban renewal funds, state grant programs, and federal transportation dollars.



Recommended Projects and Programs

East Portland in Motion recommends over 80 active transportation projects or programs over the next five years. PBOT has secured funding at the city level to construct projects programmed in the first two years. Complete implementation will require future funding allocations and partnerships with other agencies. Recommendations include the following:

- **Sidewalk infill**. PBOT is planning to construct over eight miles of sidewalk on arterial streets. This will include:
    - **5.7 miles of "curb-tight" sidewalk** within existing rights-of-way on streets like SE Stark Street and SE 162nd Avenue.
    - **2.4 miles of separated sidewalk**, including the SE 122nd "Complete and Green Main Street" project, and sidewalks along neighborhood collector streets like NE Prescott Street and SE 136th Avenue.

- **Crossing improvements**. PBOT plans to build over 50 crossing improvements to help people access transit stops and other destinations along busy streets. Some crossings will be built as part of sidewalk or neighborhood greenway projects. NE Halsey Street, SE Division Street, SE Stark Street, 122nd Avenue and other arterial streets will see improvements ranging from median refuge islands to full traffic signals.

- **Neighborhood greenways** are low-traffic, low-speed streets where priority is given to people biking and walking. They provide quieter alternatives to busier streets nearby and enhance the environment through tree plantings and landscaping. PBOT is planning nearly 30 miles of new neighborhood greenways in East Portland, starting with a north-south route along the 130s avenues and an east-west route along SE Market, Mill and Main streets.

- **Separated in-roadway bikeways** help people bike to destinations along busier streets. These facilities include regular and buffered bike lanes and cycle tracks. PBOT plans to stripe seven miles of new or enhanced bike lanes in East Portland, including portions of NE Prescott and SE Division streets.

- **Bicycle parking.** With the help of regional funding, PBOT will establish safe and secure "Bike & Rides" at three MAX stations, create higher quality bike parking at suburban-format shopping centers through a pilot "Bike & Shop" program, and provide bicycle parking in traditional business districts like Parkrose and Lents.

- **Education and encouragement programs.** East Portland in Motion recommends the continuation and expansion of several proven city programs that help people use active transportation. This includes:
    - expanding **Safe Routes to School** to 28 schools in five school districts;
    - administering safety programs on six **High Crash Corridors**; and
    - bringing the **SmartTrips** program back to East Portland.

East Portland in Motion also pledges PBOT's cooperation on several projects led by other agencies, including five **trail projects** and seven **roadway improvement projects**.

Next steps. During the development of *East Portland in Motion* PBOT has continued to move forward with projects that have broad community support, including sidewalks on SE 122nd Avenue, crossing improvements on SE Foster Road, and the 80s neighborhood greenway. With the completion of the implementation strategy, PBOT has begun implementation of the sidewalk infill projects and the next round of neighborhood greenways.

1
Introduction

1.1. Active Transportation for East Portland

East Portland in Motion is a five-year implementation strategy for active transportation projects east of 82nd Avenue in the city of Portland, Oregon. ***Active transportation*** is daily travel powered by human energy. Walking, biking and taking transit (which often involves walking) are all means of active transportation. Encouraging active travel means creating seamless networks of accessible trails, sidewalks and bikeways. A successful active transportation network can:

- provide equity and access to viable, affordable transportation options,
- help create safer streets and communities,
- help reduce the causes of global climate change,
- promote a healthy environment,
- limit adverse health impacts related to inactivity, and
- support local businesses.

The City of Portland has been an international leader in encouraging and providing facilities for active transportation, from innovating new types of bikeways and expanding the region's trail network, to partnering with TriMet to construct one of the nation's first modern light rail systems. Visitors often marvel at the number of bicyclists they see in Portland, the cleanliness and convenience of our public transit, and the bustling activity along our sidewalks. Portland repeatedly ranks among the top American cities in magazine polls about walking, bicycling, transit and healthy lifestyles.[1]

However, the conditions that make active transportation so attractive in Portland are harder to find east of 82nd Avenue. Even with three light rail lines, 57 miles of bike lanes and 24 miles of paved multi-use trails, East Portland remains difficult to navigate on foot, bike or transit. Five-lane arterial roads – many without sidewalks – are the primary corridors of activity of East Portland, interspersed with residential streets that are often poorly connected and sometimes unpaved. Not surprisingly, use of active transportation modes is lower in East Portland than in the city as a whole. Still, many people who depend on active travel – lower income families, immigrants, those without cars – choose to live in East Portland for its lower housing costs, and must walk, bike or wait for the bus in substandard conditions.

[1] "25 Best Walking Cities," Prevention, April 2009. "America's Top 50 Bike-Friendly Cities," Bicycling, April 2010. "10 Best Cities for Public Transportation," US News & World Report, February 2011.

East Portland's active transportation challenges have been well documented in recent planning documents, news stories and community forums.[2] But until now, there has not been a single, overarching strategy to guide the Portland Bureau of Transportation (PBOT) in prioritizing its transportation investment decisions here. The City's *Transportation System Plan* (TSP) serves this function, but was last updated in 2007, before recent planning efforts such as the *East Portland Action Plan* and *Portland Bicycle Plan for 2030* offered updated recommendations. *East Portland in Motion* builds on the planning work and community conversations that have taken place over the last four years, channeling identified projects as well as newly identified ones into a single source for implementation guidance.

East Portland in Motion will not solve every active transportation problem in East Portland, but it is a critical, positive step forward. It prioritizes a series of pedestrian, bicycle and access-to-transit projects that address some of the most serious needs, are supported by the East Portland community, and can be feasibly constructed in the next five years with identified funding sources.

1.2. The Origins of East Portland in Motion

PBOT initiated *East Portland in Motion* in response to a Portland City Council mandate as well as several funding and partnership opportunities. Scoping of the strategy began when the ***Portland Bicycle Plan for 2030*** was drawing to a close in the winter of 2009-2010. Members of the East Portland community were concerned that PBOT would face insurmountable challenges when implementing the recommended bikeways east of 82nd Avenue – many of which were proposed to take new, experimental forms. To respond to these concerns, City Council directed PBOT to more closely examine the preferred bikeway network in East Portland, and to test public acceptance of the new types of bikeway facilities proposed in the plan. The ***Portland Plan***, Portland's twenty-five year vision, includes this directive as action items in the *Healthy Connected City* strategy.

In 2009, the Oregon Legislature passed the **Oregon Jobs and Transportation Act** (Oregon House Bill 2001), providing new state funding for transportation projects. Mayor Adams pledged a portion of this new revenue – about $16 million for two years – to fund sidewalk infill projects in East and Southwest Portland. The money is split evenly between the two districts – about $8 million for each. PBOT decided to use *East Portland in Motion* as a means to identify and prioritize sidewalk infill locations in East Portland.

During this time, TriMet – Portland's primary public transit provider – had begun a technical analysis of pedestrian infrastructure deficiencies near its transit stops. East Portland emerged

[2] City of Portland Bureau of Planning, *East Portland Review*, November 2007. Griffin, Anna, "Portland and its leaders need to remember the city continues east of 82nd Avenue," The Oregonian, 4 June 2010. Pitkin, James, "Dirt Roads, Dead Ends." Willamette Week, 11 May 2011. Sauvie, Nick and Hiroaki Aki, *East Portland Community Values*, ROSE Community Development Corporation, March 2011.

as an area with significant transit access issues, prompting a collaboration with PBOT on how to address them. A parallel effort was also underway at the grassroots level, with community organizing group OPAL bringing attention to deficient East Portland bus stops through its *East Portland Community Bus Stop Assessment*. PBOT included ***safer access to transit*** in the scope of *East Portland in Motion* to build on the work of TriMet and OPAL.

The Multnomah County Health Department offered additional resources through a ***Communities Putting Prevention to Work*** grant it received from the U.S. Center for Disease Control. This grant helps public agencies increase the development and usage of active transportation facilities. A portion of this grant was dedicated to support the EPIM effort.

PBOT defined the *East Portland in Motion* study area as the **City of Portland east of 82nd Avenue** – not just the jurisdiction of the East Portland Neighborhood Associations, but also Sumner and portions of Madison South and Montavilla neighborhoods. Using this western boundary allows for greater continuity when planning facilities between 82nd Avenue and I-205, and corresponds to commonly held notions of where transportation investments are needed in Portland's eastern reaches.

PBOT collaborated with the East Portland community on the project for about a year, including close coordination with the East Portland Land Use and Transportation Committee (**EPLUTC**) and East Portland Action Plan Bike Subcommittee (**EPAPbike**), numerous stakeholder interviews, and more than a dozen community events, fairs, workshops and open houses.

A draft report was circulated for public review beginning in September, 2011, with comments accepted until November 10, 2011. The report was then revised to incorporate public feedback. The implementation strategy represented in this Final Report was adopted by Portland City Council on April 18, 2012.

1.3. Relation to Past and Concurrent Planning

East Portland in Motion follows and focuses the recommendations of several planning efforts. The five most significant planning projects that inform this strategy are:

- ***Portland Plan*** (draft, October 2011). Portland's twenty-five year vision to inform a *Comprehensive Plan* update specifically calls for an *East Portland Active Transportation Plan* to prioritize connections that improve access to neighborhood hubs, transit, schools and parks.[3] PBOT coordinated with the Bureau of Planning and Sustainability as it developed this and other transportation-related goals, objectives and concepts. PBOT also shared *East Portland in Motion* materials at a Portland Plan open house in East Portland.

[3] *Portland Plan 5-Year Action Plan: Healthy Connected City Strategy*, Actions 10, 26 – 30, 32, 33, and 45, October 2011.

- ***Portland Bicycle Plan for 2030*** (2010). *East Portland in Motion* serves as a means of refining bike plan recommendations for East Portland. PBOT collaborated with EPAPbike to determine the most appropriate locations, facility types and phasing for bicycle facilities in East Portland.

- ***East Portland Action Plan*** (2009). *East Portland in Motion* focuses the transportation recommendations of this district-wide plan, from the overarching call to "identify and prioritize East Portland street improvement projects" (Action T.7.2), to specific recommendations such as "implement 122nd Avenue safety improvements at high crash intersections." (Action T.4.8). The East Portland Action Plan generally calls for improved transit service throughout East Portland (T1), increased safety and convenience of walking throughout East Portland (T2), increased safety and accessibility of bicycling in East Portland (T3), improved safety and multi-modal function of arterial and collector streets throughout East Portland (T4), improved connectivity throughout East Portland (T6), and to foster equity in transportation decisions and services (T7). The plan specifically calls for certain pedestrian improvements: (T.1.7) Expand City of Portland and TriMet partnership linking sidewalk improvements with transit stop improvements; (T.2.1) prioritize East Portland schools for Safe Routes to School sidewalk and crossing improvements; (T.2.2) study, identify and scope funding for pedestrian crossing safety improvements on Glisan, Halsey, Stark, Division, 122nd, and Foster; (T.2.4) review policy: prioritize adding sidewalk connections over expanding/widening existing connections; and (T.6.5) institute policy and develop plan to provide accessible transportation options (sidewalks, streets, connections) for people with physical disabilities. EPAP also calls for certain bicycle improvements: (T.3.1) install striped bike lanes on all major arterials throughout East Portland, prioritize areas with gaps in the bike network; (T.3.3) develop complete and more well-defined bike system plan for East Portland, consider/incorporate safety innovations such as divided bike lanes, bike boxes, and path systems; and (T.3.6) assess bike safety issues in key areas such as Mall 205, Lents, and Division Street, and implement improvements. EPAP lays out arterial safety improvements: (T.4.1) identify and implement low cost/high impact maintenance improvements on SE Powell Boulevard; (T.4.2) implement Powell Boulevard Safety Improvements, 122nd Avenue to 136th Avenue; (T.4.8) Implement 122nd Avenue Safety Improvements at high crash intersections; and (T.4.9) implement Sandy Boulevard Safety Improvements, 122nd Avenue to 141st Avenue. EPAP specifically calls for equity improvements in decision-making: (T.7.1) prioritize East Portland schools in 'safer routes to school' funding and implementation; (T.7.3) prioritize transportation safety improvements at high-crash intersections.

- ***Safe, Sound and Green Streets*** (2008). In 2007, then-commissioner Sam Adams convened an 89-member stakeholder committee to gather input on transportation safety, infrastructure and funding needs. The resulting *Safe, Sound and Green Streets* program recommended pedestrian crossing improvements, sidewalks on arterial streets, neighborhood greenways on lower-traffic streets, and increased investment in the Safe Routes to School program, among other action items. The city was able to

avoid instituting the original funding proposal (a city gas tax and street maintenance and safety fee) by using an alternative mix of state and local funding. Today, *Safe, Sound and Green Streets* continues as both an overarching policy, as well as an ongoing list of transportation projects to be investigated further. *East Portland in Motion* provides a fresh look at safety and infrastructure needs east of 82nd Avenue, and ultimately recommends many of the projects identified during the earlier effort.

- ***Portland Transportation System Plan*** (2007). *East Portland in Motion* selects and prioritizes projects found in PBOT's master policy and capital planning document, based on the latest community priorities. In turn, *East Portland in Motion* will help guide a complete update of the TSP in 2012.

Other related plans, programs and policies that helped inform decisions on *East Portland in Motion* include the following:

- ***122nd Avenue Project*.** This is a *Portland Plan* pilot project undertaken by the Portland Bureau of Planning in 2010. It identifies projects and policies that would encourage a more cohesive "20-minute neighborhood" centered on SE 122nd Avenue from Division Street to Foster Road. Among its key transportation recommendations are crossing improvements along SE 122nd Avenue.

- **TriMet's *Pedestrian Network Analysis* technical memos.** TriMet performed a technical analysis of pedestrian facilities near its bus and rail stops to determine which areas most need improvement, based on pedestrian infrastructure deficiencies, land use and ridership. It identified ten focus areas throughout the region for pedestrian improvements – two of which are in East Portland: an area focused on SE Division Street and 122nd Avenue, and another focused on SE Powell Boulevard and 82nd Avenue.

- **Urban renewal area planning.** Urban renewal advisory committees help the Portland Development Commission (PDC), in cooperation with PBOT, guide transportation improvements in three East Portland urban renewal areas: Lents Town Center, Gateway Regional Center, and Airport Way. All three areas have prioritized lists of community-supported transportation improvements, and pose opportunities for multi-jurisdictional leverage.

- ***Outer Powell Boulevard Conceptual Design Plan*.** PBOT partnered with the Oregon Department of Transportation (ODOT) to develop concepts for a complete reconstruction of SE Powell Boulevard from Interstate 205 to the Gresham city limit. This is a complex project on a state-controlled road with a longer implementation time frame than *East Portland in Motion*. However, PBOT shared and gathered input on *East*

Portland in Motion during public events associated with the project, and used the project's *Local Street and Accessway Report* as a source for potential local ped/bike connections.

- **Safe Routes to School.** PBOT maintains ongoing partnerships with 20 schools in five different school districts in East Portland. Safe Routes to School encourages safe walking and bicycling to K-12 schools through the 5 'E's: education, encouragement, engineering, enforcement and evaluation. Nine of the partner schools in East Portland have engineering plans that recommend sidewalk, crossing and other projects that helped inform *East Portland in Motion*. PBOT received grant awards to build some of these projects during the development of the strategy.

- **High Crash Corridors.** PBOT's High Crash Corridor program targets city roadways with high rates of crashes, pedestrian fatalities, drunk driving and distracted driving. The program works to improve safety through enhanced education, enforcement, and engineering strategies. PBOT began the program in 2008 with 82nd Avenue, where safety improvements and programs continue to be implemented. The current efforts in East Portland are on 122nd Avenue and SE Foster Road, with future plans to include SE Division Street, NE Marine Drive, NE Sandy Boulevard and SE Powell Boulevard.

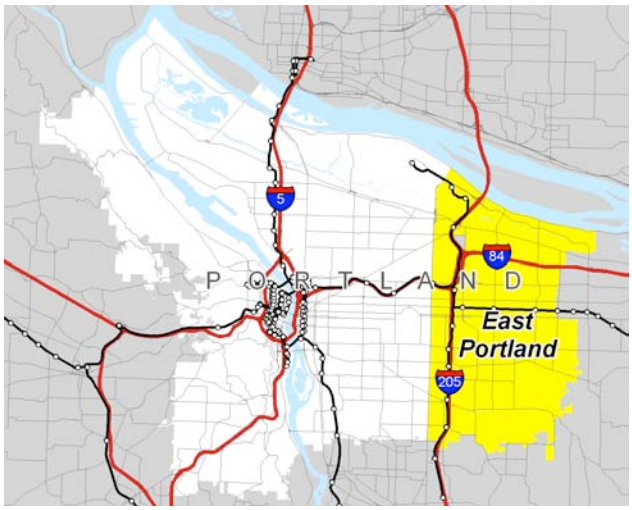
Most importantly, the above planning projects contain recommendations on **specific active transportation projects and program**s, which are included as "project candidates" in *East Portland in Motion*.

2
East Portland Today

Look Alive!
Be alert and stay safe

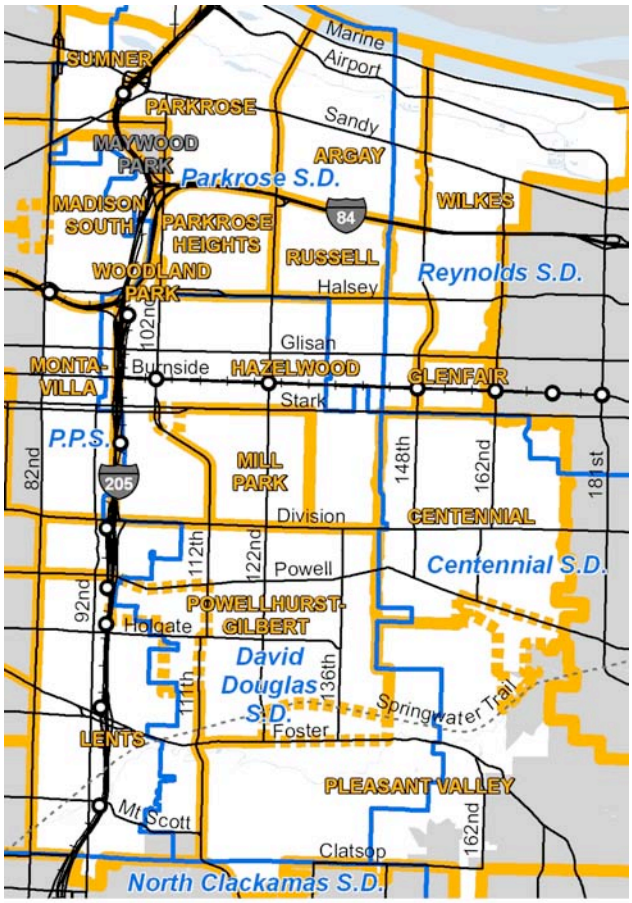
2.1. The East Portland Community

Transportation equity is a critical issue for PBOT and city leadership, and a key motivating factor for developing *East Portland in Motion*. From a demographic and socio-economic standpoint, East Portland is very different from the rest of Portland – it is more ethnically and racially diverse, less affluent, and has a greater proportion of both children and seniors. Data highlighting these differences are summarized below, with more details available in Appendix A.



For the purposes of *East Portland in Motion*, East Portland is the portion of the City of Portland **east of 82nd Avenue**, stretching five miles from 82nd Avenue to Gresham, and eight miles from the Columbia River to Clackamas County. As of 2010, this study area contains:

- 164,679 residents
- 63,411 housing units
- Roughly 58,000 jobs
- 16 neighborhoods
- All or parts of six school districts
- 34 square miles



East Portland represents 28% of Portland's population and 23% of its land area. On its own, **East Portland would be Oregon's second largest city** by population**,** with more people than Eugene or Salem. In the decade from 2000 to 2010, East Portland added nearly 24,000 people (a 17% increase) and 11,000 housing units (a 21% increase), significantly outpacing growth in the City of Portland as whole. Put another away, 44% of the citywide population increase over the decade can be attributed to East Portland.[4]

[4] US Bureau of the Census, 2010 Decennial Census.

PBOT considered other pertinent demographic facts about East Portland, including:[5]

- **Population Density**. Parts of East Portland are as dense as the city's inner east side neighborhoods. Glenfair, Powellhurst-Gilbert and Centennial neighborhoods are the most densely populated in East Portland. Numerous apartment complexes and infill townhomes have developed in high-density zoning districts along transit corridors. South of Foster Road, density is significantly lower in the forested hills of Pleasant Valley.

- **Employment Density**. While many characterize East Portland as a suburban residential area, about an eighth of Portland's jobs are located east of 82nd Avenue. East Portland's most significant concentration of employment is the Gateway Regional Center, where Adventist Medical Center, Oregon Clinic and numerous retail and professional businesses employ over 11,000 workers. Even more people work in the Columbia Corridor – the linear belt of manufacturing and warehousing north of Sandy Boulevard. The portion of the Columbia Corridor from 82nd Avenue eastward to the city limits contains nearly 17,000 jobs. Other, smaller clusters of jobs are found in the form of retail shopping centers, often where major arterials intersect, such as SE 122nd and Division.

- **Age**. East Portland has a greater proportion of children and youth (age 17 and younger) and older adults (age 65 and over) than Portland as a whole. In fact, East Portland is home to:

  - 37% of Portland's children,
  - 38% of Portland's K-12 students, and
  - 33% of Portland's seniors.

- **Race and Ethnicity[6].** East Portland is more ethnically and racially diverse compared to Portland as a whole, with a full third of the East Portland population identifying as something other than "white," compared to a quarter citywide. Specifically:

  - 15% of East Portland residents identify themselves as Hispanic or Latino.
  - 12% are of Asian descent, including significant Vietnamese and Chinese populations.
  - 9% are Hawaiian or Pacific Islander.

[5] US Bureau of the Census, 2010 Decennial Census and 2005-2009 American Community Survey Five-Year Estimates.

[6] Note that race and ethnicity are not mutually exclusive in the Census, so percentages may add up to greater than 100%.

- 7% consider themselves Black or African American.
- 1% are Native American or Native Alaskan.
- 13% are either multiracial or classify their race/ethnicity as "other."
- East Portland is also home to a significant Eastern European population, including many first-generation Russian immigrants.

- **Language.** One quarter of East Portland households speak a primary language other than English. Citywide, that proportion is 17%. After English, Spanish is the single most common primary language in East Portland (representing 9% of households), though a similar number of households speak one of several Asian or Pacific Island languages. David Douglas School District reports that 67 languages are spoken in students' homes.

- **Poverty.** With some of the lowest rents and home prices in the City, East Portland is a significant draw for families with children, immigrants and refugees, and people of limited means. Recent evidence suggests that some Portland residents – especially non-whites – have been priced out of gentrifying areas of inner Portland, especially North/Northeast, and are moving to East Portland in search of more affordable housing.[7] Additionally**:**

  - The **poverty rate** – the percentage of residents whose average income is below the federally-determined poverty line – is 18% in East Portland, a few points higher than the citywide rate of 16%, and as high as 36% in the Glenfair neighborhood.

  - 79% of David Douglas School District students are eligible for **free or reduced price lunches** through federal assistance. In Parkrose schools, 75% are eligible; in Centennial schools, 64%. Eligibility is as high as 91% at David Douglas's Mill Park Elementary School.[8] By contrast, 43% of Portland Public School students are eligible for the program.

- **Zero-Car Households.** Households without access to a motor vehicle are less common in East Portland – they represent fewer than 5% of households here, versus 7% citywide. However, significant concentrations of zero-car households are found along the MAX Blue Line, often in the form of senior housing.

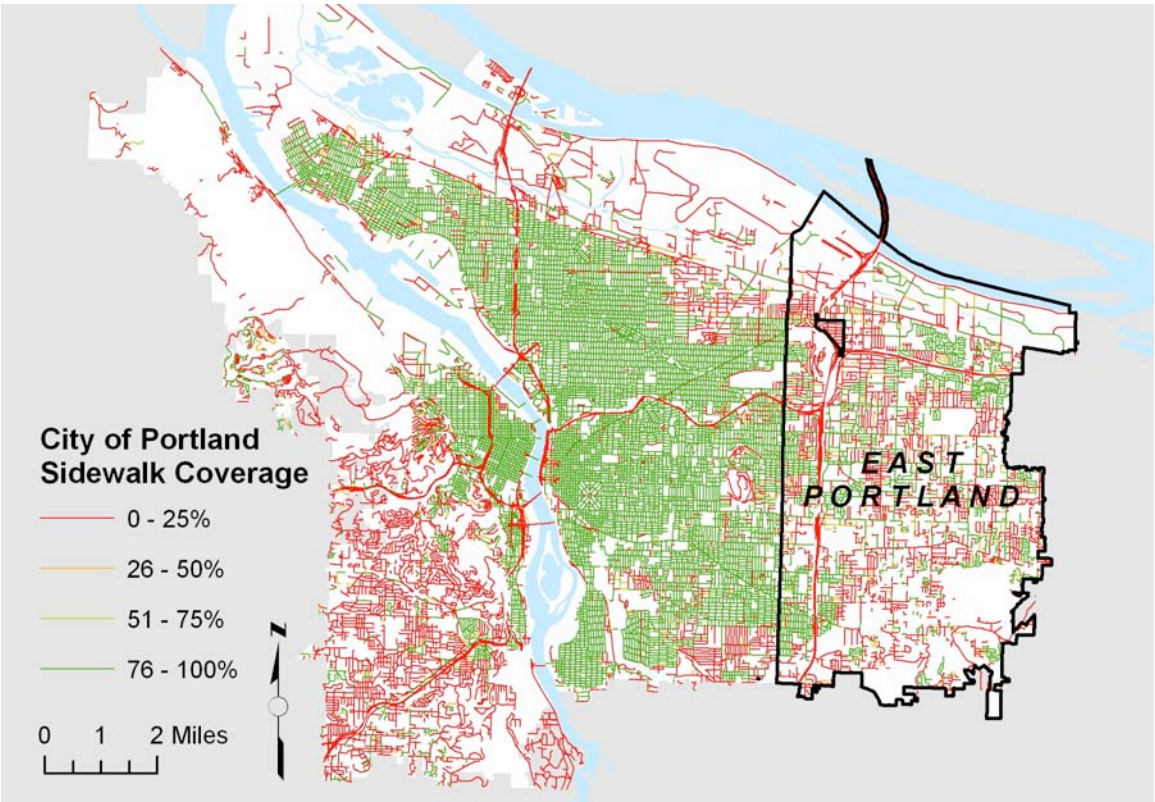
[7] The Oregonian, "In Portland's heart, diversity dwindles," Sunday, May 1, 2011.
[8] Oregon Department of Education DBI reports, http://www.ode.state.or.us/sfda/reports/r0061Select.asp

2.2. Getting Around East Portland

East Portland developed differently than areas closer to downtown Portland, and consequently functions differently from a transportation standpoint. The City of Portland annexed most of the area between I-205 and the western border of Gresham in the 1980s and 90s. This previously unincorporated area witnessed an incremental transition from rural farmland to suburban development over many years, resulting in a patchwork quilt of land uses from different eras of the 20th and 21st centuries. It is not uncommon to see a century-old farmhouse next to new townhouses next to a mid-century shopping center, for example.

East Portland's unique development history resulted in a transportation system that presents challenges and opportunities for implementing active transportation. Among them:

- **Lack of sidewalks.** Prior to the City of Portland gaining jurisdiction over East Portland roadways, Multnomah County did not require sidewalks within or alongside new development. As a result, most areas that developed during county jurisdiction have streets with gravel shoulders instead of curbs and sidewalks. On major arterial roadways, the county usually installed curbs and stormwater facilities, but often no sidewalks.



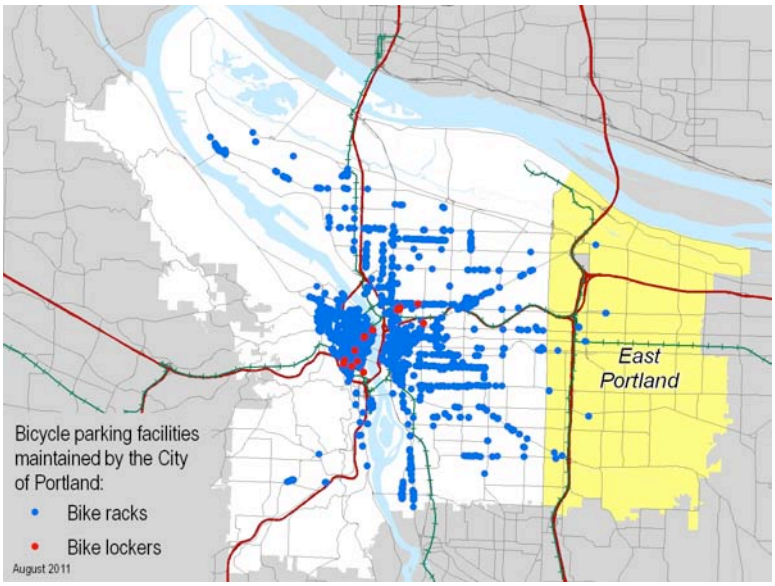
- **Wide, busy arterials.** In the mid-20th century, Multnomah County transformed major roadways like Division, Stark, Glisan, Halsey, 122nd and 162nd from rural farm roads into five-lane suburban highways in anticipation of eastward growth from Portland. Today these roadways pose challenges for people walking, bicycling or accessing transit. Sidewalks are incomplete and substandard. Safe places to cross are often separated by a quarter mile or more. Some arterials have bike lanes, but bicycling remains challenging due to the speed and volume of traffic.

- **Poor connectivity.** In the large blocks between arterial streets, incremental development of large parcels and the intentional discontinuity of mid-century planning created poorly- connected local street networks. For people on foot or bike, this means extra travel to navigate around dead-end streets and isolated subdivisions. It also encourages through travel on the deficient arterial streets described above, and makes those streets busier.

- **High-stress bikeways.** While East Portland is fortunate to have the Springwater Corridor and other car-free paved trails, most of the area's other bikeways are bike lanes on busy arterial roadways. While they offer dedicated space for bicycling, bike lanes on heavily travelled five-lane roadways present safety and comfort issues for many cyclists. East Portland has very few lower-stress alternatives on quieter streets, known as neighborhood greenways. A goal called out in the *Portland Bicycle Plan for 2030* – to have 80% of the population within one half mile of a low-stress bikeway – has yet to be met east of 82nd Avenue.

- **Automobile-oriented development.** In inner Portland neighborhoods, mixed-use main streets are made pleasant and safe with the help of buildings right at the edge of the sidewalk, few driveways interrupting the path of pedestrians, space for bike parking and bus shelters, and active uses that provide "eyes on the street." In East Portland, most commercial areas (as well as many multi-family residential areas) have been designed for cars rather than people, with parking lots in front of buildings, long driveway cuts interfering with sidewalks, and segregated land uses that often prevent access between adjacent properties.

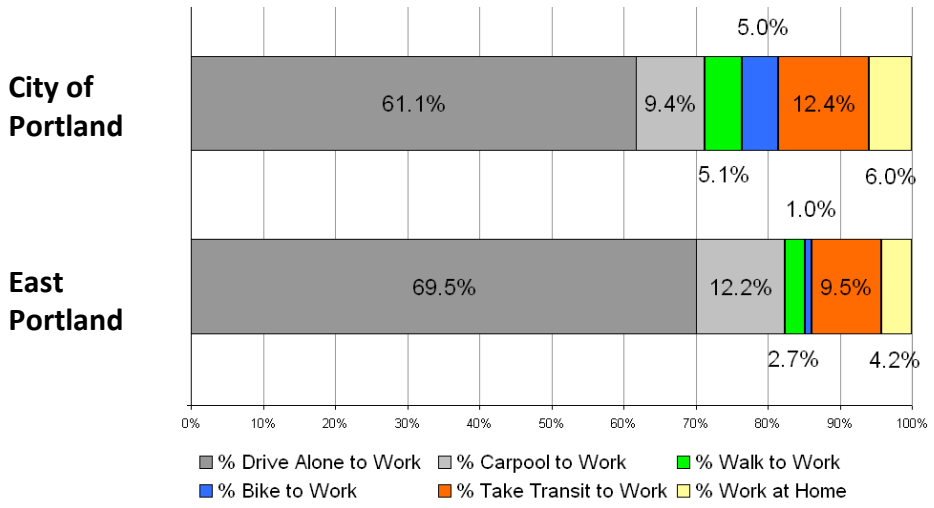
- **Limited bicycle parking.** Throughout Portland, bicycle parking is provided by private businesses and property owners, as well as by public agencies like PBOT, TriMet and school districts. In East Portland, both types of bike parking are severely lacking. As of August 2011, the City maintains 3,728 individual bike racks or bike lockers. East of 82nd Avenue, this number is 15, or 0.4% of city-provided bike parking. Private businesses and shopping centers also offer less bike parking in East Portland than in inner Portland – though it is required in new development. Perhaps the biggest obstacle to bike parking in East Portland is that there have been no policy decisions or discussions on how to provide good bike parking in East Portland's suburban format commercial areas. Regardless of the cause, a lack of end-of-trip facilities is a major deterrent to bicycling as a whole.



- **Unimproved streets.** East Portland has more than twelve miles of unimproved streets, a 25% share of the citywide total (roughly proportional to East Portland's share of city land area.) Unimproved streets sometimes disintegrate into impassible landscapes of mud, potholes and puddles, posing difficulty for all modes of travel.

- **An incomplete transit network.** The transit network in East Portland is less dense, and transit service is generally less frequent, than in other parts of the city. In recent years, budget cuts have further reduced service.

Perhaps due to these deficiencies, a smaller percentage of people use active transportation modes (walking, biking and taking transit) when traveling to work or school from East Portland. According to 2005-2009 American Community Survey estimates, **13% of East Portland commuters use active transportation to get to work or school, versus 23% citywide**.



Despite these challenges, East Portland still has an active transportation network that is better than many places in America – a strong skeletal framework that is well positioned for enhancement and expansion. Consider:

- **Three light rail lines** pass through East Portland, with fourteen stations attracting tens of thousands of riders everyday.

- **TriMet's highest-ridership bus lines** – the #72 bus on 82nd Avenue and the #4 bus on Division Street – are high-frequency routes used by thousands of East Portlanders every day.

- **24 miles of multi-use trail** wind through East Portland neighborhoods, most notably the Springwater Corridor, the I-205 Multi-Use Path, the Marine Drive Trail and the I-84 Multi-Use Path. These facilities represent 31% of Portland's paved multi-use trail mileage.

- **East Portland is relatively flat**, with the exception of areas south of Foster Road. Mild topography plays a role in encouraging residents of all abilities and fitness levels to use active modes.

- **Wide rights-of-way** could present opportunities for wider sidewalks, buffered bike lanes and curb extensions on arterial streets.

TRIMET
TRIMET

3
Community Voices

ARTS BUILDING

3.1. Public Participation

East Portland in Motion is based on community priorities and was developed in partnership with the people of East Portland. Early in the process, seeking a broad and diverse participation in the formulation of the implementation priorities, the project team adopted a community involvement philosophy of going to people where they were. This philosophy extended into a variety of activities.

Community involvement included:

- PBOT collaborated directly with two neighborhood groups focused on transportation: the **East Portland Land Use & Transportation Committee** (EPLUTC) and the **East Portland Action Plan Bicycle Subcommittee** (EPAPbike). Both groups served as de facto advisory committees on the project.

- PBOT engaged residents by staffing *East Portland in Motion* **"stations" at community events** and at open houses for related projects, including:

  - **Portland 5th Transportation Safety Summit** (2/8/11 at Marshall High School)
  - **Portland Plan Fair** (3/12/11 at IRCO)
  - **Outer Powell Conceptual Design Plan Open House** (3/16/11 at Ron Russell Middle School)
  - **BikePortland Get Together** (3/30/11 at Lents Commons)
  - **122nd Avenue High Crash Corridor Open House** (5/1/11 at Midland Library)
  - **Parkrose Farmers Market** (5/7/11 at Parkrose High School)
  - **Holgate Safety Project Open House** (5/11/11 at Lent School)
  - **Gateway Fun-o-Rama** (5/21/11 at 111th Square)
  - **East Portland Sunday Parkways** (5/22/11 at Ron Russell Middle School)
  - **East Portland Exposition** (7/23/11 at Ed Benedict Park)
  - **Active Transportation Day** (8/20/11 at Holgate Library)
  - **Parklane Neighborhood Fair** (8/25/11 at Parklane Park)
  - **Portland 6th Transportation Safety Summit** (3/13/12 at Jefferson High School)

  Participants took part by voting for potential sidewalk projects, taking a survey focused on sidewalk and bicycle policy priorities, and engaging directly with PBOT staff. Full results from the *Sidewalk & Bicycle Priorities Survey* and the sidewalk voting exercise can be found in Appendix B.

- Portland State University Master of Urban and Regional Planning (MURP) students performed **individual interviews of community stakeholders** as well as **group interviews of typically underrepresented populations** in East Portland, including Russian and Ukrainian families, Somali mothers, immigrant high school students, immigrant adults, elders from multiple cultures, parents at a high-poverty elementary school, and homeless families. Details about this process and findings from these interviews are included in Appendix E.

- MURP students also prepared and mailed an **East Portland Travel Survey** to 3,000 geographically dispersed households in East Portland, asking about travel behaviors and attitudes. Students received more than 300 surveys back, and compiled and analyzed results. Full survey results, including selected analyses of different variables, are included in Appendix C.

- PBOT presented to and received feedback from **other stakeholders and advisory groups**, including the Portland Commission on Disability, the Immigrant and Refugee Community Organization (IRCO), the Portland Pedestrian Advisory Committee, several school districts, and many others. Details from these interviews are included in Appendix D.

- PBOT maintained a **website** throughout the course of the project to provide project updates, notice of community events, project materials such as maps and display boards, and an on-line version of the *Sidewalk & Bicycle Priorities Survey*. (www.portlandonline.com/transportation/epim)

3.2. Themes from Community Feedback

Although East Portland is a collection of communities with many different voices, certain themes emerged from the public process for *East Portland in Motion*. Each exercise revealed findings that helped PBOT prioritize active transportation projects and programs.

The two neighborhood groups, EPNOLUTC and EPAPbike, provided overall policy direction as well as prioritized project lists. Results from these groups, shown in greater detail in Chapter 4, include:

- A list of the **top two active transportation priorities** for eleven of the thirteen East Portland neighborhood associations participating in EPLUTC, as well as priorities from David Douglas, Parkrose and Reynolds school districts. The list, shown in section 5.1, included a mix of sidewalk infill, crossing improvements, neighborhood greenways and bike lanes.

- A **five-year strategy for neighborhood greenways.** EPAPbike helped PBOT refine the East Portland-focused recommendations in the *Portland Bicycle Plan for 2030* through a year of monthly meetings. The result is a five-year phasing strategy for neighborhood greenways, as well as recommendations on bike lane projects and bike parking.

From the interviews of individuals and underrepresented groups, the project team and the PSU MURP students noted a few common themes:

- **Focus on children.** The groups interviewed showed significant support for programs like Safe Routes to School that focus on engineering improvements as well as education and encouragement, promoting safer walking and bicycling to school.

- **Importance of transit.** People want safer access to and from transit stops, including both MAX and buses. For many people in East Portland who do not have access to a car, transit is crucial in getting around, more so than bicycling.

- **Enthusiasm for neighborhood greenways.** Regardless of whether they rode bikes or not, the people interviewed widely supported improving conditions for bicycling and walking on quieter streets that already have low traffic volumes.

In the subsequent *East Portland Travel Survey*, MURP students discovered finer-grain trends in residents' transportation-related opinions and behaviors:

- **Desire for basic infrastructure**. When asked what types of improvement projects PBOT should build in East Portland, respondents ranked street maintenance and pothole repair highest, followed by safer crossings of busy streets, improved signal timing and sidewalks on busy streets. New and wider bike lanes ranked the lowest.

- **Walking to the store is common**. The most frequent type of walking trip in East Portland involves walking to a grocery or convenience store. The least frequent walking trips are to work or school.

- **More destinations would encourage more walking**. The solution that would most encourage East Portlanders to walk more is having more destinations nearby. While this is a land use and economic development issue that *East Portland in Motion* cannot address directly, results also show support for infrastructure-based solutions such as sidewalks, better lighting, marked crosswalks and slower vehicle traffic.

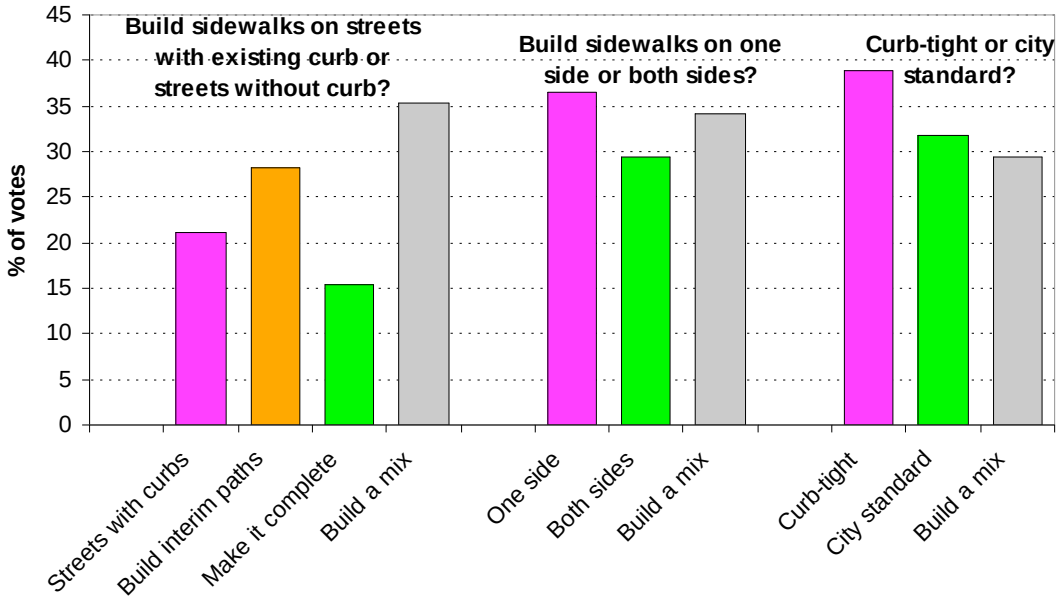
- **More paths would encourage more bicycling**. Creating more off-street multi-use paths is respondents' top recommendation to get themselves to bike more, followed by more destinations and grade-separated bike lanes.

- **Active transportation is more strongly supported by minority and lower income populations**. Improvements such as sidewalks on busy streets, sidewalks that access transit, safer crossings and neighborhood greenways are favored more by minority and lower-income populations than by white and upper-income populations. Wealthier and white residents rate pothole repair and signal timing higher.

PBOT's *Sidewalk & Bicycle Priority Survey* revealed mixed feelings toward sidewalk policy, but strong support for low-stress bikeways:

- **Build multiple types of sidewalks on multiple types of streets.** Survey respondents generally support sidewalk infill on a mix of street types, including streets with and without curbs. They also support building different types of sidewalks in different situations. However, simple, curb-tight sidewalks received more support than complete reconstruction of roadways, suggesting that residents desire to spread the funding out to get more miles of improvements.

- **Build a mix of sidewalks on one side of the street and sidewalks on both sides.** Respondents split roughly into thirds on whether PBOT should build sidewalks on one side of the street to save money, build them on both sides to provide better access, or to build a mix of both.



- **Low-stress bikeways are most popular.** Respondents gave highly favorable ratings to neighborhood greenways and paved trails. Bicycle facilities that pose more potential conflict with cars, including advisory bike lanes and enhanced shared roadways, received the lowest ratings.

- **Proposed greenway network is well received.** 74% of respondents strongly or somewhat agree with the location and phasing of neighborhood greenways proposed.

Results from the sidewalk voting exercise – where participants each placed sticky dots next to projects of their choice – revealed strong support for projects in the Powellhurst-Gilbert neighborhood, including SE 136th Avenue, SE Division Street and SE 122nd Avenue. Popular projects in Northeast Portland included NE Prescott Street, NE Sandy Boulevard and the NE Halsey/Weidler couplet. *More detailed results from this exercise are described in section 5.1.*

4
Project Candidates

4.1. Project Sources

Chapter 4 documents PBOT's process of identifying active transportation "**project candidates"** to be considered for inclusion in the five year strategy. Project sources for *East Portland in Motion*, while overlapping, can generally be divided into three categories: planning projects, neighborhood priorities, and geographic analysis:

Planning projects include:

- ***Portland Bicycle Plan for 2030*** (PBOT, 2010)
- ***122nd Avenue Pilot Project*** (Bureau of Planning & Sustainability, 2010)
- ***Pedestrian Network Analysis Memos 1 and 2*** (TriMet, 2010)
- ***East Portland Action Plan*** (Bureau of Planning & Sustainability, 2009)
- ***City of Portland Transportation System Plan*** (PBOT, 2006)
- **Safe Routes to School** engineering reports (PBOT, 2008-2010)
- **High Crash Corridor** program recommendations (PBOT, ongoing)
- **Safe, Sound and Green Streets** program recommendations (PBOT, 2007-2008)

Neighborhood priorities include:

- **Neighborhood association requests**, voiced through representatives on the EPNOLUTC.
- **EPAPbike recommendations** on bicycle facilities, developed through a year of monthly meetings.
- **Urban renewal area** transportation priorities developed by the Lents Town Center and Gateway Regional Center urban renewal advisory committees.
- **Traffic safety requests** to the 823-SAFE telephone hotline.
- **Other priorities** identified through interaction with groups and individuals.

Geographic analysis includes:

- **Sidewalk gap analysis**: Inspection of aerial photography and Google StreetView images, verified by field work, to accurately identify missing sidewalk segments on arterial roadways.
- **Crossing gap analysis**: Digitization of existing crossing improvements, followed by geographic analysis identifying excessive gaps between safe crossings on arterial roadways.

From the hundreds of projects identified in the above sources, it was necessary to refine the candidates into a manageable "first cut" list of potential projects for the public to weigh in on. PBOT refined each type of project (sidewalk, bikeway, etc.) using different processes, described in the sections that follow.

4.2. Sidewalk Project Candidates

Hundreds of miles of roadways in East Portland are missing sidewalks, either in whole or in part. PBOT filtered sidewalk projects using the following criteria:

- Projects must be on roadways **controlled and maintained by PBOT**. This excludes ODOT-controlled roads such as 82nd Avenue, Powell Boulevard and Sandy Boulevard east of 102nd Avenue. *East Portland in Motion* is meant to be an action-oriented strategy where PBOT can move quickly with projects on its own roadways. The other roads are not ignored, however – PBOT is partnering with ODOT to build pedestrian crossings on 82nd Avenue, to implement safety improvements on NE Sandy Boulevard between 122nd Avenue and 141st Drive, and to plan and design the reconstruction of SE Powell Boulevard from I-205 to the Gresham city limits.

- Projects must be on streets classified as ***Major City Traffic Streets***, ***District Collectors*** or ***Neighborhood Collectors*** in the TSP. Sidewalks were considered on ***Local Service Traffic Streets*** only if they are within a ***Pedestrian District***. The resulting list of streets includes nearly all of East Portland's five-lane thoroughfares like Division, Halsey and 122nd, in addition to smaller collector streets like SE 136th Avenue and NE Prescott Street.

- Projects must be **new or infill sidewalks** where there is currently no sidewalk present. Unless supplemental funding is involved, projects that widen or add amenities to existing sidewalks were not considered in *East Portland in Motion*. PBOT is, however, partnering with the Portland Development Commission on the NE 102nd Boulevard Streetscape, Foster/Woodstock Streetscape and SE 122nd Avenue Complete and Green Street. These projects widen and improve existing sidewalks, but are funded largely with urban renewal, state and federal funding.

The resulting list, comprising 57 project candidates, exhibits a distinction between **two different types of sidewalk projects**. Some projects are on streets where curb already exists, allowing for easier and more cost-efficient construction. Other projects are on streets that have gravel shoulders and no curb, necessitating either a rebuild of the entire street profile or an alternate design solution. PBOT classified the sidewalk candidate projects accordingly:

- **Type 1 Sidewalk Project Candidates** would fill in missing sidewalks on streets with existing curbs. Many of these projects are on busy, five-lane roadways like SE Division Street, SE Stark Street or SE 122nd Avenue. On these roadways, there is typically seven feet from the face of curb to the property line, leaving room for a six-foot, curb-tight sidewalk. Other streets, like NE Sandy Boulevard, have more room, allowing for a planting strip between the sidewalk and curb. In either case, Type 1 projects are relatively economical – about $1 million per mile – because curbs and stormwater facilities are already in place.

- **Type 2 Sidewalk Project Candidates** would build new sidewalks on streets without curbs. These streets have gravel shoulders or sometimes just dirt, grass or other vegetation. Examples include SE 136th Avenue, SE Harold Street and NE Prescott Street. These projects can be relatively expensive – about $5-7 million per mile – because in most cases the street must be completely rebuilt due to substandard pavement and road base, in addition to adding sidewalks, curbs, bike lanes and stormwater facilities. PBOT is investigating the potential of improving these types of streets with less costly interim facilities.

Type 1 Sidewalk Project Candidates	Type 2 Sidewalk Project Candidates
BEFORE: Existing curb and stormwater facilities. 7-foot right-of-way beyond curb. Demand path and encroaching vegetation.	**BEFORE**: Gravel shoulder with no curb or stormwater facilities. Variable right-of-way width beyond pavement, with occasional on-street parking, trees and mailboxes.
AFTER: 6-foot-wide, curb-tight sidewalk with curb ramps. Meets minimum ADA clearance standards at utility poles.	**AFTER**: 6-foot-wide sidewalk separated from street. Furnishing zone width and stormwater treatment methods will vary. Bioswale shown here.

The following tables and map show the **57 sidewalk project candidates**. Information provided includes the project extent, project length (the amount of missing sidewalk on both sides of the street), planning level cost estimates (based on the $1 million and $5-7 million figures described above), and project source. These project candidates represent over 34 miles of missing sidewalk.

More detailed information on each of the sidewalk project candidates is provided in Appendix F.

Table 1. Type 1 Sidewalk Project Candidates (Existing Curb and Stormwater)

Map ID #	Street	Segment	Length (miles)	Low-Confidence Planning-Level Cost Estimate†	Project Source*
1	NE Sandy Blvd	85th – 91st	0.10	$100,000	Sumner AN
2	NE Fremont St	112th – 122nd	0.74	$740,000	GIS gap analysis
3	NE San Rafael St	122nd – 132nd	0.29	$290,000	GIS gap analysis
4a	NE Halsey St	85th – 92nd	0.45	$450,000	GIS gap analysis
4b	NE Weidler St	99th – 112th	0.21	$210,000	Gateway RC UR Plan
4c	NE Halsey St	126th – 132nd	0.34	$340,000	Hazelwood NA
4d	NE Halsey St	134th – 148th	1.24	$1,240,000	Hazelwood NA
4e	NE Halsey St	148th – 162nd	0.56	$560,000	TSP
5a	NE Glisan St	135th – 148th	0.47	$470,000	TSP
5b	NE Glisan St	148th – 162nd	0.57	$570,000	Glenfair NA, Wilkes CG
6a	SE Stark St	126th – 143rd	0.29	$290,000	GIS gap analysis
6b	SE Stark St	148th – 160th	0.53	$530,000	Glenfair NA, Centennial CA
7a	SE Market St	99th – 112th	0.30	$300,000	GIS gap analysis
7b	SE Market St	112th – 130th	0.61	$610,000	David Douglas SD
7c	SE Mill St	130th – 148th	1.27	$1,270,000	Centennial CA
7d	SE Millmain Dr/Main St	151st – 162nd	0.78	$780,000	Centennial CA
8a	SE Division St	101st – 145th	0.54	$540,000	TSP
8b	SE Division St	148th – 171st	0.51	$510,000	Centennial CA
9	SE Holgate Blvd	99th – 122nd	0.72	$720,000	David Douglas SD
10	SE Foster Rd	103rd – 122nd	0.60	$600,000	Lents NA
11	SE Flavel St	84th – 92nd	0.22	$220,000	GIS gap analysis
12	SE Mt Scott Blvd	I-205 – 98th	0.21	$210,000	GIS gap analysis
13	SE 92nd Ave	Lincoln – Powell	0.23	$230,000	GIS gap analysis
14	SE 99th Ave	Main – Division	0.55	$550,000	Hazelwood NA
15a	NE 102nd Ave	Sandy – I-84	0.10	$100,000	GIS gap analysis
15b	NE 102nd Ave	I-84 – Weidler	0.43	$430,000	Woodland Park NA
16	SE Cherry Blossom Dr	Morrison – Market	0.31	$310,000	Hazelwood NA
17	SE 112th Ave	Market – Holgate	0.38	$380,000	David Douglas SD
18	SE 117th Ave	Burnside – Stark	0.18	$180,000	East Portland Action Plan
19a	NE 122nd Ave	Marine – Shaver	0.60	$600,000	GIS gap analysis
19b	SE 122nd Ave	Powell – Holgate	0.22	$220,000	Powellhurst-Gilbert NA
19c	SE 122nd Ave	Holgate – Foster	0.73	$730,000	Powellhurst-Gilbert NA
20a	NE 148th Ave	Rose – Halsey	0.68	$680,000	Wilkes CG
20b	NE 148th Ave	Halsey – Glisan	0.83	$830,000	Wilkes CG
21	SE 160th Ave	Burnside – Stark	0.11	$110,000	Portland Comm. on Disability
22a	NE 162nd Ave	Stanton – Russell	0.15	$150,000	GIS gap analysis
22b	SE 162nd Ave	Taylor – Powell	0.99	$990,000	Centennial CA

*Many projects have multiple sources. Priority for listing the source is as follows: East Portland Action Plan, neighborhood association, school district, other community group, Transportation System Plan, other source, GIS analysis. NA = neighborhood association; CA = community association; SD = school district; UR = urban renewal.

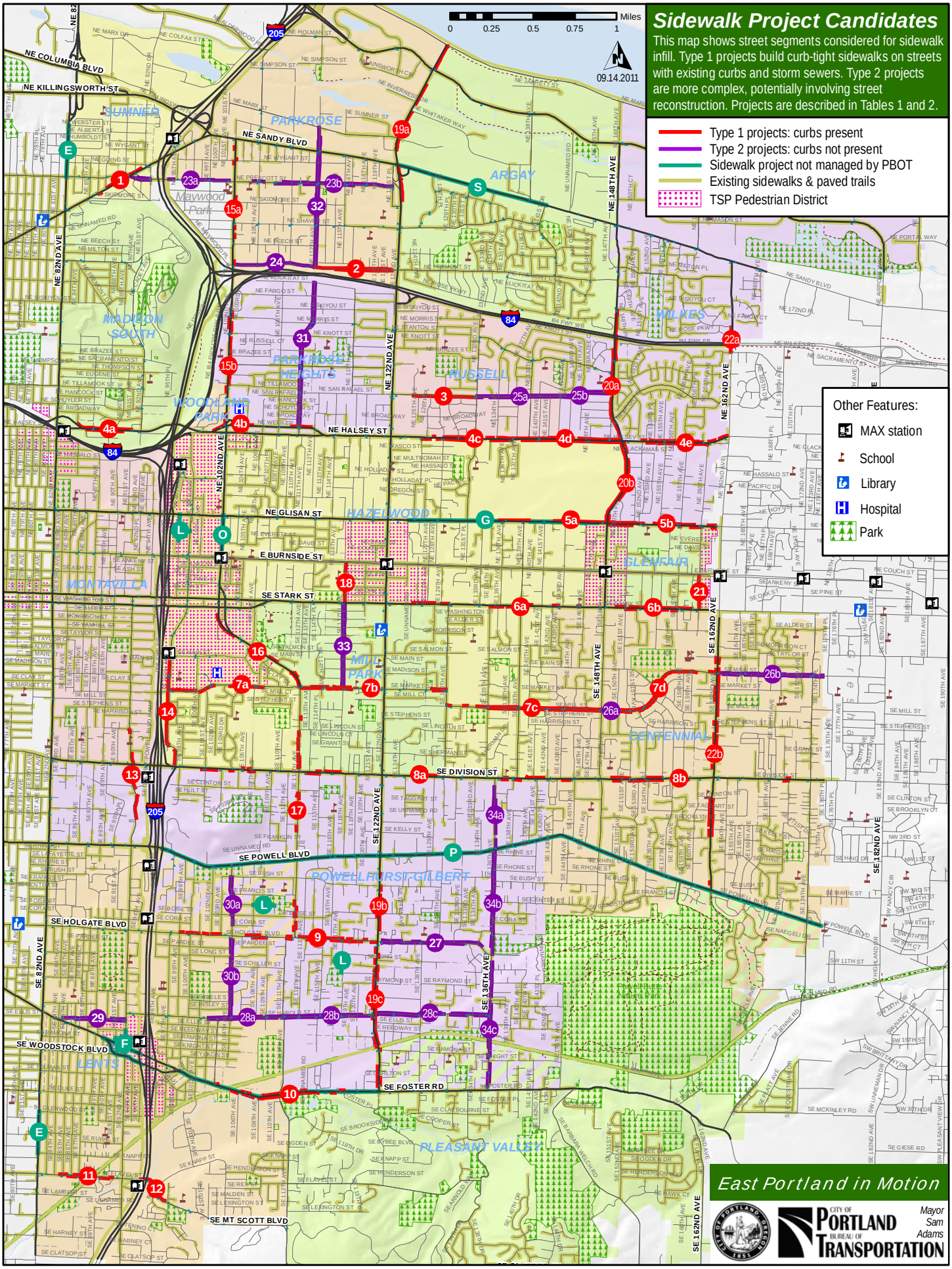
†All costs shown are low-confidence planning-level estimates that require further project development and engineering to determine more precise costs.

Table 2. Type 2 Sidewalk Project Candidates (Curb and Stormwater Not Present)

Map ID #	Street	Segment	Length (miles)	Low-Confidence Planning-Level Cost Estimate†	Project Source*
23a	NE Prescott St	Sandy – 102nd	0.43	$2,160,000	Parkrose SD
23b	NE Prescott St	102nd – 121st	0.95	$4,740,000	Parkrose SD
24	NE Fremont St	102nd – 112th	0.42	$2,100,000	EPAPbike
25a	NE San Rafael St	132nd – 142nd	0.88	$4,380,000	GIS gap analysis
25b	NE San Rafael St	142nd – 148th	0.51	$2,530,000	Wilkes CG
26a	SE Mill St	148th – 151st	0.22	$1,080,000	Centennial CA
26b	SE Main St	162nd – city limit	1.03	$5,150,000	Centennial CA
27	SE Holgate Blvd	122nd – 136th	0.82	$4,090,000	Powellhurst-Gilbert NA
28a	SE Harold St	102nd – 111th	0.59	$2,970,000	David Douglas SD
28b	SE Harold St	111th – 122nd	1.11	$5,570,000	David Douglas SD
28c	SE Harold St	122nd – 136th	1.15	$5,750,000	David Douglas SD
29	SE Ellis St	Foster – 92nd	0.54	$2,690,000	Lents NA
30a	SE 104th Ave	Bush – Cora	0.48	$2,410,000	East Portland Action Plan
30b	SE 104th Ave	Holgate – Harold	0.85	$4,260,000	East Portland Action Plan
31	NE 111th Dr/Ave	Klickitat – Halsey	1.55	$7,730,000	Parkrose Heights AN
32	NE 112th Ave	Marx – Fremont	1.48	$7,400,000	GIS gap analysis
33	SE 117th Ave	Stark – Market	0.89	$4,450,000	East Portland Action Plan
34a	SE 136th Ave	Division – Powell	0.43	$2,150,000	East Portland Action Plan
34b	SE 136th Ave	Powell – Holgate	1.00	$5,020,000	East Portland Action Plan
34c	SE 136th Ave	Holgate – Foster	0.96	$4,810,000	East Portland Action Plan

*Many projects have multiple sources. Priority for listing the source is as follows: East Portland Action Plan, neighborhood association, school district, other community group, Transportation System Plan, other source, GIS analysis. NA = neighborhood association; CA = community association; SD = school district; UR = urban renewal.

†All costs shown are low-confidence planning-level estimates that require further project development and engineering to determine more precise costs.


Sidewalk Project Candidates
This map shows street segments considered for sidewalk infill. Type 1 projects build curb-tight sidewalks on streets with existing curbs and storm sewers. Type 2 projects are more complex, potentially involving street reconstruction. Projects are described in Tables 1 and 2.
Type 1 projects: curbs present
Type 2 projects: curbs not present
Sidewalk project not managed by PBOT
Existing sidewalks & paved trails
TSP Pedestrian District
Other Features:
MAX station
School
Library
Hospital
Park
Miles
0
0.25
0.5
0.75
1
09.14.2011
East Portland in Motion
CITY OF PORTLAND BUREAU OF TRANSPORTATION
Mayor Sam Adams
NE COLUMBIA BLVD
NE KILLINGSWORTH ST
NE SANDY BLVD
NE HALSEY ST
NE GLISAN ST
E BURNSIDE ST
SE STARK ST
SE DIVISION ST
SE POWELL BLVD
SE HOLGATE BLVD
SE WOODSTOCK BLVD
SE FOSTER RD
SE MT SCOTT BLVD
NE 82ND AVE
NE 102ND AVE
NE 122ND AVE
NE 148TH AVE
NE 162ND AVE
SE 82ND AVE
SE 122ND AVE
SE 136TH AVE
SE 148TH AVE
SE 162ND AVE
SUMNER
PARKROSE
ARGAY
MADISON SOUTH
PARKROSE HEIGHTS
RUSSELL
WILKES
WOODLAWN PARK
HAZELWOOD
GLENFAIR
MONTAVILLA
MILL PARK
CENTENNIAL
POWELL-HURST-GILBERT
LENTS
PLEASANT VALLEY
Maywood Park

4.3. Crossing Improvement Project Candidates

Another critical component of a safe pedestrian network – as well as safe access to transit – is **improved pedestrian crossings**. These may include anything from basic crosswalk striping and warning signs to full traffic signals with pedestrian activation buttons and median refuge islands. Crossing improvements are crucial on East Portland's busy, five-lane arterial streets where there are often hundreds of feet between safe crossing locations, but people are nevertheless crossing to access bus stops and other destinations.

Crossing improvement candidates generally come from one of three sources:

1) Planned or potential crossing improvements already under consideration by **PBOT's Traffic Safety team**. These projects originate from various primary sources, such as:

   - Locations identified in **planning documents**, including the *122nd Avenue Pilot Project* and the *East Portland Action Plan*.

   - Crossing projects listed in engineering reports for schools participating in the **Safe Routes to School** program.

   - Improvements proposed as part of **High Crash Corridor** programs along 122nd Avenue and Foster Road.

   - **Community requests** for crossings submitted by neighborhood associations, school districts, businesses and individuals.

2) Locations where **proposed neighborhood greenways** will cross arterial streets. These crossings will be designed to help people cross busy streets on foot or bike, and may include two-way cycle tracks where intersections are offset. (Neighborhood greenways are fully described in the next section.)

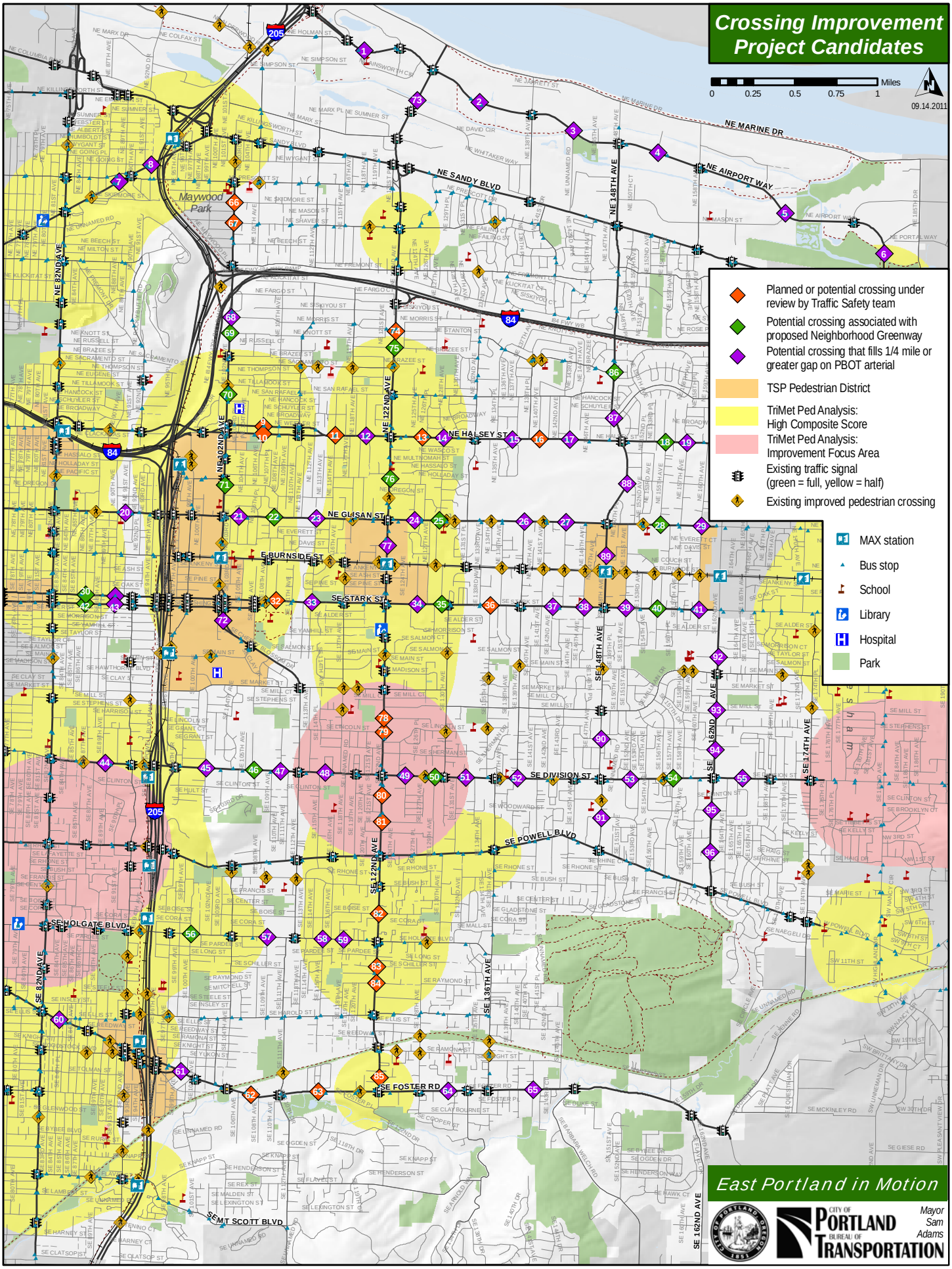
3) Geographic analysis revealing segments of arterial roads where **gaps between improved pedestrian crossings exceed a quarter mile** (1,320 feet). Using a quarter-mile threshold helps identify a realistic number of projects that would solve the worst deficiencies. The exact positions of these proposed crossings are dictated by bus stop and intersection locations, and are subject to further analysis and adjustment.

PBOT further filtered potential crossing improvement locations by focusing on **PBOT-controlled arterials with three or more travel lanes.** Five-lane roadways like Division and 122nd are the most difficult and dangerous roads for people to cross. These initial criteria resulted in 96 potential crossing improvement locations, shown in Table 3 and the accompanying map. Color coding corresponds to the project source. More detailed information on each of the crossing improvement candidates is provided in Appendix G.

Table 3. Crossing Improvement Project Candidates

Map #	Street	Location	Source	Map #	Street	Location	Source
1	NE Airport Way	Ainsworth Ct	QMG	49	SE Division St	124th/125th Ave	QMG
2	NE Airport Way	13000 block	QMG	50	SE Division St	129th/130th Ave	NG
3	NE Airport Way	Cross Levee Trail	QMG	51	SE Division St	132nd Ave	QMG
4	NE Airport Way	152nd Pl	QMG	52	SE Division St	139th Ave	QMG
5	NE Airport Way	Mason Ct	QMG	53	SE Division St	152nd Ave	QMG
6	NE Airport Way	Columbia Slough	QMG	54	SE Division St	157th Ave	NG
7	NE Sandy Blvd	88th Ave	QMG	55	SE Division St	165th Ave	QMG
8	NE Sandy Blvd	92nd Ave	QMG	56	SE Holgate Blvd	100th Ave	NG
9	NE Weidler St	106th Ave	TS	57	SE Holgate Blvd	108th Pl	QMG
10	NE Halsey St	106th Ave	TS	58	SE Holgate Blvd	115th Ave	QMG
11	NE Halsey St	114th Ave	TS	59	SE Holgate Blvd	118th Ave	QMG
12	NE Halsey St	119th Ave	QMG	60	SE Foster Rd	84th Ave / Ellis St	QMG
13	NE Halsey St	126th Ave	TS	61	SE Foster Rd	Henry St	QMG
14	NE Halsey St	128th Ave	QMG	62	SE Foster Rd	107th Ave	TS
15	NE Halsey St	136th Pl	QMG	63	SE Foster Rd	116th Ave	TS
16	NE Halsey St	140th Ave	TS	64	SE Foster Rd	130th Ave	QMG
17	NE Halsey St	143rd Ave	QMG	65	SE Foster Rd	141st Ave	QMG
18	NE Halsey St	155th Ave	NG	66	NE 102nd Ave	Skidmore St	TS
19	NE Halsey St	157th Ave	QMG	67	NE 102nd Ave	Shaver St	TS
20	NE Glisan St	92nd Ave	QMG	68	NE 102nd Ave	Morris St	QMG
21	NE Glisan St	104th Ave	QMG	69	NE 102nd Ave	Knott St	NG
22	NE Glisan St	108th Ave	NG	70	NE 102nd Ave	Bell Dr	NG
23	NE Glisan St	113th Ave	QMG	71	NE 102nd Ave	Pacific St (east)	NG
24	NE Glisan St	125th/126th Ave	QMG	72	SE Cherry Bloss. Dr	Morrison St	QMG
25	NE Glisan St	128th Ave	NG	73	NE 122nd Ave	Columbia Slough	QMG
26	NE Glisan St	139th Ave	QMG	74	NE 122nd Ave	Stanton St	TS
27	NE Glisan St	143rd Ave	QMG	75	NE 122nd Ave	Russell St	NG
28	NE Glisan St	155th Ave	NG	76	NE 122nd Ave	Holladay St/Pl	NG
29	NE Glisan St	160th Ave	QMG	77	NE 122nd Ave	Davis St	QMG
30	SE Stark St	86th Ave	NG	78	SE 122nd Ave	Stephens St	TS
31	SE Stark St	90th Ave	QMG	79	SE 122nd Ave	Lincoln St (west)	TS
32	SE Stark St	109th Ave	TS	80	SE 122nd Ave	Clinton St	TS
33	SE Stark St	113th Ave	QMG	81	SE 122nd Ave	Tibbetts St	TS
34	SE Stark St	126th Ave	QMG	82	SE 122nd Ave	Boise St	TS
35	SE Stark St	129th/130th Ave	NG	83	SE 122nd Ave	Schiller St	TS
36	SE Stark St	135th Ave	TS	84	SE 122nd Ave	Raymond St	TS
37	SE Stark St	142nd Ave	QMG	85	SE 122nd Ave	Carlton St	TS
38	SE Stark St	146th Ave	QMG	86	NE 148th Ave	Sacramento St	NG
39	SE Stark St	151st Ave	QMG	87	NE 148th Ave	Broadway	QMG
40	SE Stark St	155th Ave	NG	88	NE 148th Ave	151st Ave	QMG
41	SE Stark St	160th Ave	QMG	89	NE 148th Ave	Couch St	QMG
42	SE Washington St	86th Ave	NG	90	SE 148th Ave	Lincoln St	QMG
43	SE Washington St	90th Ave	QMG	91	SE 148th Ave	Woodward St	QMG
44	SE Division St	89th Ave	QMG	92	SE 162nd Ave	Taylor/Salmon St	QMG
45	SE Division St	101st Ave	QMG	93	SE 162nd Ave	Mill St	QMG
46	SE Division St	106th/107th Ave	NG	94	SE 162nd Ave	Lincoln/Grant St	QMG
47	SE Division St	110th Ave	QMG	95	SE 162nd Ave	Taggart St	QMG
48	SE Division St	115th Ave	QMG	96	SE 162nd Ave	Haig St	QMG

Source Key: TS = Planned or potential crossing under review by PBOT Traffic Safety team. NG = Location where proposed neighborhood greenway crosses arterial. QMG = Quarter-mile gap or more between safe crossings.


Crossing Improvement Project Candidates
Miles
0
0.25
0.5
0.75
1
09.14.2011
Planned or potential crossing under review by Traffic Safety team
Potential crossing associated with proposed Neighborhood Greenway
Potential crossing that fills 1/4 mile or greater gap on PBOT arterial
TSP Pedestrian District
TriMet Ped Analysis: High Composite Score
TriMet Ped Analysis: Improvement Focus Area
Existing traffic signal (green = full, yellow = half)
Existing improved pedestrian crossing
MAX station
Bus stop
School
Library
Hospital
Park
Maywood Park
NE MARINE DR
NE AIRPORT WAY
NE SANDY BLVD
NE 148TH AVE
NE 82ND AVE
NE 102ND AVE
NE 122ND AVE
NE HALSEY ST
NE GLISAN ST
E BURNSIDE ST
SE STARK ST
SE 148TH AVE
SE 162ND AVE
SE 174TH AVE
SE DIVISION ST
SE POWELL BLVD
SE 122ND AVE
SE HOLGATE BLVD
SE 82ND AVE
SE 136TH AVE
SE FOSTER RD
SE MT SCOTT BLVD
SE 162ND AVE
East Portland in Motion
CITY OF PORTLAND
BUREAU OF TRANSPORTATION
Mayor Sam Adams

4.4. Bicycle Project Candidates

One of the core purposes of *East Portland in Motion* is to improve upon recommendations in the *Portland Bicycle Plan for 2030* ("bike plan"). This involves refining the recommended locations and types of *bikeways* (the streets and trails designated for bicycle travel) as well as recommendations on supporting facilities such as bicycle parking.

The bike plan recommends a variety of bikeway facility types, as described in Table 4. Bikeways are generally of three types:

- **Separated in-roadway bikeways**. The bike plan recommends that arterial roadways provide separate, dedicated space for bicyclists. This can take the form of traditional **bike lanes**, or enhanced versions such as **buffered bike lanes** or **cycle tracks**. NE Glisan and SE Stark streets are among the recommended separated in-roadway bikeways.

- **Shared roadway facilities.** Low-traffic local service streets that provide continuous connections through neighborhoods are designated as **neighborhood greenways** (previously called bike boulevards). For streets with slightly higher traffic volumes, including several neighborhood collectors, the bike plan recommends **advisory bike lanes**. On some streets, the bike plan recommends either treatment, subject to further analysis. SE Bush Street is an example of a neighborhood greenway under construction; SE 117th Avenue between Stark and Division is proposed in the bike plan as an advisory bike lane.

- **Car-free bikeways.** Multi-use trails fall under this category. The bike plan recommends two new major trails in East Portland: the Columbia Slough Trail along the namesake water feature near Airport Way, and the Sullivan's Gulch Trail along Interstate 84. Shorter, local trail connections are also recommended.

To further refine bike plan recommendations, PBOT met monthly with EPAPbike for over a year. EPAPbike members pored over maps, talked with other neighborhood leaders, enjoyed exploratory bike rides, then gave their official recommendations in the form of a letter to Mayor Adams. PBOT staff studied several additional facilities to complement EPAPbike's list. Bicycle project candidates include neighborhood greenways, bike lanes and bicycle parking.

4.4.1. Neighborhood Greenway Project Candidates

Bicycle project candidates emphasize **expansion of the City's neighborhood greenway network into East Portland**. EPAPbike helped PBOT identify routes that connect schools and parks, and are parallel to East Portland's busy, wide streets, offering lower-stress alternatives to access businesses. Greenway candidates are listed in Table 5, shown on the *Bicycle Project Candidates* map, and described further in Appendix H.

Table 4. Bikeway facility types recommended in the *Portland Bicycle Plan for 2030*

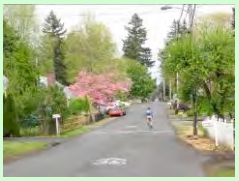
SEPARATED IN-ROADWAY FACILITIES

Bike lane. An area of the roadway designated by a white stripe and bicycle symbol, protected by law for the exclusive use of bicycle travel. A bike lane is typically located between a car travel lane and either a parking lane, curb or shoulder. While the preferred width of a bike lane is 6' or wider, most existing lanes in East Portland are 4.5 or 5'. A **buffered bike lane** adds an area of stripes beside the bike lane to provide extra comfort and safety.

Cycle track. A dedicated bicycle facility adjacent to a roadway, but physically separated from it by plantings, car parking or other barriers. Safety improvements are added at intersections to mitigate turning conflicts.

SHARED ROADWAY FACILITIES

Neighborhood greenway. Previously called a bike boulevard, this is a street with low traffic and low speed where bicyclists and pedestrians are given priority, safety is improved, and the natural environment is enhanced, all while maintaining access to private property.

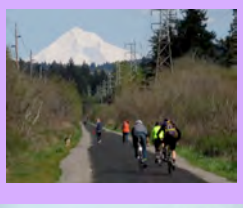


Advisory bike lane. This unique facility gives bicyclists priority on shared roadways. Marking a full bike lane in each direction means that the remaining roadway is wide enough for only one motor vehicle. Dashed striping is used to show that, unlike a regular bike lane, the advisory bike lane may be used by motor vehicles passing each other, provided they yield to cyclists. Advisory bike lanes are used in The Netherlands.

Enhanced shared roadway. Under some conditions neither neighborhood greenways nor advisory bike lanes are possible. In those cases, signing and markings are used to elevate driver awareness of the presence of bicycles in the roadway. These "enhanced shared roadways" may include traffic calming and intersection crossing treatments.

CAR-FREE BIKEWAYS

Paved trail. A paved bikeway separated from motorized traffic, off the roadway system, and often shared with walkers, skaters and other non-motorized users. In the future, off-street path designs may separate walkers and bicyclists where high volumes of users are expected.



Natural surface trail. A trail with a natural surface intended for off-road bicycling. Most existing off-road trails in Portland are in parks such as Powell Butte Nature Park. In the future it may be possible to develop some off-road trails that parallel paved trails.

Car-free zone. This is an area where the streets have restricted motor vehicle access but bicycling is allowed. Widely used in Europe, this facility type is not common now in Portland. In the future it may be possible to develop more car-free zones.

Table 5. Neighborhood Greenway Project Candidates

Map #	Project Name	Project Description	Length (miles)
1	Parkrose/Argay/Wilkes Neighborhood Greenway	East-west greenway along NE Shaver, Fremont and other streets, connecting the Parkrose, Argay and Wilkes neighborhoods.	3.50
2	Parkrose Neighborhood Greenway	Connection from Gateway Green and the I-205 Multi-Use Path to Parkrose schools and business district via NE Fremont St, NE Fremont Ct and NE 115th Ave.	1.65
3	Knott/Russell Neighborhood Greenway	East-west greenway connecting the Parkrose Heights, Russell and Wilkes neighborhoods.	3.70
4	Woodland Park Neighborhood Greenway	Connection to Gateway Transit Center from the Woodland Park and Parkrose Heights neighborhoods.	1.00
5	Pacific/Oregon/Holladay Neighborhood Greenway	East-west greenway connecting the Gateway Transit Center to the 130s Neighborhood Greenway through the Hazelwood neighborhood.	2.10
6	Midland Neighborhood Greenway	Greenway on SE Yamhill Street connecting the East Portland Community Center, Floyd Light Middle School and Midland Library.	0.84
7	Market/Mill/Millmain/Main Neighborhood Greenway ("4M Greenway")	East-west greenway that will complete a longer route from Gresham to the Willamette River.	4.37
8	Clinton/Woodward Neighborhood Greenway – Eastern Extension	Eastward extension of Clinton/Woodward Greenway, connecting to the Division MAX station.	0.42
9	Brookside Neighborhood Greenway	Greenway following Johnson Creek, connecting 112th Ave, the Leach Botanical Garden and the 130s Greenway.	0.90
10	Clatsop Butte Neighborhood Greenway	Loop greenway connecting the Clatsop Butte neighborhood to the Springwater Corridor.	2.34
11	80s Neighborhood Greenway - South Reach	Completion of north-south greenway from Interstate 84 through Montavilla and Lents to the Springwater Corridor.	2.90
12	100s Neighborhood Greenway – North Reach	North-south greenway connecting the East Portland Community Center, Hazelwood and Parkrose Heights.	2.23
13	100s Neighborhood Greenway - Central Reach	North-south greenway connecting the East Portland Community Center with the existing 100s Neighborhood Greenway in Lents and Powellhurst-Gilbert.	2.00
14	130s Neighborhood Greenway – Northern Extension	Northward extension of 130s Greenway over a new bike/ped bridge at I-84/132nd, through the Argay neighborhood, and on the Cross Levee Trail to the Columbia River.	2.11
15	130s Neighborhood Greenway	North-south neighborhood greenway spine from Interstate 84 to Foster Road through the heart of East Portland and the David Douglas School District.	6.49
16	150s Neighborhood Greenway – Northern Extension	Northward extension of the 150s Greenway to NE 162nd & San Rafael.	0.86
17	150s Neighborhood Greenway	North-south greenway connecting the Wilkes, Glenfair and Centennial neighborhoods, including three parks.	2.88
18	Centennial Neighborhood Greenways	Neighborhood greenways connecting the 150s Greenway and Bush Greenway with the Springwater Corridor in the Centennial neighborhood.	3.27

4.4.2. Separated In-Roadway Bikeway Project Candidates

Separated in-roadway bikeway candidates, shown in Table 6 and on the *Bicycle Project Candidates* map, are on arterial roadways that provide direct connections to commercial areas, multi-family housing, transit, parks and schools. All of these projects are identified in the bike plan as future or existing bike lanes. The list also encompasses all bike lane requests from EPAPbike and EPLUTC. All but one of the projects are on arterial streets that currently lack bike lanes. The remaining project – SE Division Street – would upgrade existing bike lanes to buffered bike lanes or cycle tracks.

Another recommendation that applies to multiple locations is fixing arterial intersections where bike lanes drop at motor vehicle turn lanes. If there is insufficient room for a bike lane to the left of the right turn lane, the most likely solution is an enhanced shared right turn lane. The shared space would be marked by green thermoplastic, dashed striping and/or sharrow symbols.

Not listed in Table 6 are portions of neighborhood greenways that may include bike lanes due to higher traffic volumes.

Table 6. Separated In-Roadway Bikeway Project Candidates

Map #	Street	Extent	Current Conditions	Length (miles)
19	NE Prescott St	81st Ave to 121st Aves	2-lane Neighborhood Collector; no bike lanes	2.32
20	NE Glisan St	I-205 Multi-Use Path to 162nd Ave	5-lane Major City Traffic Street / District Collector; no bike lanes	3.30
21	SE Stark St	108th Ave to 162nd Ave	5-lane Major City Traffic Street; no bike lanes	2.69
22	SE Division St	I-205 Multi-Use Path to 175th Pl	5-lane Major City Traffic Street; existing 5' bike lanes	4.10
23	SE Holgate Blvd	82nd Ave to I-205 Multi-Use Path	2-4-lane Neighborhood Collector; no bike lanes	0.57
24	SE Holgate Blvd	122nd Ave to 136th Ave	2-lane Neighborhood Collector; no curb, no bike lanes	0.71
25	NE 102nd Ave	Sandy Blvd – Weidler St	5-lane District Collector; no bike lanes	1.73
26	SE 102nd Ave / 103rd Ave / Cherry Blossom Dr	Burnside St – Market St	2-5 lane District Collector; no bike lanes	1.35
27	SE 112th Ave	Market St – Holgate Blvd	2-lane Neighborhood Collector; no bike lanes	1.51
28	SE 136th Ave	Division St – Foster Rd	2-lane Neighborhood Collector; no curb, no bike lanes	1.88
Not mapped	Improving bicycle safety at intersections where bike lanes are usurped by turning lanes. Most common solution includes installing sharrow symbols to indicate shared right-turn lanes.			

4.4.3. Bicycle Parking Candidates

As highlighted in section 2.2, East Portland faces a severe shortage of secure, convenient, usable bicycle parking, which in turn may be suppressing bicycle usage in general. EPAPbike expressed particular concern with the shortage (or complete lack) of bike parking at **retail destinations** such as grocery stores and major shopping centers. With the exception of a handful of traditional business districts like Parkrose and Lents, most East Portland commercial areas feature buildings that are dozens of feet away from the street, separated by car parking. These large setbacks limit the effectiveness of publicly-provided bike parking within the street right-of-way, a solution used in closer-in business districts like Hawthorne and Mississippi.

In East Portland's suburban-style shopping centers, bike parking would be best placed **close to building entrances on private property.** (City regulations require bike parking within 50 feet of primary building entrances.[8]) This poses an entirely different scenario than bike parking within the public right-of-way. PBOT would need to negotiate with property owners on the merits of providing bike parking, where to provide it, how much of it to provide, and how to pay for it.

Transit is another potential attractor for bike parking. TriMet has been partnering with the region's governments to promote increased biking to **MAX stations**, both to increase ridership and to address capacity issues on its in-vehicle bike hooks. To encourage riders to leave their bikes at the MAX station instead of bringing them on board, TriMet has been planning and constructing high-quality, high-capacity ***Bike & Rides*** like the one at right, that include shelter from the elements and electronic key-card locking systems for increased security.

Other important destinations for bike parking include schools and parks. Bike parking at **K-12 schools** is equally important, as a majority of students cannot drive. PBOT addresses school bike parking comprehensively through its Safe Routes to School program. Bike parking at parks is managed by Portland Parks and Recreation, and adheres to bicycle parking provisions in city code.

Bicycle parking candidates for *East Portland in Motion* focus on major shopping areas and MAX stations, as shown in Table 7 and the *Bicycle Project Candidates* map.

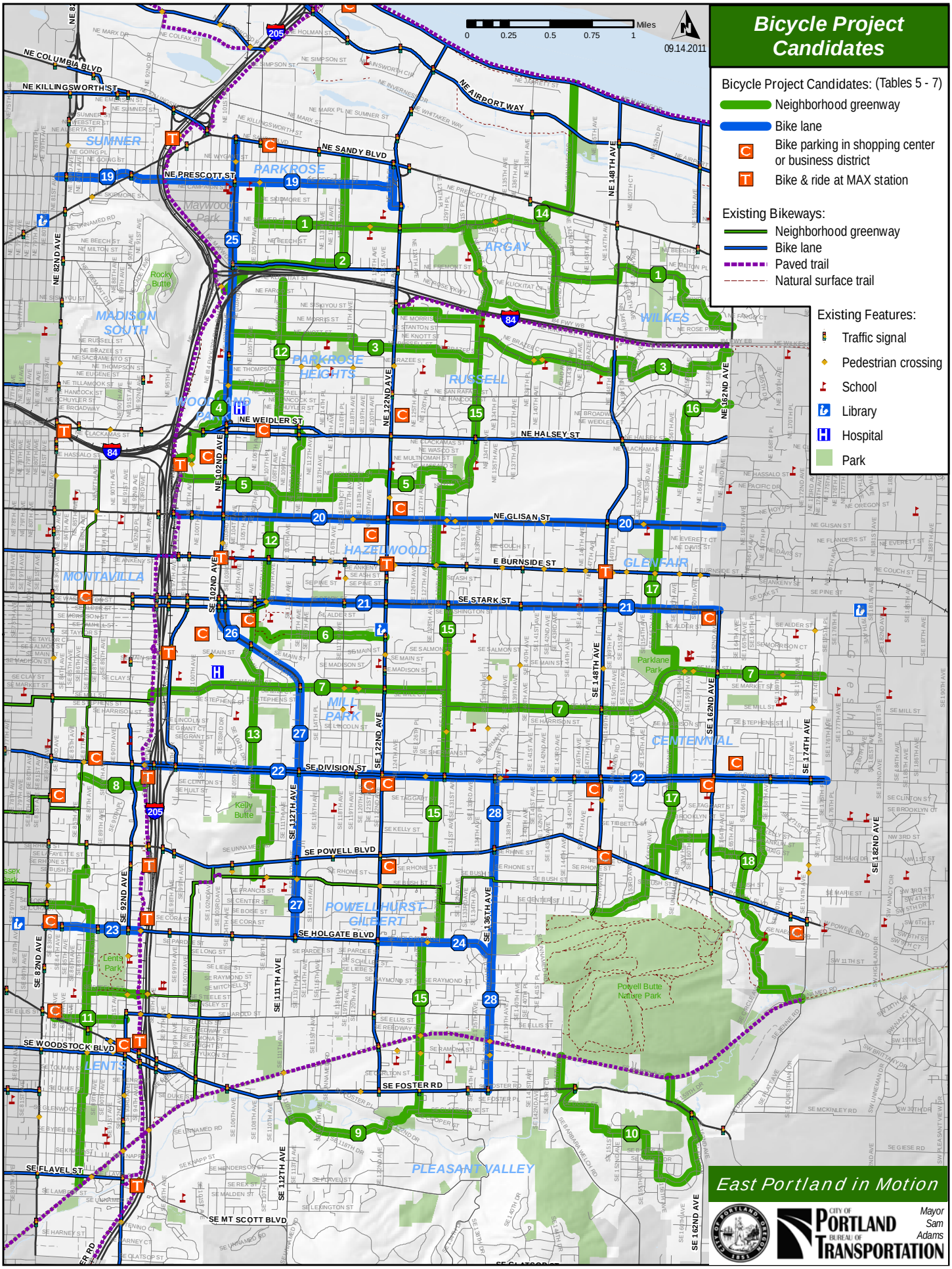
[8] City of Portland Code Chapter 33.260.210.

Table 7. Bicycle Parking Candidates

MAX Stations		
Station	**Line**	**Weekly Ridership***
NE 82nd Ave	MAX Blue/Red/Green Lines	33,788
Gateway TC	MAX Blue/Red/Green Lines	90,830
E 102nd Ave	MAX Blue Line	15,176
E 122nd Ave	MAX Blue Line	23,127
E 148th Ave	MAX Blue Line	10,254
Parkrose/Sumner TC	MAX Red Line	13,061
Cascades	MAX Red Line	6,554
Mt Hood Ave	MAX Red Line	3,629
SE Main St	MAX Green Line	6,921
SE Division St	MAX Green Line	7,967
SE Powell Blvd	MAX Green Line	6,326
SE Holgate Blvd	MAX Green Line	6,151
Lents	MAX Green Line	7,478
SE Flavel St	MAX Green Line	5,347
Retail Commercial Areas		
Area	**Location**	**Number of Businesses†**
Cascade Station	NE Cascades Pkwy & Mt St Helens Ave	40
International Corporate Center	NE Glenn Widing Way & Airport Way	17
Parkrose Business District	NE Sandy Blvd: 99th – 115th	95
Gateway Shopping Center	NE Halsey St & 102nd Ave	26
Halsey/Weidler Business District	NE Halsey/Weidler: 102nd – 112th	81
Bi-Mart / WinCo Foods	NE 122nd Ave & Halsey St	12
Menlo Park Plaza	NE Glisan St & 122nd Ave (NE corner)	16
Glisan Street Station	NE Glisan St & 122nd Ave (SW corner)	15
Montavilla East Business District	SE Stark/Washington: 82nd – 92nd	44
Mall 205	SE Washington St & 99th Ave	61
Plaza 205	SE Washington St & 103rd Ave	30
Village Square	SE Stark St & 162nd Ave	12
King Plaza	SE Division St & 87th Ave	17
The Division Center	SE Division St & 122nd Ave (SW corner)	20
Midway Plaza	SE Division St & 122nd Ave (SE corner)	8
Division Fred Meyer	SE Division St & 148th Ave	7
Big Dollar Shopping Center	SE Division St & 162nd Ave (SW corner)	9
Division Crossing	SE Division St & 162nd Ave (NE corner)	19
FuBonn Shopping Center	SE 82nd Ave & Woodward St	39
Powell Villa	SE Powell Blvd & 122nd Ave (SE corner)	15
Small Mall	SE Powell Blvd & 148th Ave	9
Meadowland Shopping Center	SE Powell Blvd & 174th Ave	12
Eastport Plaza	SE 82nd Ave & Holgate Blvd	33
Top to Bottom / Big 5 Sporting Goods	SE 82nd & Foster Rd	7
Lents Town Center	SE 92nd Ave & Foster/Woodstock	39

*Average weekly ons/offs, 2010. Provided by TriMet.

†Approximate number based on business addresses in mail carrier routes. Provided by Portland Development Commission.


Bicycle Project Candidates
Bicycle Project Candidates: (Tables 5 - 7)
Neighborhood greenway
Bike lane
Bike parking in shopping center or business district
Bike & ride at MAX station
Existing Bikeways:
Neighborhood greenway
Bike lane
Paved trail
Natural surface trail
Existing Features:
Traffic signal
Pedestrian crossing
School
Library
Hospital
Park
Miles
0
0.25
0.5
0.75
1
09.14.2011
NE COLUMBIA BLVD
NE KILLINGSWORTH ST
NE AIRPORT WAY
NE SANDY BLVD
NE PRESCOTT ST
NE WEIDLER ST
NE HALSEY ST
NE GLISAN ST
E BURNSIDE ST
SE STARK ST
SE DIVISION ST
SE POWELL BLVD
SE HOLGATE BLVD
SE FOSTER RD
SE WOODSTOCK BLVD
SE FLAVEL ST
SE MT SCOTT BLVD
NE 82ND AVE
NE 102ND AVE
NE 122ND AVE
NE 162ND AVE
NE 148TH AVE
SE 102ND AVE
SE 122ND AVE
SE 148TH AVE
SE 162ND AVE
SE 174TH AVE
SE 182ND AVE
SE 92ND AVE
SE 82ND AVE
SE 111TH AVE
SE 112TH AVE
SE 136TH AVE
SUMNER
PARKROSE
ARGAY
WILKES
MADISON SOUTH
PARKROSE HEIGHTS
RUSSELL
WOODLAND PARK
HAZELWOOD
GLENFAIR
MONTAVILLA
MILL PARK
CENTENNIAL
POWELLHURST GILBERT
LENTS
PLEASANT VALLEY
Maywood Park
Rocky Butte
Kelly Butte
Lents Park
Parklane Park
Powell Butte Nature Park
East Portland in Motion
CITY OF PORTLAND BUREAU OF TRANSPORTATION
Mayor Sam Adams

4.5. Trail Project Candidates

Trails provide car-free routes for people walking, riding bikes or using other types of non-motorized transportation. Longer distance trails such as the Springwater Corridor are considered **regional trails**. These are part of a larger trail network connecting destinations and open spaces in multiple cities and counties throughout the Portland region. Other trails are localized **ped/bike connections** that provide car-free access within or between neighborhoods and business districts. East Portland contains opportunities for both types of facilities.

4.5.1. Regional Trails

East Portland lies at the crossroads of several existing and proposed regional trails. Metro regional government's 2003 publication, *Regional Trails & Greenways: Connecting Neighborhoods to Nature*, is the guiding document for this regional trail vision. While the time frame of many of these trails is long term (and therefore beyond the five-year scope of *East Portland in Motion*), they are nevertheless included as candidates for consideration in Table 8.

Table 8: Regional Trail Candidates

Map #	Trail	Description[9]	Approximate Mileage in East Portland
1	Columbia Slough Trail	"From Kelley Point Park, this trail route heads east to Blue Lake Regional Park. In many sections, the route runs on top of a levee on the north side of the slough."	3.5 (unfinished portions)
2	Cross Levee Trail	"Proposed as a north-south trail segment of the 40-Mile Loop Trail connecting the Lewis and Clark Discovery Greenway Trail [Marine Drive Trail] to the Columbia Slough Trail near NE 143rd Avenue."	0.8
3	Sullivan's Gulch Trail	"Running from the Eastbank Esplanade, this trail corridor is envisioned on the north side of I-84, adjacent to the eastside MAX light rail and Union Pacific railroad tracks. The trail will connect to the I-205 Corridor Trail and eventually extend to the existing I-84 bikeway to Fairview."	2.7
4	Mt. Scott Trail	"Proposed as a trail that will extend north from Mt. Talbert to join the Springwater Corridor near Powell Butte. It will cross over Mt. Scott and follow Johnson Creek before intersecting with the Springwater Corridor."	2.0
5	Scouter Mountain Trail	"This trail will provide a larger loop than the East Buttes Loop connecting Powell Butte at the Springwater Corridor to Scouter Mountain to the south and back again to the Springwater further to the east."	1.3
6	East Buttes Loop Trail	"Located in the area south of the Springwater Corridor, this trail will begin at Powell Butte, loop through a number of recently acquired open space properties and back to the Springwater Corridor."	0.4

[9] "Regional Trails & Greenways: Connecting Neighborhoods to Nature," Metro, 2003.

4.5.2. Ped/Bike Connections

At the neighborhood scale, many areas of East Portland would benefit from short pedestrian and bicycle connections linking dead-end streets and providing access between residential areas, shopping centers and parks. Such connections would improve connectivity of the pedestrian network, reduce the effective walking distance to nearby destinations by creating shortcuts, and potentially encourage more walking and biking as a result. Sources for ped/bike connection candidates in *East Portland in Motion* include the following:

- **Portland Transportation System Plan Master Street Plan** (2004 and 2009). The Master Street Plan component of the TSP identifies potential ped/bike connections and new local streets in the Far Southeast District and Gateway District.[10] All ped/bike connections shown on the two district maps are included in *East Portland in Motion*, except for a handful that have been completed since the adoption of the respective maps. Also included are several local street connections that would have significant utility for pedestrian and bicycle circulation. Examples include SE Clinton Street between 122nd and 124th in the Far Southeast District, and NE Wasco Street between 106th and 107th Avenues in Gateway District.

- **Outer Powell Conceptual Design Plan** (2011). This plan's *Local Street and Accessway Report* includes an update of potential ped/bike connections within a half mile of SE Powell Boulevard from I-205 to Gresham. New ped/bike connections not already included in the TSP Master Street Plan were added as candidates.

- **Neighborhood Greenway Candidates**. Potential neighborhood greenways researched as part of *East Portland in Motion* contain short sections that would be built as multi-use trails or bridges. Examples include:

    - Enhancement of an ODOT maintenance access bridge over I-84 near NE Fremont Street and 105th Avenue.

    - A new ped/bike bridge over Interstate 84 at NE 132nd Avenue.

    - Trails through (or along the perimeter of) parks including Beech, Wilkes Headwaters, Glenfair, Parklane, Clatsop Butte and Leach Botanical Garden.

    - Trails in unimproved rights-of-way, including SE Clinton Street from 85th Avenue to the I-205 Path, SE 106th between Market and Division streets, and SE 108th Avenue and Franklin Street.

[10] *Portland Transportation System Plan*, Chapter 11, maps 11.11.3 and 11.11.7.

In general, *East Portland in Motion* shows ped/bike connection alignments with more detail than their parent sources. It should be emphasized that **all ped/bike connections and regional trail routes are subject to further study and willing negotiation with affected property owners and jurisdictions.** Many connections will not be realized until the development or redevelopment of property.

4.5.3. Trail Crossing Enhancements

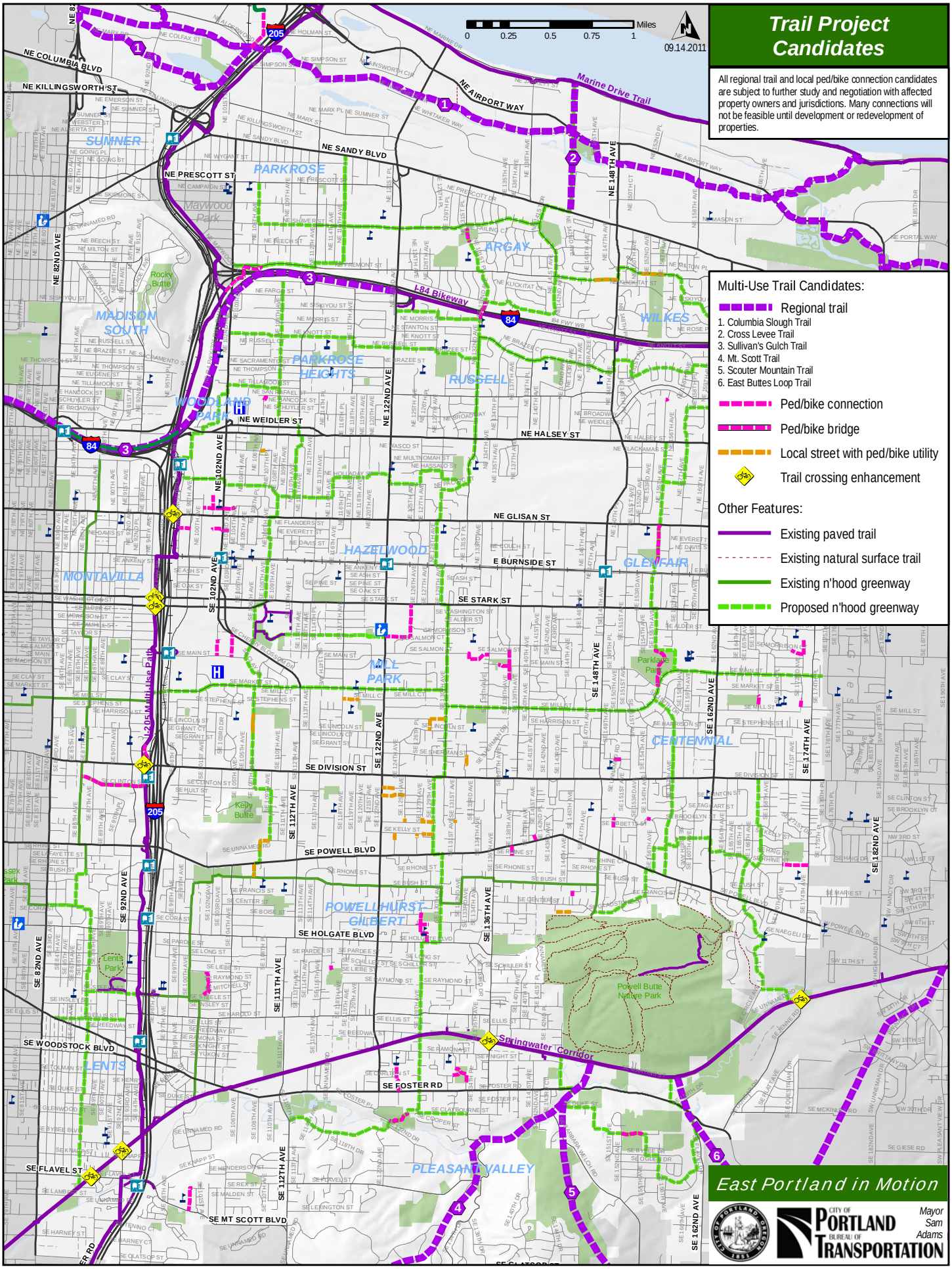
Where existing trails such as the I-205 Multi-Use Path and Springwater Corridor cross arterial streets, bicyclists and pedestrians are aided with marked crossings and, in some cases, traffic signals, overcrossings or undercrossings. However, the candidates in Table 9 below have been identified by EPAPbike and EPLUTC as needing additional improvements to provide safe passage for pedestrians and bicyclists.

Note: These candidates differ from crossing candidates listed in section 4.3 in that they are enhancements of existing improved crossings, rather than completely new facilities.

Table 9. Multi-Use Path Crossing Enhancement Candidates

Trail	Crossing Location	Current Conditions
I-205 Multi-Use Path	NE Glisan St	Traffic signal, offset crossing
I-205 Multi-Use Path	SE Stark/Washington couplet	Traffic signals, shared sidewalk
I-205 Multi-Use Path	SE Division St	Ladder striping, median refuge island
Springwater Corridor	SE Flavel St	Ladder striping, median refuge island
Springwater Corridor	SE 92nd Ave	Ladder striping, median refuge island
Springwater Corridor	SE 136th Ave	Ladder striping
Springwater Corridor	SE Jenne Rd	Ladder striping

The following *Trail Project Candidates* map shows candidates for regional trails, ped/bike connections and enhancements of trail crossings.


Trail Project Candidates
All regional trail and local ped/bike connection candidates are subject to further study and negotiation with affected property owners and jurisdictions. Many connections will not be feasible until development or redevelopment of properties.
Miles
0 0.25 0.5 0.75 1
09.14.2011
Multi-Use Trail Candidates:
Regional trail
1. Columbia Slough Trail
2. Cross Levee Trail
3. Sullivan's Gulch Trail
4. Mt. Scott Trail
5. Scouter Mountain Trail
6. East Buttes Loop Trail
Ped/bike connection
Ped/bike bridge
Local street with ped/bike utility
Trail crossing enhancement
Other Features:
Existing paved trail
Existing natural surface trail
Existing n'hood greenway
Proposed n'hood greenway
Marine Drive Trail
I-84 Bikeway
I-205 Multi-Use Path
Springwater Corridor
SUMNER
PARKROSE
ARGAY
WILKES
MADISON SOUTH
PARKROSE HEIGHTS
RUSSELL
WOODLAND PARK
HAZELWOOD
GLENFAIR
MONTAVILLA
MILL PARK
CENTENNIAL
POWELLHURST GILBERT
LENTS
PLEASANT VALLEY
Maywood Park
Rocky Butte
Kelly Butte
Parklane Park
Lents Park
Powell Butte Nature Park
NE COLUMBIA BLVD
NE KILLINGSWORTH ST
NE AIRPORT WAY
NE SANDY BLVD
NE PRESCOTT ST
NE 82ND AVE
NE 102ND AVE
NE 122ND AVE
NE 148TH AVE
NE WEIDLER ST
NE HALSEY ST
NE GLISAN ST
E BURNSIDE ST
SE STARK ST
SE DIVISION ST
SE POWELL BLVD
SE HOLGATE BLVD
SE WOODSTOCK BLVD
SE FOSTER RD
SE FLAVEL ST
SE MT SCOTT BLVD
SE 92ND AVE
SE 112TH AVE
SE 136TH AVE
SE 148TH AVE
SE 162ND AVE
SE 174TH AVE
SE 182ND AVE
East Portland in Motion
CITY OF PORTLAND BUREAU OF TRANSPORTATION
Mayor Sam Adams

5
Setting Priorities

NEW COPPER PENNY
MAGNA

5.1. Community Support

Chapter 5 documents how active transportation project candidates are prioritized into the refined list of recommended projects included in Chapter 6. This first section describes how public involvement played a crucial role in helping PBOT refine the list.

PBOT determined community support for project candidates through:

- Collaboration with **EPNOLUTC** and **EPAPbike**.
- **Public voting on sidewalk project candidates** at community events.
- The ***Sidewalk and Bicycle Priority Survey*** and Portland State University's ***East Portland Travel Survey***.
- **Letters of support** for specific projects.
- **Interviews and conversations** with community stakeholders and residents.

5.1.1. Neighborhood and School District Priorities

The EPNOLUTC was instrumental in gathering and prioritizing project requests from the community. This included a list of the top active transportation priorities from each neighborhood association and school district that participates in the committee.

Separately, the **Sumner Association of Neighbors** (a member of Central Northeast Neighbors district coalition rather than EPNO) indicated support for two active transportation projects in that neighborhood.

Neighborhood and school district priorities for active transportation are listed in Table 10.

Table 10. Neighborhood and School District Priorities[11]

Neighborhood Association or School District	Improvement	Project Type	In EPIM Rec. Strategy ?	EPIM Project Number
Centennial Community Association	SE Powell Blvd: 142nd – 174th	Infill sidewalks	No	
	SE Division St: 142nd – 174th	Pedestrian refuge islands	Yes	S-10
Glenfair Neighborhood Association	SE Stark St: 148th – 162nd	Infill sidewalks	Yes	S-9
	NE Glisan St: 148th – 162nd	Bike lanes	Yes	B-2
Hazelwood Neighborhood Association	NE Halsey and Weidler at 106th Ave	Pedestrian refuge islands	Yes	S-6
	NE Glisan St at I-205 Multi-Use Path	Trail crossing enhancement	Yes	X-6
Lents Neighborhood Association	SE Ellis St: Foster – 92nd	Infill sidewalks	No	
	SE Foster Rd: 99th – 111th	Infill sidewalks	No	
Mill Park Neighborhood Association	SE 122nd Ave at Division St	High-crash intersection improvements	Yes	E-6 & E-8
	SE 122nd Ave at Stark St	High-crash intersection improvements	Yes	E-6
Parkrose Heights Association of Neighbors	NE 111th Dr/Ave: Klickitat – Halsey	Infill sidewalks	No	
Pleasant Valley Neighborhood Association	SE 136th Ave at Springwater Corridor	Trail crossing enhancement	Yes	X-7
	SE Jenne Rd at Springwater Corridor	Trail crossing enhancement	No	
Powellhurst-Gilbert Neighborhood Association	SE 122nd Ave: Springwater Corridor to Foster Rd	Infill sidewalks	Yes	S-2
	SE Ramona St: 122nd to 136th	Infill sidewalks and curb ramps	Yes	S-19
Russell Neighborhood Association	NE 132nd Ave: I-84 Path to Halsey	Neighborhood greenway	Yes	G-1
Sumner Association of Neighbors	NE Sandy Blvd: 85th – 92nd	Infill sidewalks	Yes	S-5
	NE Prescott St: 82nd – I-205	Bike lanes	Yes	B-4
Wilkes Community Group	NE 148th Ave: Sacramento – Glisan	Infill sidewalks	Partial	S-14
	NE Glisan St: 148th – 162nd	Infill sidewalks	Yes	S-8
Woodland Park Neighborhood Association	NE 102nd Ave: Bell – Tillamook	Infill sidewalks & curb ramps	Yes	S-11
David Douglas School District	NE Glisan St: I-205 – 148th	Pedestrian refuge islands	Partial	X-6, G-1 & G-9
	SE 102nd Ave / Cherry Blossom Rd: Stark – Market	Infill sidewalks	No	
	SE Market St: 112th – 130th	Infill sidewalks	No	
	SE Powell Blvd at I-205	High-crash intersection improvements	No	
Parkrose School District	NE Sandy Blvd: 122nd – 148th	Infill sidewalks	Partial	R-3 (ODOT)
	NE Prescott St: I-205 – 122nd	Infill sidewalks	Yes	S-16
	NE 102nd Ave at Skidmore St	Curb extensions and pedestrian refuge islands	Yes	X-1

[11] Listed in EPLUTC meeting notes from March 9, 2011.

5.1.2. East Portland Action Plan Bicycle Subcommittee Priorities

As mentioned in section 4.4, EPAPbike served as the primary advisory body for refining recommendations in the *Portland Bicycle Plan for 2030*. EPAPbike gave its official recommendations, in order of priority, as a letter to Mayor Adams. These recommendations are shown in Table 11.

Table 11: EPAPbike Bikeway Recommendations[12]

Priority #	Project Description from EPAPbike	Corresponding *East Portland in Motion* Neighborhood Greenway Candidate
1	5-mile neighborhood greenway connecting Foster Road to the I-84 Multi-Use Path through the center of East Portland.	130s Neighborhood Greenway
2	4.3-mile east-west spine following an existing Multnomah County "bike route" along SE Market St, Mill St, Millmain Dr, and Main St through the center of East Portland.	'4M' (Market/Mill/Millmain/Main) Neighborhood Greenway
3	0.75-mile pedestrian and bicycle path along the south side of NE Fremont from 102nd to 115th, with a 0.9-mile community greenway along NE 115th Ave to Shaver.	Parkrose Greenway
4	2-mile community greenway and bike lane along NE Prescott St from 77th Ave to 105th Ave and then along Shaver St east across 122nd Ave to 141st Ave.	Prescott Bike Lane, Parkrose/Argay/ Wilkes Neighborhood Greenway
5	2.9+ mile neighborhood greenway connecting the Springwater Trail to NE Halsey through Pleasant Valley, Centennial and Glenfair neighborhoods.	150s Neighborhood Greenway, Centennial Neighborhood Greenways
6	Completion of the 86th – 88th St community greenway through the Lents neighborhood, from SE Woodward St to SE Flavel St.	80s Neighborhood Greenway – South Reach
7	2.4-mile community greenway along NE Knott St. and NE Sacramento St, from 102nd Ave to 162nd Ave through the Parkrose Heights, Russell and Wilkes neighborhoods	Knott/Russell Neighborhood Greenway

EPAPbike also provided important feedback on other bicycle facilities, including:

- The need for **bicycle parking** at commercial destinations in East Portland, including consideration of the suburban layout and private ownership of most shopping centers in East Portland.

- Support for **additional bike lanes** on arterial roadways in East Portland, with the condition that the public process be inclusive and incorporate lessons learned from previous bike lane processes.

[12] Listed in letter from East Portland Action Plan to Mayor Sam Adams, dated February 4, 2011.

5.1.3. Sidewalk Voting

Community members voted on the 57 sidewalk project candidates (described in section 4.2) at five community events held throughout East Portland in the winter and spring of 2011. Each of the 94 participants received five sticky dots to place next to the sidewalk projects they felt are most important. The top 20 results are shown in Table 12, ranked by popularity. Full results are shown in Appendix F.

Table 12: Top 20 Sidewalk Project Candidates by Public Voting[13]

Map ID #	Project Description	Total Votes	Map ID #	Project Description	Total Votes
34b	SE 136th Ave: Powell – Holgate	29	2	NE Fremont St: 112th – 122nd	16
19c	SE 122nd Ave: Holgate – Foster	25	22b	SE 162nd Ave: Taylor – Powell	16
34a	SE 136th Ave: Division – Powell	24	21	SE 160th Ave: Burnside – Stark	15
19b	SE 122nd Ave: Powell – Holgate	21	34c	SE 136th Ave: Holgate – Foster	15
8a	NE Prescott St: Sandy – 102nd	19	23b	NE Prescott St: 102nd – 121st	14
23a	SE Division St: 101st – 145th	19	16	SE Cherry Blossom Dr	13
9	SE Holgate Blvd: 99th – 122nd	18	24	NE Fremont St: 102nd – 112th	13
1	NE Sandy Blvd: 85th – 91st	17	4c	NE Halsey St: 126th – 132nd	12
15b	NE 102nd Ave: I-84 – Weidler	17	19a	NE 122nd Ave: Marine – Shaver	12
17	SE 112th Ave: Market – Holgate	17	8b	SE Division St: 148th – 171st	11

5.1.4. Public Surveys

The *Sidewalk and Bicycle Priorities Survey* and *East Portland Travel Survey* asked people about overall policy and travel preferences more so than about particular projects. However, the surveys collectively helped PBOT prioritize projects in two ways:

- **Recommending a mix of Type 1 and Type 2 sidewalks.** *Sidewalk and Bicycle Priorities Survey* respondents supported building a mix of sidewalk types – on streets with and without curb, and built to mixed standards of curb-tight, full city standard, or a hybrid interim facility. PBOT interprets these results as a signal to avoid focusing too heavily on any one type of sidewalk infill solution.

- **Low-stress bikeways are most popular.** In both surveys, respondents gave highly favorable ratings to neighborhood greenways and paved trails compared to other bikeway facility types. PBOT sees this as validation of EPAPbike's recommendations to focus on neighborhood greenway network development in East Portland.

[13] Voting took place at the Transportation Safety Summit, 2/9/11 at Marshall H.S.; Portland Plan Fair, 3/12/11 at IRCO; Outer Powell Conceptual Design Plan Open House, 3/16/11 at Ron Russell M.S.; Portland Committee on Disability Access in the Built Environment Subcommittee meeting, 4/11/11 at Portland State University; and Parkrose Famers Market, 5/7/11 at Parkrose High School.

5.1.5. Other Community Support

PBOT received hundreds of individual comments, had many conversations with residents and stakeholders, and received several letters of support for projects. A key example of a project that rose to the top of the list based on outstanding community support is sidewalk candidate #21: SE 160th Avenue from Burnside to Stark. In this case, residents of the Burnside Station Apartments – a community of people who use wheelchairs and mobility devices – organized and contacted both PBOT and the Portland Police Bureau to describe how the lack of sidewalks in front of their apartment complex compromises their mobility and quality of life. The project received additional support through public voting exercises.

Other groups and individuals made similar gestures – including:

- Parkrose School District, whose superintendent Dr. Karen Fischer Gray wrote a letter of support for sidewalk and crossing projects near district schools;

- Rita Charlesworth, an Airport Way worker who pointed out a particular safety hazard along that road;

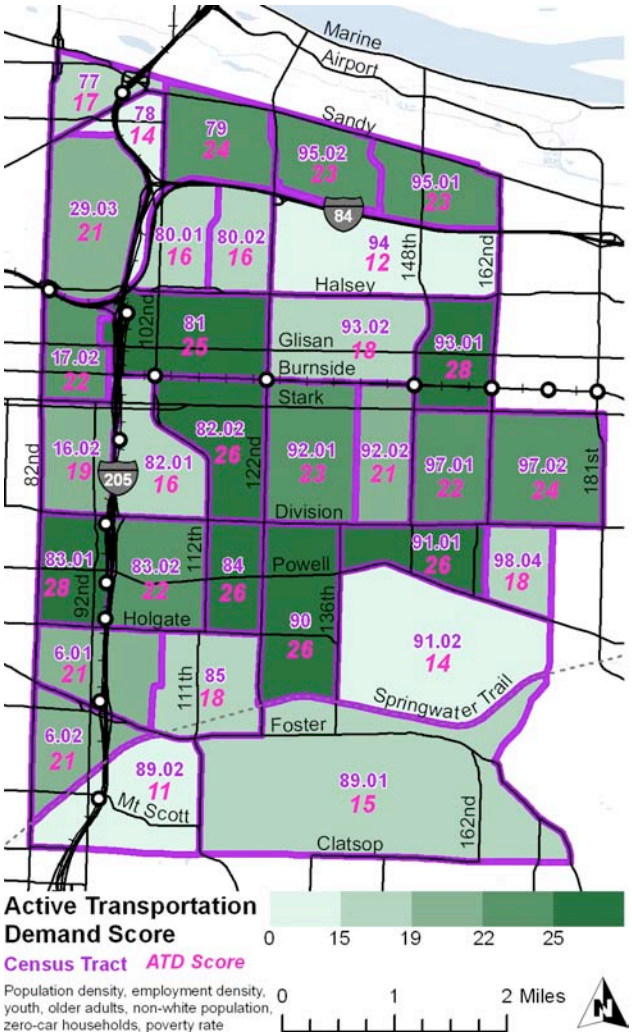
- Lents Neighborhood Association, which e-mailed in support of the 80s Neighborhood Greenway; and

- numerous others who “went the extra mile” to reach out to PBOT regarding active transportation and safety.

5.2. Transportation Equity

A major intent of *East Portland in Motion* is to recommend active transportation projects in neighborhoods that most need them. To help determine where these neighborhoods are, PBOT further analyzed the demographic indicators described in section 2.1.

Demographic data show correlations with the use of active transportation modes. Denser concentrations of people and jobs make it more likely that someone will walk, bike or take transit. Children and older adults are more likely to rely on active transportation because of age or health-related limits on driving cars. Persons with lower incomes are more likely to use active transportation, as are households without cars.



5.2.1. Active Transportation Demand Score

Because of these relationships, it is possible to calculate an *active transportation demand score* by combining the above demographic data mathematically. In the map at right, each census tract in the Study Area is assigned a score calculated by adding seven different sub-scores based on[14]:

- **Population density** (persons per gross acre)
- **Business density** (business addresses per gross acre)
- **Children** (percentage of population age 0-17)
- **Older adults** (percentage of population age 65 and over)
- **Non-white residents** (percentage of population not identifying as white)
- **Poverty rate** (percentage of households with income below federal poverty line)
- **Zero-car households** (percentage of households with no access to a vehicle)

These contributing factors are discussed further – including individual maps of each sub-score – in Appendix A.

[14] US Bureau of the Census, 2010 Decennial Census and 2005-2009 American Community Survey 5-Year Estimates.

Based on active transportation demand scores, areas that would most benefit from active transportation improvements are generally located between NE Halsey Street and SE Foster Road. **Glenfair, Powellhurst-Gilbert, Mill Park and northern portions of Lents** show particularly strong indicators of active transportation demand. Conversely, areas that would theoretically benefit the least from active transportation improvements are the Pleasant Valley neighborhood south of SE Foster Road and the Russell neighborhood north of NE Halsey Street. Low population density, low poverty rates and few employment areas contribute to lower scores in these areas.

5.2.2. Deficiencies

Many of the high demand areas also happen to have major deficiencies in the pedestrian and bicycle network. For example, the area between NE Halsey Street and SE Foster Road includes 40 of the 57 identified missing sidewalk segments and 78 of the 96 locations identified as needing crossing improvements.

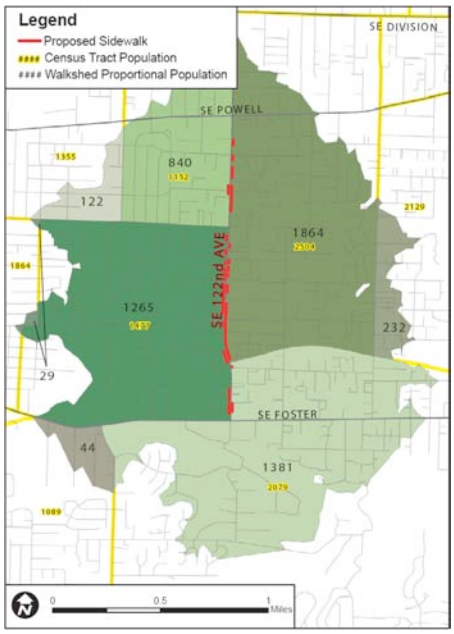
This is a predicament that many west coast cities are now facing: populations that rely on active transportation are moving to areas that lack it – not because they want to, but because this is where housing is most affordable. These equity considerations are a major factor in prioritizing projects in *East Portland in Motion*.

5.3. Accessibility

Projects that significantly improve access between destinations such as homes, businesses and transit stops have more utility than projects with negligible impacts. PBOT examined accessibility in terms of project service areas and access to transit.

5.3.1. Service Areas

One way of measuring the accessibility of a project is to define a *service area* (or *walkshed*) and determine its population. On this matter, PBOT enlisted the help of geography and urban planning students at Portland State University. Students took part in weekly "GIS jam sessions" where students in geographic information systems (GIS) classes were invited to develop class projects based on *East Portland in Motion*. The resulting work focused primarily on accessibility and connectivity considerations for the sidewalk project candidates.



Service area and population apportionment for sidewalks on SE 122nd Avenue. *Liz Paterson / C.J. Doxsee*

A sidewalk project service area for this purpose was defined as **streets and properties within one mile of the project, measured along the street or trail network**. To determine population, Census Tracts and their associated data are overlaid and apportioned to the service areas, with the help of an address point layer to adjust for fine-grain density patterns. The Census data also allows accessibility to be measured based on a project's utility to certain population groups, such as children, seniors, non-white residents and lower income households.

Table 13 below shows selected results from the accessibility analysis – the 10 sidewalk project candidates with the highest service area populations, and the 10 candidates that serve the most people in poverty. In both cases, **projects between NE Glisan Street and SE Holgate Boulevard scored the highest**. Full results are included in Appendix I.

Table 13: Top 10 Sidewalk Project Candidates by Population and Poverty

BY POPULATION			BY POVERTY		
Project ID #	**Project Description**	**Service Area Population**	**Project ID #**	**Project Description**	**Service Area Poverty Rate**
8a	SE Division St: 101st – 145th	31,304	21	SE 160th Ave: Burnside – Stark	29.3%
22b	SE 162nd Ave: Taylor – Powell	25,929	6b	SE Stark St: 148th – 160th	26.5%
8b	SE Division St: 148th – 171st	25,294	5b	NE Glisan St: 148th – 162nd	26.3%
7c	SE Mill St: 130th – 148th	22,246	26b	SE Main St: 162nd – city limit	25.7%
9	SE Holgate Blvd: 99th – 122nd	21,968	5a	NE Glisan St: 135th – 148th	23.8%
7b	SE Market St: 112th – 130th	20,974	30a	SE 104th Ave: Bush – Cora	22.7%
6a	SE Stark St: 126th – 143rd	20,512	7d	SE Millmain/Main: 162nd – city limit	22.7%
26b	SE Main St: 162nd – city limit	20,031	22b	SE 162nd Ave: Taylor – Powell	22.2%
7d	SE Millmain/Main: 151st – 162nd	19,071	20b	NE 148th Ave: Halsey – Glisan	22.1%
5b	NE Glisan St: 148th – 160th	18,269	17	SE 112th Ave: Market – Holgate	21.4%

Population data from 2010 Decennial Census; Poverty data from American Community Survey 2005-2009 Estimates.

5.3.2. Access to Transit

In another set of analyses, PBOT used TriMet ridership data to estimate how many potential people may use each sidewalk and crossing project to access transit. Projects near transit stops with higher ridership are given more consideration in overall project prioritization. Bus ramp deployments (to help people with mobility devices get on and off the bus) are another important consideration. Transit stops that see particularly high ramp usage are likely to be near concentrated populations of elderly or disabled residents. Safety and accessibility improvements are especially important for these communities.

For sidewalk project candidates, ridership and ramp deployments are measured at all transit stops immediately adjacent to the proposed project work area, as well as at other nearby stops that would be accessed by traveling along the proposed project. For crossing improvement

candidates, ridership and ramp deployments are measured at the nearest transit stop on each side of the street. In both cases, ridership data is reported as the sum of boardings and alightings ("ons and offs") over the course of a week, averaged over 9 months in 2010. Bus ramp deployments are reported as a monthly average from 2009. Table 14 below shows the crossing improvement candidates with the highest associated ridership and ramp deployments. The **Division Street and 122nd Avenue corridors are clear winners.** Complete data are included in Appendix G for crossing improvement candidates and Appendix F for sidewalk project candidates.

Table 14: Top 10 Crossing Improvement Candidates by Ridership* and Ramp Deployments†

BY RIDERSHIP				BY BUS RAMP DEPLOYMENTS			
Project ID #	**Project Description**	**Bus Line**	**Weekly Ons and Offs**	**Project ID #**	**Project Description**	**Bus Line**	**Monthly Ramp Deploy-ments**
80	SE 122nd Ave @ Clinton St	71	1,933	80	SE 122nd Ave @ Clinton St	71	42.1
50	SE Division St @ SE 129th/130th Ave	4	1,681	69	NE 102nd Ave @ Knott St	22	38.1
49	SE Division St @ 124th/125th Ave	4	1,584	51	SE Division St @ 132nd Ave	4	37.0
54	SE Division St @ SE 157th Ave	4	1,141	52	SE Division St @ 139th Ave	4	35.2
77	NE 122nd Ave @ Davis St	71	1,079	50	SE Division St @ 129th/130th Ave	4	30.7
41	SE Stark St @ 160th Ave	20	995	44	SE Division St @ 89th Ave	4	27.8
79	SE 122nd Ave @ Lincoln St	71	919	7	NE Sandy Blvd @ 88th Ave	12	26.4
52	SE Division St @ SE 139th Ave	4	853	32	SE Stark St @ 109th Ave	20	21.0
61	SE Foster Rd @ Henry St / 99th Ave	10, 14, 71	848	49	SE Division St @ 124th/125th Ave	4	20.5
51	SE Division St @ 132nd Ave	4	775	77	NE 122nd Ave @ Davis St	71	20.2

*Average weekly ons and offs, 2010. Source: TriMet

† Average monthly ramp deployments, 2009. Source: TriMet.

5.4. Connectivity

Connectivity considerations can be stated in the form of a question: **Which projects would fill a critical gap in the pedestrian network and result in a greater number of pedestrian trips?** Participants in the aforementioned GIS Jam at Portland State University were instrumental in answering this question.

PBOT was particularly interested in estimating connectivity gains for sidewalk and crossing project candidates. Students developed models that measure connectivity in terms of the projected increase in pedestrian trips through a project after it is completed. Gains in connectivity are determined by building and running a model of the pedestrian network in the vicinity of a project candidate. Specifically, this entails the following:

1) **Establishing one-mile service areas** around each of the sidewalk project candidates, as described in section 5.3.

2) **Modeling the pedestrian network.** This involves splitting arterial streets (neighborhood collectors and higher classes) into left and right side segments and crosswalks, to represent the fact that people walk along the sides of busy streets and across crosswalks, rather than in the middle of them. This also involves removing freeways and adding trails.

3) **Assigning weights to the network.** Impedance values are assigned to each street or trail segment, based on TSP street classification and the presence or absence of sidewalks and crosswalks.

4) **Selecting origins and destinations**, including grocery stores, transit stops, senior living facilities and social service providers.

5) **Running the model before and after improvements.** The model calculates walking paths to and from all origins and destinations, based on the weights assigned to the network. The model is designed so that streets with sidewalks, crosswalks, low traffic, infrequent crashes and low crime are favored over streets with the opposite conditions. The model is run twice – once representing conditions before a sidewalk is built, and again after recoding the network to represent a completed sidewalk project.

6) **Measuring the difference.** Sidewalk project locations are queried to see how many trips pass through the location before and after a project is "built." Rather than observing raw numbers, the analysis measures the *proportion* of total trips in the service area that pass through the sidewalk project. Projects that see a greater increase in the proportion of local trips are deemed to have a higher connectivity value.

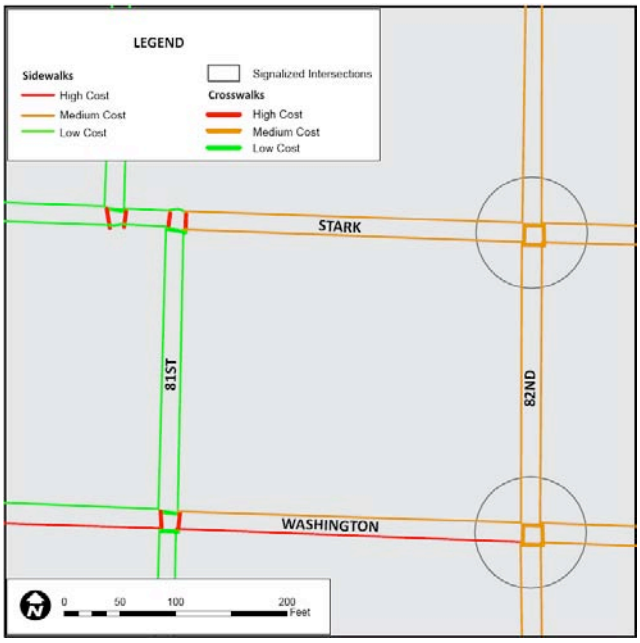
Because the time-consuming process above must be repeated for each project, students tested a subset of the full 57 sidewalk project candidates. PBOT pre-selected 14 projects that received strong support during the community engagement process.

Table 15 below shows the estimated connectivity rank of sidewalk projects. The connectivity rank is based on the proportion of local area trips that pass through the sidewalk project location. Projects on **SE 122nd Avenue**, **SE Division Street** and **SE Holgate Boulevard** score in the top three.

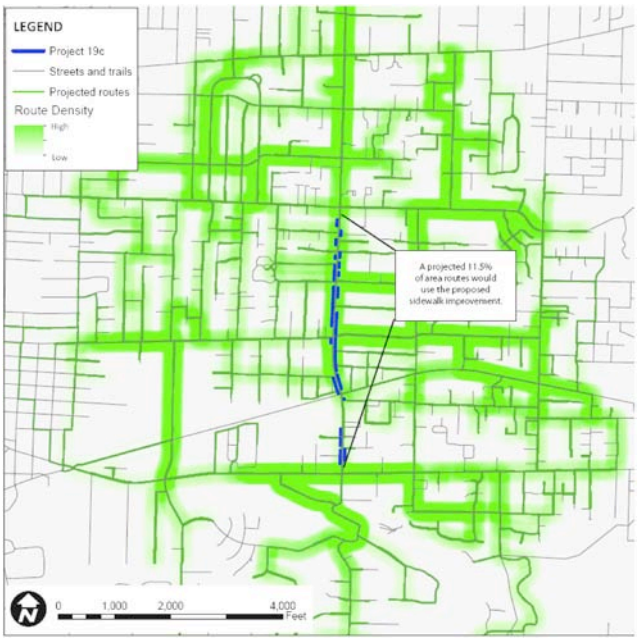
Table 15: Connectivity Rank of Selected Sidewalk Project Candidates*

Project ID #	Project Description	Connec-tivity Rank	Project ID #	Project Description	Connec-tivity Rank
19c	SE 122nd Ave: Holgate – Foster	1	34b	SE 136th Ave: Powell – Holgate	8
8b	SE Division St: 101st – 145th	2	19b	SE 122nd Ave: Powell – Holgate	9
27	SE Holgate Blvd: 122nd – 136th	3	6b	SE Stark St: 148th – 160th	10
6a	SE Stark St: 126th – 143rd	4	24	NE Fremont St: 102nd – 112th	11
23b	NE Prescott St: 102nd – 121st	5	17	SE 112th Ave: Market – Holgate	12
4e	NE Halsey St: 148th – 162nd	6	21	SE 160th Ave: Burnside – Stark	13
22b	SE 162nd Ave: Taylor – Powell	7	4b	NE Weidler St: 99th – 112th	14

*Based on percentage of local trips that pass through sidewalk project candidate location.



The pedestrian network modeled as two routes (one on each side of the street) and crosswalks, instead of one centerline with single intersection nodes. Weights are assigned based on the presence or absence of sidewalks and crosswalks. *Liz Paterson / C.J. Doxsee*



Visualization of the number of pedestrian trips that pass along each walkway segment within a project service area, with darker shading indicating more trips. *Liz Paterson / C.J. Doxsee*

5.5. Funding Leverage and Partnerships

In an era of constrained resources, any opportunity to leverage city investments with funds from other sources is desirable. Grant funding from state, regional and federal agencies, as well as creative partnerships with other public entities, help stretch resources to build more and better projects. PBOT considered these leverage opportunities when narrowing the list of *East Portland in Motion* project candidates. Certain projects, due to their location, neighborhood demographics or proposed features, may be more likely to win grant funding, or appeal to partner agencies, than others.

For example, a crossing improvement project near a school may be eligible for Safe Routes to School funding from the State of Oregon. A sidewalk project within an urban renewal area may garner the support of the Portland Development Commission and its urban renewal advisory committees. An access-to-transit project in an area with high poverty may present a strong case to win regional funding.

While funding opportunities often change, disappear or reappear, and no funding source should be considered a "given," the following list includes funding opportunities that PBOT considered when prioritizing projects for *East Portland in Motion*:

5.5.1. State of Oregon

- **Oregon Jobs and Transportation Act**. State funding established through House Bill 2001 is the primary funding source for sidewalk infill projects recommended in *East Portland in Motion*, as a result of Mayor Adams' decision to allocate $8 million for this purpose. These one-time funds are dedicated specifically for East Portland arterial streets, and must be obligated before the end of fiscal year 2012-13. After these funds are exhausted, East Portland projects will be able to compete for citywide HB 2001 funds.

- **ODOT Transportation Enhancement Funds.** ODOT manages federal highway funds for projects that strengthen the environmental value of the transportation system, including pedestrian and bicycle projects. In fiscal years 2010-2013, the program has $6.5 million available annually for competitively selected projects, as well as $2 million annually for discretionary grants. In 2011, ODOT awarded $1.5 million in TE funds to PBOT to build sidewalks along SE Ramona Street and SE Holgate Boulevard in the Powellhurst-Gilbert neighborhood.

- **ODOT Flexible Funds.** Established in 2010, this state program funds "sustainable, non-highway transportation projects, programs and services that positively impact modal connectivity, the environment, mobility and access, livability, energy use and the

overall operation of the transportation system."[15] ODOT Flexible Funds have allowed PBOT and PDC to implement the SE 122nd Avenue Complete and Green Main Street project between Holgate Boulevard and Ramona Street.

- **Oregon Safe Routes to School.** ODOT channels federal funds authorized through the 2005 SAFETEA-LU transportation bill. Eligible activities include infrastructure projects within two miles of a school, as well as education, encouragement and traffic enforcement. Funds for fiscal year 2012-2013 were awarded in May 2011, and include funding for several sidewalk and crossing projects in East Portland.

5.5.2. Metro Regional Government

- **Metro Transportation Improvement Program.** Through the MTIP program, Metro regional government administers federal funds for all types of transportation investments throughout the Portland region. The program runs on a four-year cycle, and is currently administering funds for projects in federal fiscal years 2010-2013.

- **Metro Regional Flexible Funds**. A subset of MTIP, regional flexible funds are allocated every two years, and can be spent on a greater variety of transportation improvements than other federal transportation dollars. As of summer 2011, decision making is underway for $24 million available for federal fiscal years 2014 and 2015. Projects for this round must focus on one of two topics: active transportation and complete streets, or green economy and freight initiatives. The City of Portland is applying for Regional Flexible Funds for two East Portland projects – the **Foster/Woodstock Streetscape**, and **East Portland Active Transportation to Transit**. The latter proposal contains 20 project candidates listed in *East Portland in Motion*, detailed further in Chapter 6.

- **Metro Nature in Neighborhoods**. As the primary planner of the region's open space and trail network, Metro offers two grants that help build this "green infrastructure." One is a capital grant to acquire open space for preservation and recreational development, including trails. This grant, funded by Metro's 2006 natural areas bond measure, will be a critical source for developing off-road regional trails in East Portland. The other Nature in Neighborhoods grant focuses on environmental restoration, enhancement and education.

- **Metro Regional Travel Options**. This grant channels federal transportation dollars to local projects and programs that reduce drive-alone trips and improve air quality. Past grants have helped fund PBOT's Sunday Parkways events, OPAL's East Portland Community Bus Stop Assessment, and the first of TriMet's Bike and Ride projects. PBOT applied for this grant in 2010 to fund a bicycle parking initiative in East Portland.

[15] "Q & A Flexible Funds Program," Oregon Department of Transportation, http://www.oregon.gov/ODOT/TD/TP/docs/FlexFunds/FAQ.pdf

Though the application was not selected for funding, PBOT will likely apply again with a revamped proposal to help mitigate East Portland's bicycle parking deficiency.

5.5.3. Other Sources

- **Lents Town Center and Gateway Regional Center Urban Renewal Areas**. Managed by the Portland Development Commission (PDC) and overseen by urban renewal advisory committees (URACs), Portland's urban renewal areas use tax-increment financing (TIF) that can be spent only on "bricks-and-mortar" projects. Transportation improvements have historically been a significant portion of these infrastructure investments. The Lents Town Center and Gateway Regional Center urban renewal areas collectively occupy about 15% of East Portland's land area, including sizable portions of the Lents, Powellhurst-Gilbert and Hazelwood neighborhoods. (The Airport Way Urban Renewal Area expired in 2011.) Active transportation projects in these areas have the potential to leverage TIF funding, provided that they meet the goals of the URACs and the PDC.

- **TriMet.** TriMet plans to share Federal Transit Administration funds with partner agencies including PBOT to construct safety improvements near transit stops. TriMet has identified ten focus areas where such improvements are most needed in the Portland region – two of which are in East Portland (SE Division and 122nd; SE 82nd and Powell). Crossing improvements that would provide safer access to transit – particularly in these focus areas – are given special consideration in *East Portland in Motion*.

- **HUD Sustainable Communities.** The U.S. Department of Housing and Urban Development's *Sustainable Communities Regional Planning Grant* supports multijurisdictional planning efforts to integrate housing, land use, economic development and infrastructure investments in an equitable and sustainable manner. PBOT, in cooperation with the Portland Housing Bureau and other partners, may consider developing a grant proposal for East Portland. Among other purposes, the grant may be able to cover some planning and design costs for active transportation projects recommended in *East Portland in Motion*.

- **Other City of Portland Bureaus.** The public realm in Portland is managed, planned and improved by multiple city bureaus. While the City of Portland is ultimately one entity led by City Council, there are nevertheless opportunities for PBOT to leverage funds controlled by other city bureaus. Many of East Portland's parks remain undeveloped, and could eventually be improved to further goals of both PPR and PBOT. Similarly, Portland's Bureau of Environmental Services (BES) and Water Bureau (PWB) each manage properties, some of which may be able to host trails if designed appropriately. In addition, BES offers its *One Percent for Green* grant program for green street improvements that aid stormwater infiltration. BES also contributes to environmental enhancements along neighborhood greenways.

6
Action Strategy

6.1. About the Action Strategy

Chapter 6 lists and describes active transportation projects and programs recommended for implementation over the next five years. These recommendations were developed based on community input, equity, accessibility, connectivity and leverage considerations described in Chapter 5. In addition to forwarding these high-scoring project candidates, the Action Strategy also includes trail and roadway improvement projects managed by other agencies such as ODOT, PDC and Metro. Doing so pledges city cooperation on these projects and provides a comprehensive account of all active transportation priorities in East Portland.

6.1.1. Project and Program Types

Recommended projects and programs are presented in the following categories in unranked order:

- **Sidewalk Infill: Type 1.** Section 6.2 includes sidewalk projects on roadways with existing curb and stormwater facilities, some of which include crossing improvements. Project ID numbers begin with the prefix 'S', e.g. S-1, S-2.
- **Sidewalk Infill: Type 2.** Section 6.3 includes sidewalk projects on roadways *without* curb and stormwater facilities. Project numbers continue from the previous section and begin with the prefix 'S'.
- **Crossing Improvements.** Section 6.4 lists crossing improvement projects that are part of sidewalk or neighborhood greenway projects, then describes additional, stand-alone crossing improvement projects. Project numbers begin with the prefix 'X'.
- **Neighborhood Greenways.** Section 6.5 describes recommended neighborhood greenways, with project numbers beginning with the prefix 'G'.
- **Separated In-Roadway Bikeways.** Section 6.6 includes bike lane and buffered bike lane projects. Project numbers begin with a 'B' prefix.
- **Bicycle Parking.** Section 6.7 lists projects that provide bicycle parking. Project numbers begin with 'P'.
- **Trails.** Section 6.8 lends support to local and regional trail projects that would be managed primarily by other agencies. Project numbers begin with 'T'.
- **Roadway Improvement Projects.** Section 6.9 lists projects that improve or reconstruct roadways, with benefits to multiple transportation modes. These projects are led by either PDC or ODOT. Project numbers begin with 'R'.
- **Programs.** Section 6.10 includes recommendations on education, encouragement, marketing and branding efforts intended to increase usage of active transportation facilities in East Portland. Program numbers begin with 'E'.

6.1.2. Action Strategy Format

Each section of Chapter 6 begins with an account of implementation considerations, then moves on to specific project and program descriptions. Each project or program is described in a box with key information, including:

- **Project ID number**. These numbers are used in the Implementation Matrix (Table 18) and *Recommended Projects* map at the end of this chapter. Numbers do not signify priority level, except that projects in later years have higher numbers within each category. Letter prefixes are described on the previous page.

- **Project name.** Project names are subject to change upon implementation.

- **Time frame.** Anticipated implementation time frame is reported as a range of years from as early as 2011 to as late as 2016. Many projects will take multiple years to proceed from project development through construction.

- **Neighborhoods served.** This includes only the neighborhoods within the immediate bounds of a project. Projects will serve people in other neighborhoods as well.

- **Description.** Basic features of the project or program, including project extent.

- **Benefits.** Anticipated project benefits include major destinations such as schools, shopping areas and transit lines that will receive improved access. Other benefits include transportation equity considerations.

- **Length/quantity.** Linear projects report length in miles; point location projects report quantity (such as number of crossing improvements or bike parking spaces).

- **Cost estimate.** Cost estimates are provided only for projects managed by PBOT, and only for projects recommended in years 1 and 2, when funding has a higher level of certainty. Most costs are low confidence, planning level estimates, unless noted otherwise.

- **Funding and partnerships.** This lists anticipated sources of funding, as well as partners that may be involved in project/program implementation. Abbreviations and acronyms used in this section are explained on page iv at the beginning of this report.

All recommendations are summarized in a single Implementation Matrix and Recommended Projects map in section 6.11.

6.1.3. Transportation Funding Caveat

In preparing *East Portland in Motion*, PBOT has tried to match projects to available funding with the goal of preparing a realistic strategy that can be implemented over the next five years. However, the transportation revenues from which that funding derives are subject to variation depending on a number of factors. Modifications to the implementation strategy may be required in future years if the expected funding is not available. Conversely, this strategy lists additional "next tier" projects to consider should additional funding become available.

6.2. Recommended Sidewalk Infill Projects: Type 1

Type 1 sidewalk infill projects will construct sidewalks along roadways with **existing curb and stormwater facilities**, most commonly as six-foot, curb-tight sidewalks. Some projects may have additional right-of-way available for wider or separated sidewalks. Additionally, some projects include crossing improvements. *East Portland in Motion* recommends 13 type 1 sidewalk infill projects totaling 5.7 miles.

6.2.1. Type 1 Sidewalk Funding and Phasing

Sidewalk project funding and phasing are based on the following methodology:

- The highest ranking sidewalk infill projects (both type 1 and type 2) are targeted for approximately **$8 million in one-time House Bill 2001 funds** allocated for East Portland. These funds must be committed by the end of fiscal year 2012-13, as stipulated by City Council.

- A limited number of additional sidewalk infill projects will use either **House Bill 2001 citywide funds** (which are separate from the one-time East Portland funds and are expected to total roughly $300,000 per year citywide), or supplemental funding from other agencies including ODOT, PDC and Metro.

- Unless engineering-level estimates are available, planning-level cost estimates for type 1 sidewalk projects are calculated roughly at **$1 million per mile**. This is based on PBOT's recent experience building curb-tight infill sidewalk along NE Glisan Street and along 82nd Avenue.

- PBOT's **Maintenance Operations Division** may be able to begin immediately on projects that build small amounts (a tenth to a quarter mile) of curb-tight sidewalk and require little or no surveying and design. These projects are shown as single-year projects starting in 2012 (projects S-2 through S-7). Building sidewalks in this manner may result in cost savings that could then be applied to more complex sidewalk projects.

- For sidewalk projects that include **crossing improvements**, funding for the crossing elements will draw from both House Bill 2001 one-time East Portland funds as well as PBOT's Ped Safety fund. The exact cost share ratio will vary by project, but is targeted at 50/50, with House Bill 2001 funding the flatwork (curb extensions and median islands), and the Ped Safety fund funding signs, markings, and signals or beacons. Other sources may also be available, potentially including urban renewal funds in Gateway Regional Center and Lents Town Center urban renewal areas.

- The *East Portland in Motion* process confirmed that East Portland's sidewalk network is very incomplete, leading to a high number of worthy sidewalk project candidates. Even with generous one-time funding available, many of these projects cannot be funded within the five-year scope of *East Portland in Motion*. Type 1 projects that fall into this category are included as **unfunded second tier sidewalk projects** (project S-14) for consideration as additional resources become available.

6.2.2. Type 1 Sidewalk Design Considerations

Type 1 sidewalk infill projects pose several design considerations:

- **Width of sidewalks**. Most type 1 sidewalk projects have been scoped as six-foot, curb-tight sidewalks to be built within the limited right-of-way available beyond the existing curb. To build "city standard" sidewalks separated from the curb with furnishing zones, PBOT would (in most cases) need to acquire additional right-of-way from adjacent property owners. Funding to do so is available only for the *SE 122nd Avenue Complete and Green Main Street* project (S-1). In all other cases of limited right-of-way, PBOT will ask property owners to voluntarily dedicate the right-of-way needed for wider, city standard sidewalks (typically four or six feet, depending on zoning). This would result in two possible outcomes:

  1) **Willing donors** would get separated sidewalks along their frontage, including a furnishing zone with trees, at no cost to the property owner. This is a considerable value, especially for those who plan to redevelop and would then be required to dedicate right-of-way and install sidewalk at their own cost. Willing donors would likely see increased property values. The willing donor scenario would result in more lateral "jogs" when walking between old and new sidewalks, but this is already common near recently developed properties.

2) **Those who do not wish to dedicate right-of-way** would have curb-tight sidewalk built along their frontage. Some property owners may consider this option less of a hassle. However, these owners could still be required to build full, city standard sidewalks upon redevelopment or significant renovation, if the city can show this is needed. Redevelopment could result in partial demolition of the city-built sidewalk to install tree wells.

- **Stormwater treatment**. Although type 1 sidewalks will be built on roadways with storm drains and pipes, city code requires that any new impervious surfaces over 500 square feet be offset with a proportional amount of stormwater infiltration facilities such as bioswales.[1] The *Portland Stormwater Management Manual* offers flexibility on the location and design of these facilities. Given the space constraints of streets where type 1 sidewalks will be built, the following stormwater facilities would be most feasible:

  - **Curb extensions** protrude into the roadway, replacing pavement and roadbed with a vegetated swale. Curb extensions should be designed in a way that does not preclude future installation of bike lanes.

  - **Pervious paving**, including pervious asphalt and concrete, would satisfy stormwater requirements within the area of the sidewalk. Disadvantages include higher cost and potential moss growth during winter.

  - **Trees** count as an impervious area reduction technique for public streets – deciduous trees counteract 100 square feet of impervious surface; evergreen trees, 200 square feet. This equates to 17 to 33 feet of six-foot sidewalk, respectively.[2]

- **Street trees.** City code states that "any proposed street improvement shall, where feasible, include allowances for tree and landscape planting."[3] Six-foot curb-tight sidewalks do not allow room for street trees, so PBOT will need to consider alternate locations, such as within newly-constructed curb extensions or median islands (SE Tacoma Street in Sellwood

[1] *Portland Stormwater Management Manual*, Portland Bureau of Environmental Services, 2008.
[2] *Portland Stormwater Management Manual*, Portland Bureau of Environmental Services, 2008.
[3] City of Portland Code Chapter 20.40.130.

provides an example of both treatments.) Ultimately, the placement of street trees will be decided on a case-by-case basis in consultation with the City Forester.

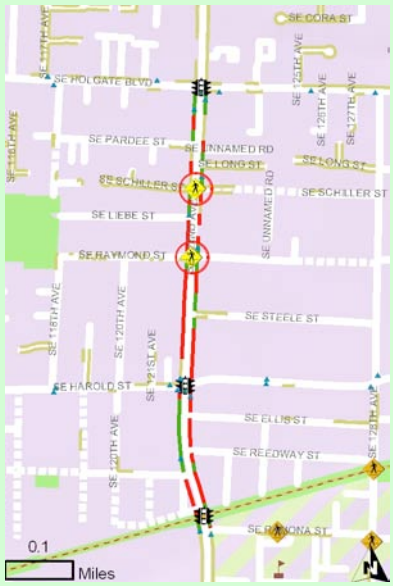
- **Curb ramps**. Curb ramps at intersections are critical for people who use mobility devices and helpful for people pushing strollers or using walkers. Recommended sidewalk projects are required to include curb ramps in the immediate vicinity of the improvements. *East Portland in Motion* recommends installing curb ramps in other, more distant locations along the same street if they are missing, and if such improvements can be accommodated within each project's budget. Doing so would create a longer effective corridor accessible to everyone.

- **Narrowing the roadway** was deemed an impractical solution for building wider sidewalks as part of *East Portland in Motion*, but should nevertheless remain under consideration. Some of East Portland's five-lane roadways have unused on-street parking and/or travel capacity, especially in lower-density areas.

6.2.3. Recommended Type 1 Sidewalk Infill Projects

S-1. SE 122nd Avenue Complete and Green Main Street

TIME FRAME
2011-14



Neighborhood: Powellhurst-Gilbert

Description: Full, 12-foot-wide "city standard" sidewalks with trees, planting strips and/or bioswales on both sides of SE 122nd Ave from SE Holgate Blvd to SE Ramona St. Sidewalk gaps as well as existing substandard sidewalks will be upgraded to standard. Right-of-way acquisition required. Two crossing improvements: SE Schiller St, SE Raymond St.

Benefits: Sidewalks and crossings will provide safer access to transit, schools, businesses, multi-family housing (including Leander Court affordable housing), and the Springwater Corridor. Nearly 2,000 transit trips begin or end on this corridor each week. Project has highest connectivity score of all sidewalk candidates. Project will promote economic development along the 122nd Ave corridor.

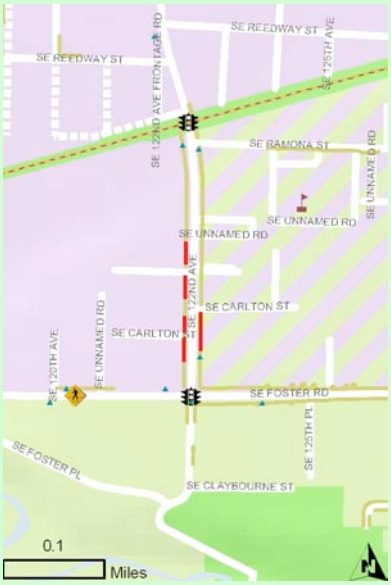
Length: 0.66 mile project corridor; 0.60 mile of sidewalk infill; 0.43 mile of substandard sidewalk upgrade, on both sides of street.

Cost estimate: $3,350,000 (medium-confidence planning level estimate)

Funding and partnerships: Partnership with PDC. $1,480,000 from HB 2001 one-time funds, supplemental funding from ODOT Flexible Funds grant awarded in February 2011, Lents Town Center URA, and other sources.

S-2. SE 122nd Avenue Sidewalk Infill: Ramona – Foster

TIME FRAME
2012-13



Neighborhoods: Powellhurst-Gilbert, Pleasant Valley

Description: 6-foot-wide curb-tight sidewalk infill on both sides of SE 122nd Ave from SE Ramona St to SE Foster Rd. Adjacent to Complete & Green Main Street (project S-1).

Benefits: Sidewalks will provide safer access to transit, Alice Ott Middle School, multi-family housing, the Springwater Corridor, and Leach Botanical Garden.

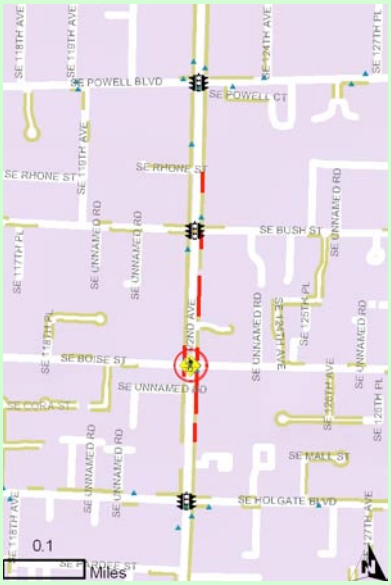
Length: 0.24 mile project corridor; 0.13 mile sidewalk infill on both sides of street.

Cost estimate: $130,000 (low-confidence planning-level estimate)

Funding and partnerships: HB 2001 one-time East Portland funds. Potential PBOT Maintenance Operations project. Potential partnership with PDC due to Lents Town Center URA.

S-3. SE 122nd Avenue Sidewalk Infill: Powell – Holgate

TIME FRAME
2012-13



Neighborhood: Powellhurst-Gilbert

Description: 6-foot-wide curb-tight sidewalk infill on both sides of SE 122nd Ave from SE Powell Blvd to SE Holgate Blvd. Adjacent to Complete & Green Main Street (project S-1). Crossing improvement at SE Boise St. HAWK signal to be installed at SE Bush Street in 2011 or early 2012.

Benefits: Sidewalks and crossings will provide safer access to transit, schools, businesses (including Safeway and Powell Villa shopping center), and multi-family housing, within one of East Portland's most densely populated areas.

Length: 0.52 mile project corridor; 0.22 mile of sidewalk infill on both sides of street.

Cost estimate: $320,000 (low-confidence planning-level estimate)

Funding and partnerships: HB 2001 one-time East Portland funds for sidewalks and crossing flatwork. PBOT Ped Safety fund for other crossing elements. Potential PBOT Maintenance Operations project. Potential partnership with PDC due to Lents Town Center URA.

S-4. SE 160th Avenue Sidewalk Infill: Burnside – Stark

TIME FRAME
2012-13

Neighborhoods: Glenfair, Centennial

Description: 6-foot sidewalk infill with 4-foot planting strips on both sides of SE 160th Ave from E Burnside St to SE Stark St. Crossing improvement at SE Stark St. SE 160th Ave is a local service street within a TSP pedestrian district.

Benefits: Provides safe, wheelchair accessible travel to MAX Blue Line and #20 bus from a neighborhood that includes Burnside Station Apartments – a community of people that use mobility devices. Located in Census Tract with the highest poverty rate in Portland, and the highest active transportation demand score in East Portland. Crossing is located near bus stops on SE Stark & 160th, which have the highest ridership of any bus stop pair on the #20 bus in East Portland.

Length: 0.21 mile project corridor; 0.11 mile sidewalk infill on both sides of street.

Cost estimate: $210,000 (low-confidence planning-level estimate)

Funding and partnerships: HB 2001 one-time East Portland funds for sidewalks and crossing flatwork. PBOT Ped Safety fund for other crossing elements.

S-5. NE Sandy Boulevard Sidewalk Infill: 86th – 92nd

TIME FRAME
2012-13

Neighborhood: Sumner

Description: Sidewalk infill on both sides of NE Sandy Blvd between NE 86th Ave and NE 92nd Ave. Portions 6-foot curb tight; other portions separated with 4-foot furnishing zone. Modification of existing fire station signal at NE 87th Ave to include pedestrian crossing function. Crossing improvement at NE 91st Ave is a top neighborhood priority.

Benefits: Provides safer access to high frequency #12 bus, Parkrose-Sumner MAX station, Central Northeast Neighbors office, The Grotto, businesses and residences along a High Crash Corridor. Addresses transportation equity in Sumner neighborhood. Project is within a high-scoring area in TriMet Pedestrian Network Analysis.

Length: 0.36 mile project corridor, 0.10 mile of sidewalk infill.

Cost estimate: $150,000 (low-confidence planning-level estimate)

Funding and partnerships: HB 2001 citywide funds (project falls within Central Northeast Neighbors district.) PBOT Ped Safety fund, Signal Rehab fund, and/or High Crash Corridor fund for signal modification at 87th. Potential PBOT Maintenance Operations project.

S-6. NE Weidler Street Sidewalk Infill: 99th – 112th

TIME FRAME
2012-13

Neighborhoods: Woodland Park, Parkrose Heights

Description: Sidewalk infill on north side of NE Weidler St from NE 99th Ave to NE 112th Ave. Portion west of NE 104th Ave has sufficient right-of-way for standard 12-foot sidewalks, except for one property. Remaining portions will be 6-foot, curb tight sidewalk unless additional funds for right-of-way are available. Crossing improvements at NE Weidler/106th Ave and NE Halsey/106th Ave.

Benefits: Completes all missing sidewalks on the Halsey/Weidler couplet in Gateway Regional Center. Crossings fill a 0.4-mile gap between signals and provide a future route for the 100s Greenway (project G-9). Provides safer access to three bus lines, retail and office businesses, Vibra Specialty Hospital and proposed Gateway Park. Improves mobility for residents of Oregon Baptist Homes and other nearby homes for older adults.

Length: 0.75 mile project corridor; 0.18 mile of sidewalk infill on both sides of street.

Cost estimate: $380,000 (low-confidence planning-level estimate)

Funding and partnerships: HB 2001 one-time East Portland funds for sidewalks and crossing flatwork. PBOT Ped Safety fund for other crossing elements. Potential PBOT Maintenance Operations project. Potential partnership with PDC due to Gateway Regional Center URA.

S-7. SE 112th Avenue Sidewalk Infill: Francis – Holgate

TIME FRAME
2012-13

Neighborhoods: Lents, Powellhurst-Gilbert

Description: 6-foot-wide curb-tight sidewalk infill on both sides of SE 112th Ave from SE Powell Blvd to SE Holgate Blvd.

Benefits: Provides safer access to Ron Russell Middle School, Earl Boyles Park, and the #9 and #17 buses from residential areas.

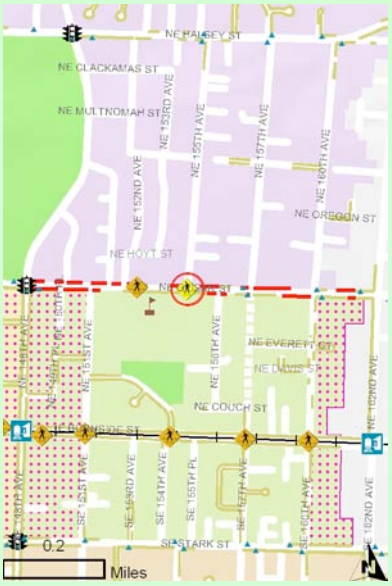
Length: 0.25 mile project corridor; 0.10 mile of sidewalk infill on both sides of street.

Cost estimate: $100,000 (low-confidence planning-level estimate)

Funding and partnerships: HB 2001 one-time East Portland funds. Potential PBOT Maintenance Operations project. Potential partnership with PDC due to Lents Town Center URA, and PPR due to Earl Boyles Park frontage.

S-8. NE Glisan Street Sidewalk Infill: 148th – City Limit

TIME FRAME
2012-14



Neighborhoods: Glenfair, Wilkes

Description: 6-foot-wide curb-tight sidewalk infill on both sides of NE Glisan St from NE 148th Ave to city limit near NE 162nd Ave. Design should consider Glisan bike lane installation (project B-2), 150s Neighborhood Greenway crossing at 155th (project G-10), #25 bus stops, and parking demand at Glenfair Elementary School. Crossing improvement at NE 155th Ave recommended as separate project (G-10).

Benefits: Provides safer routes to Glenfair Elementary School, Glenfair Park, #25 bus and Glendoveer Golf Course. Glenfair, with the highest active transportation demand score, is one of the most densely populated and poorest neighborhoods in East Portland.

Length: 0.66 mile project corridor; 0.57 mile of sidewalk infill on both sides of street.

Cost estimate: $570,000 (low-confidence planning-level estimate)

Funding and partnerships: HB 2001 one-time East Portland funds. Crossing funded through 150s Neighborhood Greenway project.

S-9. SE Stark Street Sidewalk Infill: 126th – City Limit

TIME FRAME
2012-14

Neighborhoods: Hazelwood, Mill Park, Glenfair, Centennial

Description: 6-foot-wide curb-tight sidewalk infill on both sides of SE Stark St from SE 126th Ave to city limit near SE 162nd Ave. Crossing improvement at SE 133rd/135th Ave (exact placement to be determined). Design should consider future bike lane installation, neighborhood greenway crossings and #20 bus stops. Additional crossings at 129th/130th, 154th/155th and 160th described separately under projects G-1, G-10 and S-4.

Benefits: Completes all missing sidewalks on SE Stark St east of 82nd Ave in Portland, providing safer access to transit, businesses, schools and multi-family housing. Nearly 4,000 ons/offs take place weekly on the #20 bus within the project corridor. Crossing at 133rd/135th serves David Douglas High School. Corridor includes high active transportation demand score in Glenfair neighborhood.

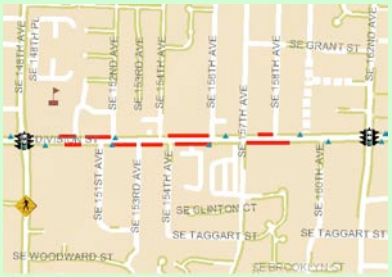
Length: 1.80 mile project corridor; 0.82 mile of sidewalk infill on both sides of street.

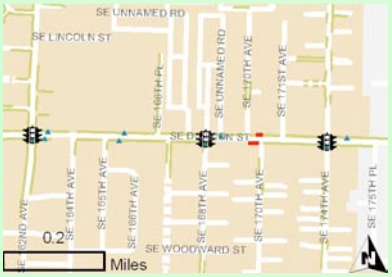
Cost estimate: $920,000 (low-confidence planning-level estimate)

Funding and partnerships: HB 2001 one-time East Portland funds for sidewalks and crossing flatwork. PBOT Ped Safety fund for other crossing elements. Other crossings funded through neighborhood greenway development and 160th Ave sidewalk infill.

S-10. SE Division Street Sidewalk Infill: 148th – City Limit

TIME FRAME
2012-14





Neighborhood: Centennial

Description: 6-foot-wide curb-tight sidewalk infill on both sides of SE Division St from SE 148th Ave to the city limit near SE 174th Ave. Design should consider future buffered bike lane installation, 150s Neighborhood Greenway crossing (project G-10) and #4 bus stops. Crossing improvements at 152nd, 157th and 165th provided separately through East Portland Active Transportation to Transit RFF grant.

Benefits: Sidewalks will provide safer access to the high-frequency #4 bus, multi-family housing, and retail areas including the Division Crossing shopping center. Project corridor sees more than 4,000 ons/offs per week on the #4 bus. Centennial neighborhood has high concentration of children and high poverty rate.

Length: 1.34 mile project corridor; 0.51 mile of sidewalk infill on both sides of street.

Cost estimate: $510,000 (low-confidence planning-level estimate)

Funding and partnerships: HB 2001 one-time East Portland funds. Potential partnership with TriMet. Crossings at 152nd, 157th and 165th funded through East Portland Active Transportation to Transit RFF grant proposal (project X-3).

S-11. NE 102nd Avenue Sidewalk Infill: I-84 to Weidler

TIME FRAME
2012-13

Neighborhoods: Parkrose Heights, Woodland Park

Description: 6-foot-wide curb-tight sidewalk infill on both sides of NE 102nd Ave from I-84 viaduct to NE Weidler St. Design should consider #22 bus stops, and potential for bike lanes and furnishing zone in current parking lane, subject to parking demand analysis. Crossing improvements at NE Knott St and NE Tillamook St/Bell Dr provided separately through Knott/Russell and Woodland Park neighborhood greenway projects (G-5 and G-8).

Benefits: Provides safer access to #22 bus, Vibra Specialty Hospital, Crossroads Church and School, Gateway Regional Center and numerous homes. Leverages existing and planned crossing improvements.

Length: 0.75 mile project corridor; 0.43 mile of sidewalk infill on both sides of street.

Cost estimate: $430,000 (low-confidence planning-level estimate)

Funding and partnerships: HB 2001 one-time East Portland funds. Crossings funded through neighborhood greenway projects. Potential partnership with PDC due to portion in Gateway Regional Center URA.

S-12. SE 162nd Avenue Sidewalk Infill: Salmon – Powell

TIME FRAME
2012-14

Neighborhood: Centennial

Description: 6-foot-wide curb-tight sidewalk infill on both sides of SE 162nd Ave from SE Salmon St to SE Powell Blvd. Crossing improvement at SE Salmon St. Design should consider furnishing zone in parking lane, which may have low parking demand in R-7 zones.

Benefits: Sidewalks will provide safer access to Centennial School District's Harold Oliver School, Division Crossing shopping center and movie theater, #4 bus on Division, #9 bus on Powell, and numerous homes. Crossing will provide additional safe route to Harold Oliver School. Centennial neighborhood has high concentration of children and high poverty rate.

Length: 1.40 mile project corridor; 0.99 mile of sidewalk infill on both sides of street.

Cost estimate: $1,090,000 (low-confidence planning-level estimate)

Funding and partnerships: HB 2001 one-time East Portland funds for sidewalks and crossing flatwork. PBOT Ped Safety fund for other crossing elements.

S-13. SE Division Street Sidewalk Infill: 98th – 145th

TIME FRAME
2013-15

Neighborhoods: Powellhurst-Gilbert, Hazelwood, Mill Park, Centennial

Description: 6-foot-wide curb-tight sidewalk infill on both sides of SE Division St from SE 98th Ave to SE 145th Ave. Design should consider future buffered bike lane installation (project B-3), 100s and 130s neighborhood greenway crossings (projects G-6 and G-1) and #4 bus stops. Crossing improvements described separately in project X-3.

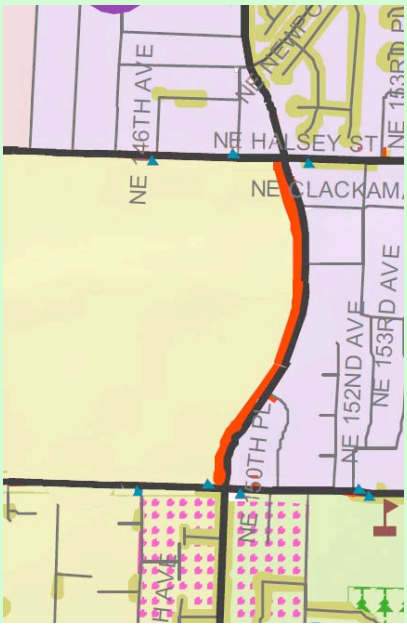
Benefits: Sidewalks will provide safer access to the high-frequency #4 bus, MAX Green Line, multi-family housing and retail areas including the Division Center shopping center at 122nd Ave. Project corridor sees nearly 10,000 ons/offs per week on the #4 bus – the highest of any sidewalk project candidate. Half-mile radius of SE Division and 122nd is a pedestrian improvement focus area identified through TriMet Pedestrian Network Analysis. Powellhurst-Gilbert scores high in all active transportation demand indicators.

Length: 2.36 mile project corridor; 0.54 mile of sidewalk infill on both sides of street.

Funding and partnerships: Part of East Portland Active Transportation to Transit RFF grant proposal.

S-14. NE 148th Avenue Sidewalk Inffill: Halsey to Glisan

TIME FRAME
2014-16



Neighborhoods: Wilkes, Hazelwood, Glenfair

Description: 6-foot-wide curb-tight sidewalk infill on the west side only of NE 148th from Halsey to Glisan streets

Benefits: Sidewalks will provide safer access to the lines 77 and 25. This is the first north-south arterial east of the golf course, so trips get concentrated here. A sidewalk will make pedestrians much safer.

Length: 0.52 mile of sidewalk infill on west side only

.

Funding and Partnerships: Metro, PBOT and other partners as feasible

S-23. Unfunded Second Tier Sidewalk Projects: Type 1

TIME FRAME
Ongoing

Neighborhoods: Various

Description: Type 1 sidewalk infill projects that scored well in the public process and project analyses, but fell below the top tier projects designated for House Bill 2001 one-time East Portland funds, are included here. Lengths shown are sidewalk infill segments on both sides of the street, unless indicated otherwise. Projects include:

- NE Halsey St: 125th – 132nd (0.34 mile)
- NE Halsey St: 132nd – 148th, north side (0.55 mile)
- NE Halsey St: 148th – 162nd (0.56 mile)
- SE Market St: 96th – 112th (0.30 mile)
- SE Market St: 112th – 130th (0.61 mile)
- SE Holgate Blvd: I-205 – 122nd (0.72 mile)
- SE Flavel St: 84th – 92nd (0.22 mile)
- NE 102nd Ave: Sandy – I-84 (0.10 mile)
- SE 112th Ave: Market – Powell (0.28 mile)

Benefits: Continues the necessary, ongoing process of upgrading East Portland arterial streets to provide safe pedestrian passage and increase opportunities for active transportation.

Quantity: 9 projects, 3.68 miles of sidewalk infill

Funding and partnerships: Potential sources include HB 2001 citywide funds (expected to be roughly $300,000 annually), urban renewal funds in Lents and Gateway, and ODOT and Metro grants.

6.3. Recommended Sidewalk Infill Projects: Type 2

Type 2 sidewalk infill projects will construct separated sidewalks or shared sidepaths on **streets that lack curbs and stormwater facilities**. *East Portland in Motion* recommends seven type 2 sidewalk infill projects totaling 2.4 miles.

6.3.1. Type 2 Sidewalk Funding and Design Considerations

- Type 2 sidewalks will be funded from the same **$8 million in one-time House Bill 2001 funds** as the type 1 sidewalks, and must be committed by 2013.

- Type 2 sidewalk projects that scored well in the public process but cannot be funded within the five-year scope of *East Portland in Motion* are included as **unfunded second tier sidewalk projects** (project S-22) for consideration as additional resources become available.

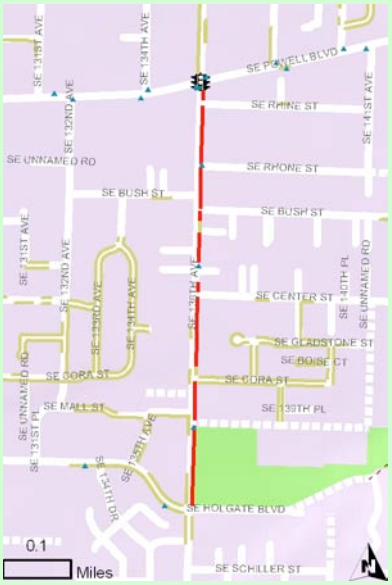
- Planning-level cost estimates for type 2 sidewalk projects were initially calculated at roughly $5 million per mile, based on a complete rebuild of the roadway and installation of city standard sidewalks with furnishing zones and stormwater facilities. However, due to funding constraints, **a less costly approach** is recommended for type 2 projects in East Portland. One potential treatment, subject to site-specific hydrologic study, is to install full-length bioswales in the furnishing zone, with slotted curb and no subterranean facilities. Other creative, lower cost solutions should be researched on a project-by-project basis.

- **On-street parking.** Many type 2 sidewalks are on neighborhood collector streets where automobile parking on gravel shoulders is common. This gravel area would be replaced by a sidewalk, furnishing zone and bike lane in most type 2 projects. *East Portland in Motion* recommends a case-by-case approach to on-street parking, including a parking demand study if necessary. In some cases it may be possible to design an alternating planter/parking strip, occupied by landscaping in some places and parallel parking in others.

6.3.2. Recommended Type 2 Sidewalk Projects

S-15. SE 136th Avenue Innovative Sidewalk Pilot Project

TIME FRAME
2012-14



Neighborhood: Powellhurst-Gilbert

Description: Sidewalk or sidepath along one side of SE 136th Ave from SE Powell Blvd to SE Holgate Blvd. Separated from roadway by variable-width bioswale and/or landscaping where ROW allows. Pilot project for innovative sidewalk solution on East Portland neighborhood collectors. Further study needed to determine which side is most feasible. East side has bus stops and park frontage; west side has more existing sidewalk and fewer large conifers.

Benefits: Provides safer access to #17 and #9 buses, Gilbert Heights Elementary School, future Gates Park, and numerous single and multi-family homes. Connects to Bush Neighborhood Greenway at SE Bush Street. Project received the most public support of any sidewalk candidate at *East Portland in Motion* open houses.

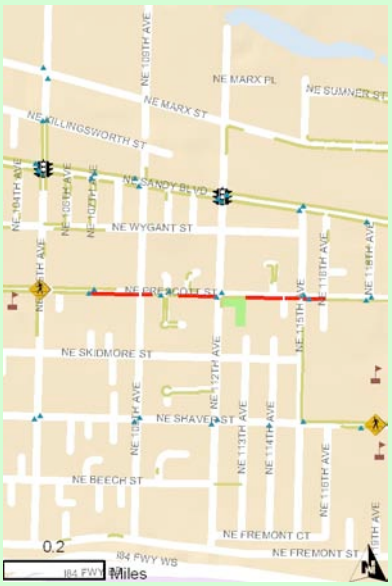
Length: 0.63 mile project corridor; 0.52 mile of sidewalk infill if east side is built; 0.48 mile if west side.

Cost estimate: $1,400,000 (low-confidence planning-level estimate)

Funding and partnerships: Multi-agency partnership potentially including PPR (due to Gates Park property), BES (1% for Green grant), SDCs and Neighborhood Greenway program (due to Bush crossing). PBOT funding from HB 2001 one-time East Portland funds.

S-16. NE Prescott Street Sidewalk Infill: 105th – 116th

TIME FRAME
2012-14



Neighborhood: Parkrose

Description: Sidewalk infill along south side of NE Prescott St from NE 105th Ave to NE 116th Ave. Sidewalk separated from roadway by landscaping, bioswale or parking lane, as appropriate. Design should consider planned installation of speed bumps and bike lanes (project B-4), eventual completion of sidewalks on north side of street, #71 bus stops, and parking demand near Parkrose schools, district office, and residences.

Benefits: NE Prescott St connects Parkrose School District's Prescott Elementary School, Parkrose High School and District Office, as well as Senns Dairy Park, Mt Hood Community College Maywood Park Center and numerous homes. Project will also improve several gravel bus stops along the #71 bus line.

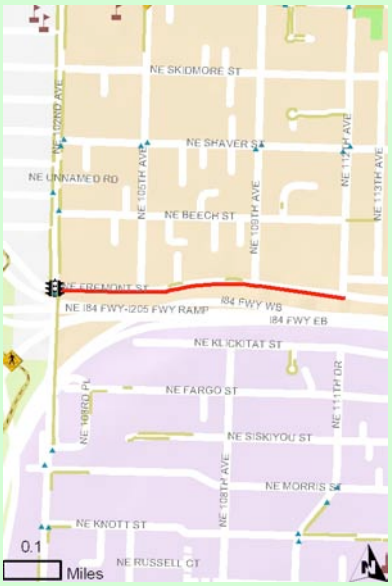
Length: 0.55 mile project corridor; 0.35 mile of sidewalk infill on south side of street.

Cost estimate: $960,000 (low-confidence planning-level estimate)

Funding and partnerships: HB 2001 one-time East Portland funds. Close cooperation needed with Parkrose School District on parking concerns near schools and district office.

S-17. NE Fremont Street Shared Pathway: 102nd – 112th

TIME FRAME
2012-14



Neighborhood: Parkrose

Description: Two-way shared walking/bicycling path along south side of NE Fremont St from NE 102nd Ave to NE 112th Ave. Variable distance from existing curb, potential meandering design. Generous public right-of-way available due to I-84 freeway, UPRR and PWB property. Limited grading issues. Interaction with existing bike lanes must be considered.

Benefits: Provides increased pedestrian and bicycle safety along a neighborhood collector, and safer access to #22 bus on NE 102nd Ave. Beautifies area of overgrown blackberries. Leverages Parkrose Neighborhood Greenway project (G-4), extending effective reach from Gateway Green and the I-205 Multi-Use Path to Parkrose High School and NE Sandy Blvd.

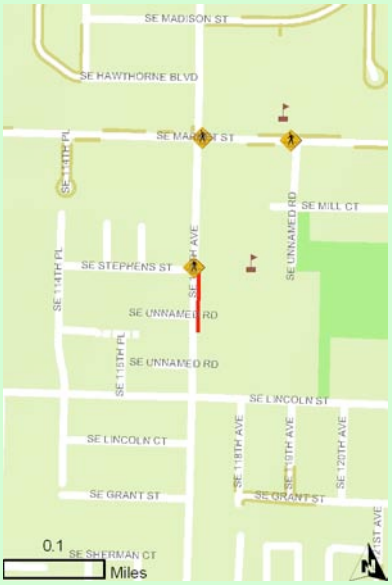
Length: 0.50 mile project corridor; 0.49 mile of pathway construction on south side of street.

Cost estimate: $380,000 (low-confidence planning-level estimate)

Funding and partnerships: PBOT Affordable Transportation Fund

S-18. SE 117th Avenue Sidewalk at Mill Park Elementary School

TIME FRAME
2012-14



Neighborhood: Mill Park

Description: New sidewalk and curb along Mill Park Elementary School frontage on east side of SE 117th Ave. This portion of SE 117th Ave is a local service street with volumes more typical of a neighborhood collector (which is the designation north of Market St.)

Benefits: PBOT Safe Routes to School staff determined Mill Park to be one of four schools citywide with the most need for pedestrian infrastructure. Mill Park School has the highest eligibility rate for free/reduced price lunch in East Portland – 91% in 2010-2011.

Length: 0.06 mile (approx. 340 feet)

Cost estimate: $60,000 (low-confidence planning-level estimate)

Funding and partnerships: ODOT Safe Routes to School Infrastructure grant for FY 2012, awarded in April 2011.

S-19. SE Ramona Street Sidewalk Infill: 122nd – 136th

TIME FRAME
2012-14

Neighborhoods: Powellhurst-Gilbert, Pleasant Valley

Description: Sidewalk, curb and stormwater facilities along south side of SE Ramona St from SE 122nd Ave to SE 136th Ave.

Benefits: Provides safer routes to David Douglas School District's Alice Ott Middle School and Gilbert Park Elementary School. Provides safer access to #71 bus on 122nd, #10 bus on 136th, convenience stores, Springwater Corridor and homes. Connects with 130s Neighborhood Greenway at SE 128th Ave. Leverages existing sidewalk segments and ladder stripe crossings on SE Ramona St, as well as proposed sidewalks on SE 122nd Ave.

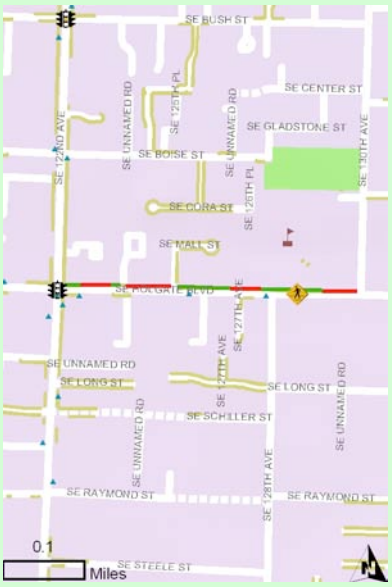
Length: 0.66 mile project corridor; 0.31 mile sidewalk infill on south side of street.

Cost estimate: $900,000 (low-confidence planning-level estimate)

Funding and partnerships: Funded by ODOT TE grant awarded in May 2011

S-20. SE Holgate Boulevard Shared Pathway: 122nd – 130th

TIME FRAME
2012-14



Neighborhood: Powellhurst-Gilbert

Description: Two-way shared walking/bicycling pathway along north side of SE Holgate Blvd from SE 122nd Ave to SE 130th Ave. Includes building infill pathway segments and modifying existing sidewalks.

Benefits: Provides safer access to Gilbert Heights Elementary School, #17 bus on Holgate, #71 bus on 122nd, and numerous single and multi-family homes in one of East Portland's most densely populated neighborhoods. Connects with proposed 130s Neighborhood Greenway at 128th and 130th avenues.

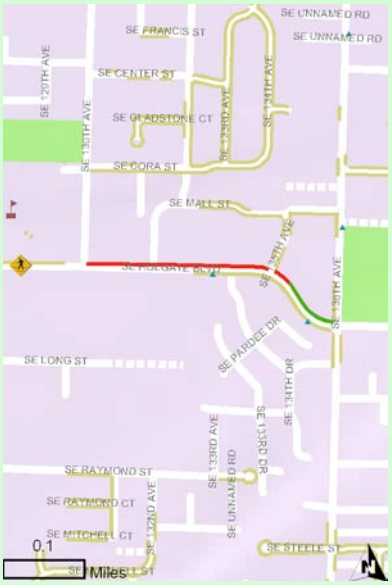
Length: 0.37 mile project corridor; 0.17 mile of pathway construction plus 0.17 mile of sidewalk modification on north side of street.

Cost estimate: $600,000 (low-confidence planning-level estimate)

Funding and partnerships: To be funded mostly by ODOT TE grant awarded in May 2011; leveraged with HB 2001 one-time East Portland funds.

S-21. SE Holgate Boulevard Shared Pathway: 130th – 136th

TIME FRAME
2013-14



Neighborhood: Powellhurst-Gilbert

Description: Two-way shared walking/bicycling pathway along north side of SE Holgate Blvd from SE 130th Ave to SE 136th Ave. Includes building infill pathway segments and modifying existing sidewalks.

Benefits: Provides safer access to Gilbert Heights Elementary School, future Gates Park, #17 bus, and single and multi-family housing, within one of East Portland's most densely populated neighborhoods. Connects with proposed 130's Neighborhood Greenway at 130th Ave.

Length: 0.33 mile project corridor; 0.25 mile of pathway construction plus 0.08 mile of sidewalk modification on north side of street.

Funding and partnerships: To be funded mostly by East Portland Active Transportation to Transit RFF grant proposal (as extension of 130's Neighborhood Greenway). Leveraged with HB 2001 one-time East Portland funds.

S-22. Unfunded Second Tier Sidewalk Projects: Type 2

TIME FRAME
Ongoing

Neighborhoods: Various

Description: Type 2 sidewalk infill projects that scored well in the public process and project analyses, but fell below the top tier projects designated for House Bill 2001 one-time East Portland funds, are included here. Lengths shown are sidewalk infill segments on both sides of the street, unless indicated otherwise. Projects include:

- NE Prescott St: I-205 – 102nd, north side (0.33 mile)
- SE Ellis St: Foster – 92nd (0.54 mile)
- SE 104th Ave: Bush – Cora (0.48 mile)
- SE 104th Ave: Harold – Holgate (0.85 mile)
- NE 111th Dr/Ave: Klickitat – Halsey (1.55 miles)
- SE 136th Ave: Division – Powell (0.43 mile)
- SE 136th Ave: Holgate – Foster (0.96 mile)

Benefits: Continues the necessary, ongoing process of upgrading East Portland arterial streets to provide safe pedestrian passage and increase opportunities for active transportation.

Quantity: 7 projects, 5.14 miles of sidewalk infill

Funding and partnerships: Potential sources include HB 2001 citywide funds (expected to be roughly $300,000 annually), urban renewal funds in Lents and Gateway, and ODOT and Metro grants.

6.4. Recommended Crossing Improvement Projects

East Portland in Motion recommends 56 crossing improvements to help people cross East Portland's busy, wide arterial streets on foot, bike or mobility device. Recommendations in this section directly address **access to transit** – one of the key principles of *East Portland in Motion*. Of the 56 total crossings, nine are associated with sidewalk projects, and 20 crossings are associated with neighborhood greenways. The remaining 27 crossing improvements include projects funded by ODOT and Metro grants, crossings at multi-use trails, and other crossings that improve safety along high crash corridors and busy transit streets.

6.4.1. Crossing Improvement Design Considerations

- **Crossing types and locations.** Crossing improvements range from a minimum of ladder-striped crosswalks and signage to a maximum of traffic signals, curb extensions and median refuge islands. In most cases, further site study – including NCHRP 562 analysis[4] – is needed to determine which type of crossing improvement is most appropriate for each site. Similarly, the exact location of crossings is subject to refinement during project development.

- **Curb extension trade-offs**. Curb extensions help people cross the street, and can provide a location for bus stops and bioswales. In some cases, curb extensions pose trade-offs with other modes. For example, on NE Glisan Street and SE Stark Street, building curb extensions up to the edge of the travel lane could complicate future installation of bike lanes. A narrower curb extension or other design solution should be considered in such locations. On SE Division Street, future buffered bike lanes must figure into curb extension design.

- **Median island trade-offs.** On streets with a center left turn lane, installing a median refuge island may prevent left turns and queueing at intersections or driveways. Turning demand and alternate crossing placements should be studied in these cases.

[4] *National Cooperative Highway Research Board Report 562: Improving Pedestrian Safety at Unsignalized Crossings*, Transportation Research Board, 2006.

6.4.2. Crossing Improvements Associated with Sidewalk Projects

Nine recommended crossing improvements are associated with sidewalk projects. As mentioned in section 6.2, funding for these crossings will draw from both House Bill 2001 one-time East Portland funds as well as PBOT's Pedestrian safety fund. Crossing improvements associated with sidewalk projects are listed in Table 16 below.

Table 16. Recommended Crossing Improvements Associated with Sidewalk Projects

Sidewalk Project	Crossing Location	Potential Funding Sources	Time Frame
S-1	SE 122nd Ave at Schiller St	ODOT FF, Lents URA, HB 2001 EP	2012-14
S-1	SE 122nd Ave at Raymond St	HB 2001 EP, Lents URA, ODOT FF	2012-14
S-3	SE 122nd Ave at Boise St	HB 2001 EP, PBOT Ped Safety fund	2012-13
S-4	SE Stark St at 160th Ave	HB 2001 EP, PBOT Ped Safety fund	2012-13
S-5	NE Sandy Blvd at 91st Ave	HB 2001 CW, PBOT Ped Safety fund, HCC, Signal Rehab	2012-13
S-6	NE Weidler St at 106th Ave	HB 2001 EP, PBOT Ped Safety fund, Gateway URA	2012-13
S-6	NE Halsey St at 106th Ave	HB 2001 EP, PBOT Ped Safety fund, Gateway URA	2012-13
S-9	SE Stark St at 133rd/135th Ave	HB 2001 EP, PBOT Ped Safety fund	2012-14
S-12	SE 162nd Ave at Salmon St	HB 2001 EP, PBOT Ped Safety fund	2012-14

6.4.3. Crossing Improvements Associated with Neighborhood Greenways

Twenty recommended crossing improvements are associated with proposed neighborhood greenways. These crossings are funded through the respective greenway projects, with funding typically originating from the PBOT Affordable Transportation fund, but also from grant funding such as Metro Regional Flexible Funds. Crossing improvements associated with neighborhood greenways are listed in Table 17 below and described in more detail in section 6.5.

Table 17. Recommended Crossing Improvements Associated with Neighborhood Greenways

Greenway Project	Crossing Location	Potential Funding Sources	Time Frame
G-1. 130s Greenway	NE Glisan St at 128th Ave	Metro RFF, PBOT ATF	2012-14
	E Burnside St at 128th/129th Ave	Metro RFF, PBOT ATF	2012-14
	SE Stark St at 129th/130th Ave	Metro RFF, PBOT ATF	2012-14
	SE Division St at 129th/130th Ave	Metro RFF, PBOT ATF	2012-14
	SE Powell Blvd at 129th/130th Ave	Metro RFF, PBOT ATF	2012-14
G-5. Knott/ Russell Greenway	NE 102nd Ave at Knott St	PBOT ATF	2013-14
	NE 122nd Ave at Russell St	PBOT ATF	2013-14
	NE 148th Ave at Sacramento St	PBOT ATF	2013-14
G-6. 100s Greenway Central	SE Division St at 106th/107th Ave	Metro RFF, PBOT ATF	2013-14
	SE Powell Blvd at 108th Ave	PBOT ATF, ODOT	2013-14
G-7. Pacific/ Oregon/Holladay Greenway	NE 102nd Ave at Pacific St	Metro RFF, PBOT ATF	2013-14
	NE 122nd Ave at Holladay St/Pl	Metro RFF, PBOT ATF	2013-14
G-8. Woodland Park Greenway	NE 102nd Ave at Bell Dr/Tillamook St	PBOT ATF	2014-15
G-9. 100s Greenway North	NE Glisan St at 108th Ave	PBOT ATF	2014-16
G-10. 150s Greenway	NE Halsey St at 155th Ave	PBOT ATF	2015-16
	NE Glisan St at 155th Ave	PBOT ATF	2015-16
	E Burnside St at 154th Ave	PBOT ATF	2015-16
	SE Stark St at 154th/155th Ave	PBOT ATF	2015-16
	SE Division St at 157th Ave	Metro RFF, PBOT ATF	2015-16
	SE Powell Blvd at 157th Ave	PBOT ATF, ODOT	2015-16

6.4.4. Other Crossing Improvements

The remaining recommended crossing improvements are found along high crash corridors, transit streets, and multi-use trails. They will be funded by a variety of sources, including:

- **PBOT Pedestrian Safety fund**. This is the budget line item that PBOT typically uses to fund pedestrian crossings. Based on PBOT staff discussions in April 2011, approximately $100,000 of the annual $300,000 fund will be allocated to East Portland, potentially resulting in $500,000 over five years (assuming that funding levels remain stable).

- PBOT is exploring a **partnership with TriMet** that would use Federal Transit Administration funds to enhance available funding for crossing improvements. These funds would be focused in areas with high transit ridership and deficient pedestrian

facilities, including the aforementioned focus areas at SE Division Street and 122nd Avenue, and SE 82nd Avenue and Powell Boulevard.

- **High Crash Corridor engineering funding** will be available for crossing projects on Foster Road, 122nd Avenue, Division Street, Marine Drive, Sandy Boulevard and Powell Boulevard. However, the budget for engineering projects on each corridor is approximately $33,000, which will require supplemental funding in order to build significant improvements.

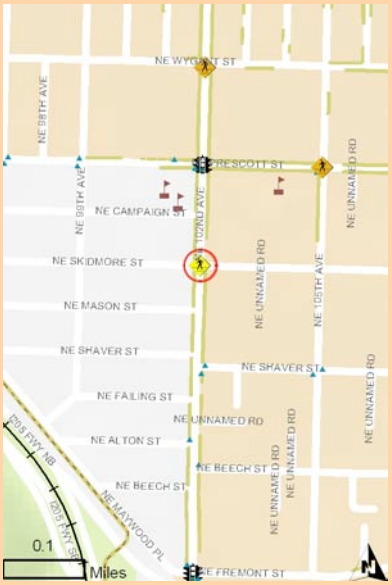
- PBOT has applied for **Metro Regional Flexible Funds** for the East Portland Active Transportation to Transit (EPAT2T) grant proposal, which includes 13 crossings along SE Division Street and 122nd Avenue. The grant would also fund six crossings associated with neighborhood greenways.

- **ODOT** has awarded **Safe Routes to School** grants to PBOT for crossing improvements near Prescott and Mill Park elementary schools. ODOT is also improving five intersections along **82nd Avenue**, and will be a key partner for any crossings involving the **I-205 Multi-Use Path**. ODOT projects are subject to modifications of that agency's Statewide Transportation Improvement Program (STIP).

Recommended crossing improvements not already included as part of sidewalk or neighborhood greenway projects are described starting on the following page. As a general rule, crossing improvements are estimated to cost **$100,000 each** for five-lane road crossings, including the installation of curb extensions, median refuge island, pavement markings, signage, and a half signal or other overhead traffic signal. Crossings that do not include signalization may cost less, typically around $40,000.

X-1. NE 102nd Avenue Crossing Improvement at Skidmore Street

TIME FRAME
2012-14



Neighborhoods: Parkrose, City of Maywood Park

Description: Pedestrian crossing improvement on NE 102nd Ave at NE Skidmore St. Curb extensions, refuge islands, ladder striping. Design should consider future bike lanes along NE 102nd Ave.

Benefits: Provides safer access to Prescott Elementary School, Mt Hood Community College Maywood Park Center, #22 bus on NE 102nd Ave and NE Shaver St, #71 bus on NE Prescott St, and homes. Calms automobile traffic.

Quantity: 1 crossing

Cost estimate: $40,000 (low-confidence planning-level estimate)

Funding and partnerships: Skidmore crossing funded by ODOT Safe Routes to School Infrastructure grant for FY 2012 awarded in April 2011. Partnership with the City of Maywood Park required.

X-2. SE 122nd Avenue Crossing Improvements: Stephens, Lincoln

TIME FRAME
2012-14

Neighborhood: Mill Park

Description: Pedestrian crossing improvements on SE 122nd Ave at SE Stephens St and SE Lincoln St (west leg). Curb extensions, refuge islands, ladder striping. Potential signalization.

Benefits: Provides safer access to Mill Park Elementary School, Mill Park, #71 bus, multi-family housing and businesses. Fills a half-mile gap between improved crossings. Within TriMet pedestrian improvement focus area. PBOT Safe Routes to School staff determined Mill Park to be one of four schools citywide with the most need for pedestrian infrastructure.

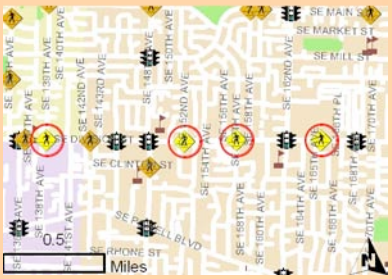
Quantity: 2 crossings

Cost estimate: $140,000 (low-confidence planning-level estimate)

Funding and partnerships: Funded by ODOT Safe Routes to School Infrastructure grants for FY 2010 and 2012. Upgrades to full or half signals should be considered, with funding through PBOT Ped Safety fund.

X-3. SE Division Street Crossing Improvements: 101st – City Limit

TIME FRAME
2013-15



Neighborhoods: Powellhurst-Gilbert, Hazelwood, Mill Park, Centennial

Description: 11 crossing improvements on SE Division St, at 101st, **106th/107th**, 110th, 115th, 124th/125th, **129th/130th**, 132nd, 139th, 152nd, **157th**, 165th avenues. Improvement types and exact locations to be determined through project development. Locations in bold are neighborhood greenway crossings. Design should consider future buffered bike lanes and bus stop configuration.

Benefits: Provides safer access to high frequency #4 bus, retail areas, multi-family housing, and schools. Half-mile radius of SE Division and 122nd is a pedestrian improvement focus area identified through TriMet Pedestrian Network Analysis. Project includes 5 of the top 10 EPIM crossing candidates ranked by transit ridership; 3 of the top 10 ranked by bus ramp deployments.

Quantity: 11 crossings

Funding and partnerships: Part of East Portland Active Transportation to Transit RFF grant proposal. Project includes crossings of 100s, 130s and 150s neighborhood greenways.

X-4. SE 122nd Avenue Crossing Improvements: Clinton, Tibbetts

TIME FRAME
2013-15

Neighborhood: Powellhurst-Gilbert

Description: 2 crossing improvements on SE 122nd Ave, at SE Clinton St and SE Tibbetts St. Improvement types and exact locations to be determined. Design should consider potential buffered bike lanes and bus stop configuration.

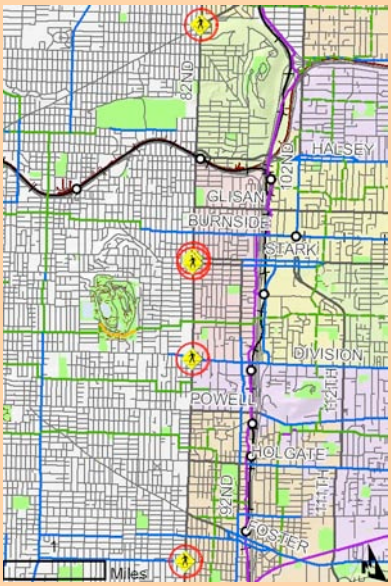
Benefits: Provides safer access to #71 bus, Division Center shopping center and multi-family housing. Half-mile radius of SE Division and 122nd is a pedestrian improvement focus area identified through TriMet Pedestrian Network Analysis. Both crossings are called out in 122nd Ave Study. SE Clinton St crossing has the highest transit ridership and incidence of bus ramp deployments of any EPIM crossing candidate.

Quantity: 2 crossings

Funding and partnerships: Part of East Portland Active Transportation to Transit RFF grant proposal.

X-5. 82nd Avenue Safety Improvements

TIME FRAME
2015-16



Neighborhoods: Sumner, Madison South, Montavilla, Powellhurst-Gilbert, Lents

Description: Crossing and safety improvements on 82nd Avenue at NE Sandy Blvd, SE Stark St, SE Washington St, SE Division St and SE Duke St. Improvements vary by location and include traffic signal upgrades, access management, sidewalk and curb reconstruction, median islands, ped countdown signals and advance warning signals.

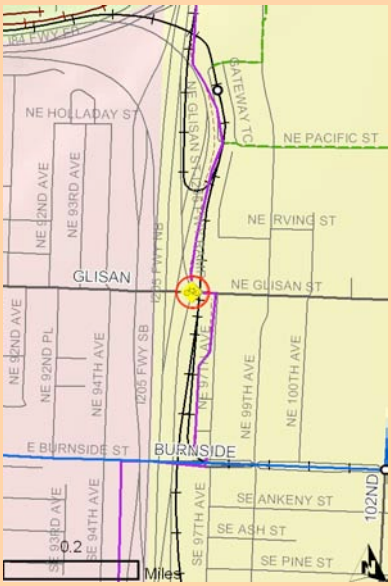
Benefits: Improves safety for all modes or traffic at major intersections along 82nd Avenue.

Quantity: 5 intersections

Funding and partnerships: ODOT projects identified in draft 2012-15 State Transportation Improvement Program (STIP).

X-6. I-205 Multi-Use Path Crossing Improvement at Glisan Street

TIME FRAME
2012-13



Neighborhoods: Montavilla, Hazelwood

Description: Safety and wayfinding improvements where I-205 Multi-Use Path crosses NE Glisan St at grade. Improvement types to be determined, but may include wider sidewalks and curb ramps, curb extensions, median islands, pavement/ sidewalk markings, wayfinding signage, path realignment, or traffic signal modifications. Potential improvements described further in *I-205 Multi-Use Path Action Plan* (ODOT, 2011).

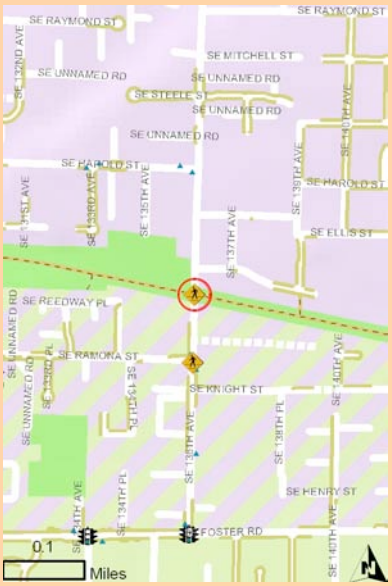
Benefits: Provides a safer and more obvious route for bicyclists and pedestrians traveling along the I-205 Multi-Use Path in a congested area. Reduces confusion as to when and where peds/bikes should cross a high-volume arterial and signalized intersection. Helps motorists know where to expect peds/bikes.

Quantity: 1 crossing

Funding and partnerships: Partnership and cost sharing between ODOT (which controls path), PBOT (which plans to resurface Glisan St), and PDC (due to Gateway Regional Center URA.)

X-7. Springwater Corridor Crossing Improvement at 136th Avenue

TIME FRAME
2013-15



Neighborhoods: Pleasant Valley, Powellhurst-Gilbert

Description: Improved crossing of SE 136th Ave at the Springwater Corridor Trail. Improvement types to be determined, but may include median refuge island, rapid-flash beacon, 4-way stop or half signal.

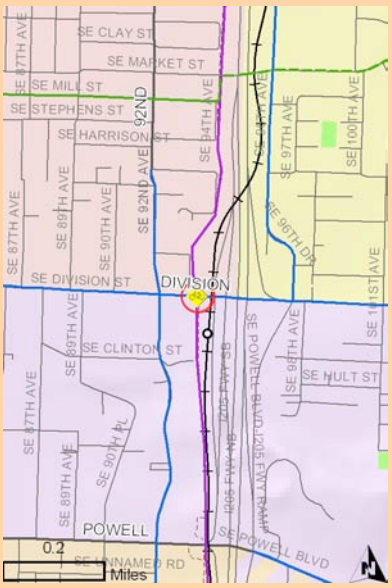
Benefits: Provides safer trail crossing and greater visibility of pedestrians and bicyclists at a neighborhood collector street with an estimated 7,500 ADT. Implements a top active transportation priority of the Pleasant Valley Neighborhood Association.

Quantity: 1 crossing

Funding and partnerships: Partnership between PBOT, PPR and Metro.

X-8. I-205 Multi-Use Path Crossing Improvements: Division

TIME FRAME
2014-15



Neighborhoods: Montavilla, Powellhurst-Gilbert

Description: Safety improvements on I-205 Multi-Use Path at existing at-grade crossing of SE Division St, as well as new bypass trail underneath SE Division St overpass. Exact improvements are to be determined, and may include elements described in *I-205 Multi-Use Path Action Plan* (ODOT, 2011).

Benefits: At-grade improvements increase safety for those accessing or transferring between MAX Green Line and #4 bus. Undercrossing provides safety and mobility benefits for those passing through Division station area on I-205 MUP, and leverages already-complete grading work. Located in an improvement focus area identified through TriMet Pedestrian Network Analysis.

Quantity: 2 crossing improvements (one at grade, one below grade)

Funding and partnerships: Partnership and cost sharing between ODOT, PBOT and TriMet.

X-9. SE Foster/Woodstock Crossing Improvements at 97th Avenue

TIME FRAME
2012-13

Neighborhood: Lents

Description: Crossing improvements on SE Foster Rd and SE Woodstock Blvd at SE 97th Ave, or alternatively at the median island one block east. Improvement types and exact locations to be determined.

Benefits: Helps fill a ¼ mile gap between safe crossings on a high crash corridor in a pedestrian district. Provides access to 3 bus lines (#10, 14, 71) that collectively attract over 800 riders per week at two nearby bus stops. Provides safer access to 7-11 convenience store and nearby homes

Quantity: 2 crossings

Cost estimate: $200,000 (low-confidence planning-level estimate)

Funding and partnerships: PBOT Ped Safety fund and High Crash Corridor program. Potential partnership with PDC due to Lents Town Center URA.

X-10. NE 122nd Avenue Crossing Improvement at Davis Street

TIME FRAME
2014-15

Neighborhood: Hazelwood

Description: Crossing improvement on NE 122nd Ave at NE Davis St. Improvement types and exact placement to be determined.

Benefits: Provides safer access to #71 bus, MAX Blue Line station, and Glisan Street Station shopping center, which includes Safeway, Target, and several other businesses and restaurants. Nearby #71 bus stop pair attracts more than 1,000 riders per week. Project fills a ¼ mile gap between traffic signals at Glisan and Burnside streets and is located within a pedestrian district. Located in a high composite score area identified through TriMet Pedestrian Network Analysis.

Quantity: 1 crossing

Funding and partnerships: PBOT Ped Safety fund

X-11. SE Stark Street Crossing Improvement at 113th Avenue

TIME FRAME
2014-15

Neighborhoods: Hazelwood, Mill Park

Description: Crossing improvement on SE Stark St at SE 113th Avenue. Improvement types and exact placement to be determined.

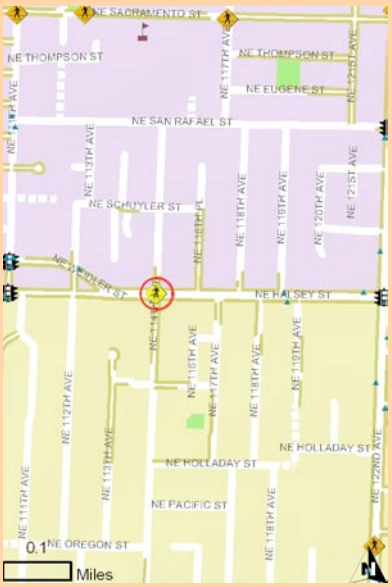
Benefits: Provides safer access to Ventura Park, #20 bus, Ventura Park Elementary School, Floyd Light Middle School, Eastgate Bible Chapel, and surrounding neighborhoods. Fills a ½ mile gap between safe crossings at 108th and 117th avenues. Located in a high composite score area identified through TriMet Pedestrian Network Analysis.

Quantity: 1 crossing

Funding and partnerships: PBOT Ped Safety fund. Potential partnership with PPR due to Ventura Park.

X-12. NE Halsey Street Crossing Improvement at 114th Avenue

TIME FRAME
2015-16



Neighborhoods: Parkrose Heights, Hazelwood

Description: Crossing improvement on NE Halsey St at 114th Ave. Improvement types and exact placement to be determined.

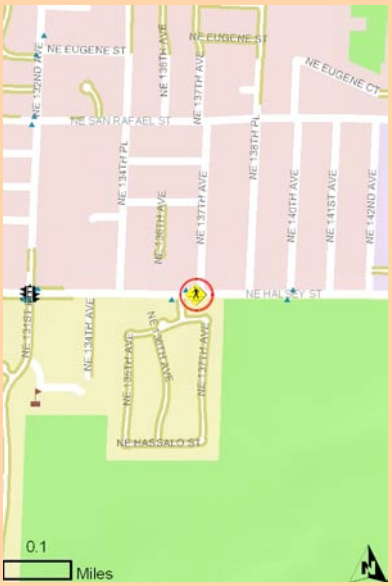
Benefits: Provides safer access to #77 bus, East Portland Neighborhood Office, businesses including a 7-11 convenience store and Gateway Breakfast House, and surrounding neighborhoods. Fills a ½ mile gap between existing signals at 108th and 122nd avenues. Located in a high composite score area identified through TriMet Pedestrian Network Analysis.

Quantity: 1 crossing

Funding and partnerships: PBOT Ped Safety fund. Potential partnership with PDC due to Gateway Regional Center URA.

X-13. NE Halsey Street Crossing Improvement at 136th Pl / 137th Ave

TIME FRAME
2015-16



Neighborhoods: Russell, Hazelwood

Description: Crossing improvement on NE Halsey St at 136th Pl / 137th Ave. Improvement types and exact placement to be determined.

Benefits: Provides safer access to #77 bus, Glendoveer Fitness Path (northwestern access point), and surrounding neighborhoods. Helps fill a 0.9 mile gap between existing traffic signals at 131st and 148th avenues.

Quantity: 1 crossing

Funding and partnerships: PBOT Ped Safety fund.

X-14. Maintenance and Upgrade of Existing Pedestrian Signals

TIME FRAME
Ongoing

Neighborhoods: Various

Description: Improving or repairing the functionality of existing half signals, beacons and other signal-aided pedestrian crossings in East Portland. This includes adding activation buttons to overhead beacons that lack them (example: SE 122nd Ave at Main St) and decreasing ped/bike wait time at half signals (example: SE Foster Rd at 87th Ave).

Benefits: Reliable, responsive and predictable ped-activated signals increase safety and visibility of pedestrians and bicyclists while discouraging crossing out of turn or jaywalking at other locations.

Quantity: East Portland contains at least 9 half-signals and at least 4 overhead beacons.

Funding and partnerships: PBOT Signal Rehabilitation & Reconstruction funds

X-15. Unfunded Second Tier Crossing Improvements

TIME FRAME
Ongoing

Neighborhoods: Various

Description: Crossing improvement project candidates that scored well during project analyses, but fell below the top tier projects that can be feasibly funded in the next five years. These include crossings on high crash corridors, crossings that would further enhance sidewalk projects recommended in section 6.2, and additional crossings on transit streets or in other high activity areas. Unfunded projects include the following:

High Crash Corridor Crossings:

- NE Sandy Blvd at 91st/92nd Ave (also near sidewalk project S-5)
- SE Division St at 89th Ave
- SE Foster Rd at 84th Ave / Ellis St
- SE 122nd Ave at Carlton St (also near a sidewalk project S-2)

Sidewalk Project Crossings:

- NE Glisan St at 160th Ave (sidewalk project S-8)
- SE Stark St at 126th Ave (sidewalk project S-9)
- SE Stark St at 142nd Ave (sidewalk project S-9)
- SE Stark St at 145th Ave (sidewalk project S-9)
- SE Stark St at 151st Ave (sidewalk project S-9)
- SE 162nd Ave at Mill St (sidewalk project S-12)
- SE 162nd Ave at Grant St (sidewalk project S-12)
- SE 162nd Ave at Taggart St (sidewalk project S-12)
- SE 162nd Ave at Haig St (sidewalk project S-12)

Other Crossings:

- NE Airport Way at Ainsworth Cir (west leg)
- NE Halsey St at 119th Ave
- NE Halsey St at 126th Ave
- NE Halsey St at 128th Ave
- NE Glisan St at 91st Ave
- SE Stark St at 111th Ave
- NE 102nd Ave at Shaver St
- SE 122nd Ave at Carlton St
- SE 102nd Ave / 103rd Ave at Morrison Ct

Benefits: Continues the necessary work of making East Portland's arterial streets safer for walking and accessing transit. Provides safer access to transit stops, commercial and residential areas, schools, parks, and other destinations. Fills gaps of ¼ mile or more between improved crossings.

Quantity: 23 crossings

Funding and partnerships: Potential sources include PBOT Ped Safety fund, High Crash Corridor engineering funds, HB 2001 citywide funds, and ODOT and Metro grants.

6.5. Recommended Neighborhood Greenways

This section describes recommended **neighborhood greenways** – low traffic, low speed streets where bicycling and walking are given priority, safety is improved at major road crossings, cut-through traffic is reduced, and environmental quality is enhanced through tree plantings and bioswales, all while maintaining vehicle access to private property. Neighborhood greenways have received strong support from the East Portland community, and will significantly increase the mileage of "low-stress bikeways" in East Portland. *East Portland in Motion* recommends ten neighborhood greenway projects that total 29.5 miles, and that will bring more than 80% of East Portland's population within a half mile of a low-stress bikeway.

6.5.1. Neighborhood Greenway Funding and Phasing

- Neighborhood greenways will be funded primarily through the city's **Affordable Transportation Fund**, in addition to special grant funding on certain projects.

- The two highest priority neighborhood greenways are the **130s Greenway** and the **4M (Market/Mill/Millmain/Main) Greenway**. Together, these two routes create a scaffold extending in all four directions from the geographic center of East Portland.

- **Gradual implementation.** Some elements of the proposed neighborhood greenway network will be built over several years and through multiple funding sources. Work on the 130s Neighborhood Greenway, for example, will begin in year 1, but many of the more expensive elements will be funded through a Regional Flexible Funds grant in 2013-14 (assuming the funding request is granted). PBOT must determine whether or not this earlier work can be considered as leverage for the grant.

6.5.2. Neighborhood Greenway Design Considerations

- **Higher-volume portions of neighborhood greenways.** Portions of proposed neighborhood greenways are neighborhood collector streets with higher traffic volumes than a typical neighborhood greenway (SE 130th Avenue between Stark and Division, for example). The most effective and appropriate bikeway design solution for such segments must be studied further, and could include bike lanes.

- **Speed bumps on EMS routes.** Speed bumps – commonly used to calm automobile traffic on neighborhood greenways – may not be possible on some higher volume

routes. By city policy, standard speed bumps cannot be installed on TSP-designated Major Emergency Response Routes such as SE Market, Mill and Main streets between 112th Avenue and the eastern city limit, and NE 132nd Avenue between San Rafael and Halsey streets. New designs that accommodate emergency vehicles while still slowing most traffic could make it possible to install devices on such streets in the future.

- **Neighborhood greenways on unimproved streets.** Portions of some neighborhood greenways are routed along unimproved streets. The recommended treatment for a completely unimproved right-of-way is to construct a paved multi-use trail. Other unimproved rights-of-way are gravel streets that cars can navigate. Ideally, these streets would be improved to city standard, with pavement, sidewalks and a green furnishing zone. However, it is unlikely that project budgets will allow for full improvements. Alternate, lower cost improvements such as a pervious asphalt shared street should be explored. Building a paved trail adjacent to a gravel street is not a desirable solution.

- **Sidewalks on neighborhood greenways.** Due to funding constraints, sidewalks will not be built as part of neighborhood greenway projects. Sidewalk investments recommended in *East Portland in Motion* are prioritized on arterial streets, while neighborhood greenways typically follow local service streets. However, walking conditions on neighborhood greenways will be improved through traffic calming, traffic diversion, and crossing improvements at busy streets.

6.5.3. Recommended Neighborhood Greenways

G-1. 130s Neighborhood Greenway

TIME FRAME
2012-14

Neighborhoods: Russell, Hazelwood, Mill Park, Powellhurst-Gilbert, Pleasant Valley

Description: North-south neighborhood greenway spine along NE 132nd Ave, NE 128th Ave, SE 129th Ave, SE 130th Ave and SE 128th Ave from Interstate 84 to SE Foster Road through the heart of East Portland and the David Douglas School District. Route uses primarily local service streets, except one mile along SE 130th Avenue and one mile along NE 132nd Avenue, both neighborhood collectors. Six crossing improvements (potentially including two-way cycle tracks) needed at selected arterials: Glisan, Burnside, Stark, Division, Powell.

Benefits: Provides low-stress alternative to 122nd Avenue, connects to MAX Blue Line, eight bus lines, Springwater Corridor and several schools including David Douglas High School. Improves pedestrian safety at crossings of Glisan, Stark, Division and Powell.

Length: 6.49 miles

Cost estimate: $1,345,000 (low-confidence planning-level estimate)

Funding and partnerships: Three-phase implementation over next 3 years, beginning with portion south of SE Division St. Part of *East Portland Active Transportation to Transit* grant application to Metro Regional Flexible Funds 2013-2014. Earlier work funded through PBOT Affordable Transportation fund.

G-2. 4M Neighborhood Greenway (Market / Mill / Millmain / Main)

TIME FRAME
2012-13

Neighborhoods: Hazelwood, Mill Park, Centennial

Description: East-west greenway along SE Market Street, SE Mill Street, SE Millmain Drive and SE Main Street, from the I-205 Multi-Use Path to the border with Gresham. Route is classified as a neighborhood collector and a major emergency response route, necessitating different traffic calming devices than are used on local service streets.

Benefits: Serves as a primary east-west greenway spine through the heart of East Portland, with lower stress conditions than Division or Stark streets. Provides access to SE Main Street MAX station, Adventist Hospital, Parklane Park, 4 David Douglas schools, 3 Centennial schools and 2 private schools. Continues existing Harrison/Lincoln greenway, creating a low-stress route from Gresham to the Willamette River.

Length: 4.37 miles

Cost estimate: $350,000 (low-confidence planning-level estimate)

Funding and partnerships: PBOT Affordable Transportation fund. Opportunity to partner with City of Gresham in branding and wayfinding once Gresham's MAX Trail is complete, creating a low-stress bikeway between downtown Portland and downtown Gresham.

G-3. 80s Neighborhood Greenway: Southern Section

TIME FRAME
2012-13

Neighborhood: Lents

Description: Southward extension of north-south greenway from Interstate 84 through Montavilla and Lents to the Springwater Corridor. Route uses local service streets. Northernmost portion utilizes Eastport Plaza property. East-west connections along SE Ellis Street and SE Steele Street.

Benefits: Provides low-stress biking and walking alternative to 82nd and 92nd Avenues. Provides access to five bus lines, Lents Park, and major shopping areas including Eastport Plaza and FuBonn. Helps spur revitalization of Lents Town Center. Serves diverse, low-income population.

Length: 2.90 miles

Cost estimate: $600,000 (low-confidence planning-level estimate)

Funding and partnerships: Funded primarily through PBOT Affordable Transportation fund. Potential partnership with PDC through Lents Town Center URA. Implementation partnership with Eastport Plaza ownership/management.

G-4. Parkrose Neighborhood Greenway

TIME FRAME
2012-14

Neighborhood: Parkrose

Description: On-street and off-street connection from proposed Gateway Green park and I-205 Multi-Use Path to Parkrose neighborhood via NE Fremont St, NE Fremont Ct and NE 115th Ave. Neighborhood greenway treatments along NE 112 Ave, NE Fremont Ct and NE 115th Ave. Multi-use path and bridge from I-205 Path to NE Fremont St accounted under project T-3; sidepath along south side of NE Fremont St accounted under project S-17.

Benefits: Provides lower-stress access to Gateway Green and the I-205 Multi-Use Path for residents of Parkrose and Argay. Beautifies and increases safety in area of overgrown vegetation along NE Fremont Street, and fills sidewalk gap here. Connects to Parkrose High School and Middle School, and businesses along NE Sandy Blvd.

Length: 1.65 miles

Cost estimate: $420,000 (low-confidence planning-level estimate)

Funding and partnerships: On-street portions funded through PBOT Affordable Transportation fund. Gateway Green path is a partnership with ODOT, Metro, PPR and others (see project T-3 for more details).

G-5. Knott/Russell Neighborhood Greenway

TIME FRAME
2013-14

Neighborhoods: Parkrose Heights, Russell, Wilkes

Description: East-west greenway along NE Knott St, NE Russell St, NE Brazee St, NE Sacramento St and NE Thompson St from NE 102nd Ave to NE 162nd Ave. Crossing improvements at NE 102nd Ave, NE 122nd Ave and NE 148th Ave. Potential cycle track at 148th.

Benefits: Provides quieter and more accessible alternative to the I-84 Bikeway. Links 3 neighborhoods, 5 schools (within both the Parkrose and Reynolds school districts), 3 parks and the Western States Chiropractic College. Provides crossing improvements for people accessing bus lines on 102nd and 122nd.

Length: 3.70 miles

Funding and partnerships: PBOT Affordable Transportation fund

G-6. 100s Neighborhood Greenway: Central Section

TIME FRAME
2013-14

Neighborhoods: Hazelwood, Mill Park, Powellhurst-Gilbert, Lents

Description: North-south greenway along SE 106th, 107th, 108th and 109th avenues, from SE Stark St to the existing Bush Neighborhood Greenway. Crossing improvements (potentially including cycle tracks) at Stark, Washington and Powell (Division crossing part of project X-9). Multi-use trail segments on unimproved rights-of-way on SE 106th Ave between Division and Market, and at SE Franklin and 108th.

Benefits: Continues existing 100s Greenway northward, providing a low-stress connection between eastern portions of Lents Town Center and Gateway Regional Center. Provides access to Ed Benedict Park, Kelly Butte Natural Area, Cherry Park and School, Adventist Hospital and East Portland Community Center. Includes two car-free sections.

Length: 2.00 miles

Funding and partnerships: PBOT Affordable Transportation fund. SE Division St crossing funded through project X-9. Coordination with ODOT in vicinity of Powell Blvd. Portion between Powell and Bush contingent on proposed redevelopment of 10702 SE Powell Blvd, which will dedicate public street.

G-7. Pacific/Oregon/Holladay Neighborhood Greenway

TIME FRAME
2014-15

Neighborhood: Hazelwood

Description: East-west greenway connecting Gateway Transit Center to proposed 130s Neighborhood Greenway through the Hazelwood neighborhood. Crossing improvements (potentially including cycle tracks) at 102nd and 122nd. Improvement of gravel streets: NE Oregon St between 110th and 111th; NE Holladay St between 118th and 119th.

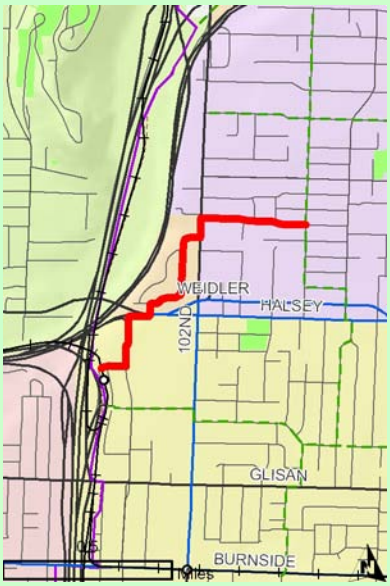
Benefits: Provides low-stress biking and walking alternative to Glisan and Halsey streets for accessing MAX and the I-205 Multi-Use Path. Along with secure bike parking at MAX station, supports use of active transportation to transit. Improves pedestrian safety at NE 122nd Ave. Connects to East Holladay Park.

Length: 2.10 miles

Funding and partnerships: Part of *East Portland Active Transportation to Transit* grant application to Metro 2013-2014 Regional Flexible Funds.

G-8. Woodland Park Neighborhood Greenway

TIME FRAME
2014-15



Neighborhoods: Woodland Park, Parkrose Heights, Hazelwood

Description: Greenway route connecting Woodland Park and Parkrose Heights neighborhoods to Gateway Transit Center via NE Multnomah St, NE 99th Ave, NE Halsey St, NE 100th/101st Ave, NE Bell Dr, NE 102nd Ave and NE Tillamook St. Cycle track component on 99th and Halsey. Crossing improvement (potentially including cycle track) at 102nd. Improved routing within transit center.

Benefits: Provides safer, better marked route from Gateway Transit Center and Gateway Shopping Center to neighborhoods to the northeast. Improves pedestrian safety at NE 102nd Ave.

Length: 1.00 mile

Funding and partnerships: PBOT Affordable Transportation fund. Potential partnership with PDC due to Gateway Regional Center URA.

G-9. 100s Neighborhood Greenway: Northern Section

TIME FRAME
2014-16

Neighborhoods: Parkrose Heights, Hazelwood

Description: North-south greenway along SE 108th and 110th avenues, from NE Klickitat St to SE Stark St. Crossing improvement (potentially including cycle track) at Glisan St. Long-term route on SE 106th/107th Ave when/if easement or right-of-way is acquired on NE Wasco St between 106th and 107th.

Benefits: Provides low-stress biking and walking alternative to 102nd Avenue. Connects Parkrose Heights and Hazelwood neighborhoods to Gateway commercial areas along Halsey/Weidler and Stark/ Washington. Intersects 5 transit lines. Long term route provides access to proposed Gateway Park.

Length: 2.23 miles

Funding and partnerships: PBOT Affordable Transportation fund. Partnership with Teamster Local #223 and PDC on long term route at NE 106th & Wasco.

G-10. 150s Neighborhood Greenway

TIME FRAME
2015-16

Neighborhoods: Wilkes, Glenfair, Centennial

Description: North-south greenway along NE 155th Ave, NE 154th Ave and SE 157th Ave from NE Halsey St to SE Powell Blvd. Crossing improvements at Halsey, Glisan, Stark and Powell (Division crossing part of project X-9). Multi-use trail segments through (or along the perimeter of) Glenfair Elementary School grounds, Glenfair Park and Parklane Park. Park/school alignments subject to further study and coordination with affected jurisdictions.

Benefits: Provides low-stress alternative to 148th and 162nd Avenues. Connects three large parks (Glenfair, Parklane, Powell Butte) and two schools (Glenfair, Harold Oliver) in a "string of pearls" fashion. Serves two of Portland's poorest neighborhoods. Intersects 5 bus lines and the MAX Blue Line.

Length: 2.88 miles

Funding and partnerships: Funded primarily through PBOT Affordable Transportation fund. SE Division St crossing funded through project X-9. Partnership with PPR on trails through Parklane and Glenfair parks, and with Reynolds School District on trail through Glenfair Elementary School grounds.

6.6. Recommended Separated In-Roadway Bikeway Projects

East Portland in Motion recommends five separated in-roadway bikeway projects that received support from neighborhood associations or school districts. These projects take the form of bike lanes or buffered bike lanes.

6.6.1. Separated In-Roadway Bikeway Design Considerations

Installation of bike lanes and buffered bike lanes will raise design issues related to other facilities in the right-of-way.

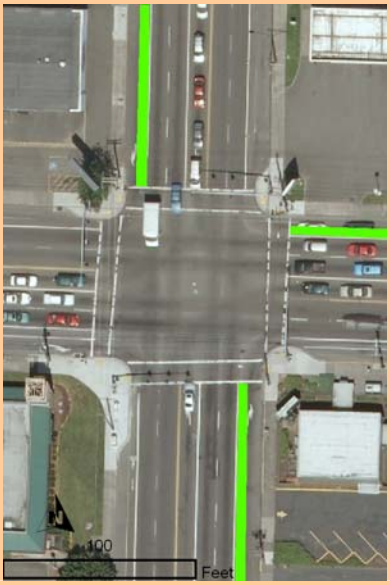
- **On-street parking.** Both types of bike lanes pose trade-offs with on-street parking. Bike lanes proposed on streets with curbs may require the removal of one or both lanes of on-street parking. Bike lanes on streets without curbs may replace gravel parking areas, depending on available right-of-way and street profile. It should be noted that the City of Gresham has replaced on-street parking with bike lanes on nearly all of its five-lane arterial streets, with few reported problems. However, a parking demand study and public outreach process is recommended for all bike lane projects.

- **Bike lanes, curb extensions and bus stops.** As mentioned in section 6.4.2, special attention is required on transit streets where both bike lanes and curb extensions are proposed.

6.6.2. Recommended Separated In-Roadway Bikeway Projects

B-1. Bicycle Safety Improvements at Intersections

TIME FRAME
2011-13



Neighborhoods: Various

Description: Bicycle safety improvements at intersections where bike lanes discontinue at right turn lanes. Preferred treatment is extending green thermoplastic bike lane up to the crosswalk. Alternative treatment is installing bicycle sharrow markings within shared right turn lane, along with "begin right turn lane yield to bikes" sign. Locations include intersections along 122nd Ave, Division St and Halsey St.

Benefits: Provides additional safety for bicyclists at intersections. Indicates where bicyclists should be positioned in the turn lane. Lets motorists know to expect bicyclists at intersections.

Quantity: Approximately 20 intersections

Cost estimate: $20,000 (low-confidence planning-level estimate)

Funding and partnerships: PBOT Affordable Transportation fund

B-2. NE Glisan Bike Lane Pilot Project: 148th – 162nd

TIME FRAME
2012-13

Neighborhood: Wilkes, Glenfair

Description: Bike lanes on NE Glisan St from NE 148th Ave to city limit near NE 162nd Ave. Requires parking removal on both sides of street. Available space (approximately 7 feet on each side of the street) allows for modest buffer between travel lane and bike lane. Design must consider #25 bus stops and proposed crossings (projects X-4 and G-10).

Benefits: Extends existing bike lanes on Gresham's portion of Glisan Street westward into Portland, connecting to proposed 150s Neighborhood Greenway and existing bike lanes on NE 148th Ave/Dr. Improves bicycle access to Glenfair Elementary School and Glenfair Park. Serves as pilot project for streets with cross sections that prevent co-existence of parking and bike lanes (Stark is another example). Serves Glenfair neighborhood, which has highest active transportation demand score in East Portland.

Length: 0.69 mile

Cost estimate: $20,000 (low-confidence planning-level estimate)

Funding and partnerships: PBOT Affordable Transportation fund. Project is supported by Glenfair Neighborhood Association and Reynolds School District, both of whom will be key partners during community outreach and implementation. Potential to package with sidewalk project S-8 and crossing project X-4. Coordinate with TriMet on bus stops.

B-3. SE Division Buffered Bike Lanes: Phase 1

TIME FRAME
2013-14

Neighborhoods: Powellhurst-Gilbert, Hazelwood, Mill Park

Description: Upgrading existing bike lanes to buffered bike lanes on SE Division Street from I-205 Multi-Use Path eastward to proposed 130s Greenway at SE 130th Avenue. Parking removal on both sides of street. Design must consider high-frequency #4 bus stops.

Benefits: Provides direct connection to MAX Green Line SE Division station and I-205 Multi-Use Path from residential and commercial areas east of I-205. Provides increased safety and comfort compared to existing bike lanes. Along with secure bike parking at MAX station, supports use of active transportation to transit. Parking removal creates clearer sight lines for motorists and bicyclists at driveways and intersections.

Length: 1.80 miles

Funding and partnerships: Part of *East Portland Active Transportation to Transit* grant application to Metro 2013-2014 Regional Flexible Funds. Coordinate with TriMet on bikeway design to avoid negative impacts (and potentially improve) high-frequency #4 bus operation.

B-4. NE Prescott Bike Lanes

TIME FRAME
2015-16

Neighborhoods: Sumner, Parkrose

Description: Bike lanes on NE Prescott Street from NE 81st Ave to NE 121st Pl, and on NE 121st Pl from NE Sandy Blvd to NE 122nd Ave. Improvements vary by location, and potentially include shoulder paving, parking removal on one side of the street, or combinations thereof. Design must consider #71 bus stops and proposed sidewalks (project S-16).

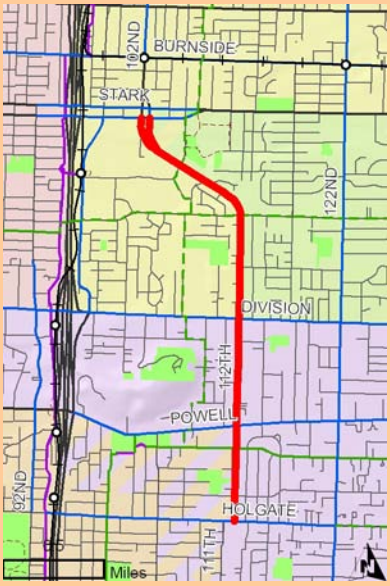
Benefits: Provides direct connections between several Parkrose schools. Strengthens critical connection over I-205 freeway, linking Sumner, Parkrose and Argay neighborhoods to Cully and points west. Extends reach of proposed Skidmore Neighborhood Greenway from Cully eastward.

Length: 2.32 miles

Funding and partnerships: PBOT Affordable Transportation fund. Close cooperation needed with Parkrose School District on parking concerns near schools and district office. Coordinate with TriMet on bus stops. Potential to implement earlier by packaging with sidewalk project S-16.

B-5. SE Cherry Blossom / 112th Bike Lanes

TIME FRAME
2015-16



Neighborhoods: Hazelwood, Mill Park, Powellhurst-Gilbert, Lents

Description: Bike lanes along SE 102nd Ave, SE 103rd Ave and SE Cherry Blossom Dr from E Burnside St to SE Market St, and along SE 112th Ave from SE Market St to SE Holgate Blvd. Parking removal on one side of street necessary from SE 106th / Cherry Blossom southward. Lane narrowing or lane removal necessary on 5-lane segment north of SE 106th / Cherry Blossom.

Benefits: Provides fast, direct bicycle access to MAX Blue Line, Mall 205, East Portland Community Center, Ron Russell Middle School and numerous residential areas. Intersects existing bike lanes on Burnside, Stark, Washington, Division, Powell and Holgate.

Length: 2.41 miles

Funding and partnerships: PBOT Affordable Transportation fund. Project endorsed by David Douglas School District.

6.7. Recommended Bicycle Parking Projects

East Portland in Motion recommends three bicycle parking initiatives to increase end-of-trip facilities at shopping areas and transit stations in East Portland. They are as follows:

P-1. East Portland Bike & Shop Pilot Project

TIME FRAME
2011-13

Neighborhoods: Various

Description: Pilot project to install secure, high-quality bicycle parking at suburban format shopping centers, small retail pods and employment centers in East Portland. Design will vary by location, but will aim to comply with city zoning code, which requires bike parking within 50 feet of the main entrance of the primary building, or distributed when multiple primary buildings are present. Safe passage between bike parking and local bikeways will also be considered. Potential locations listed in Table 7 in section 4.4.

Benefits: Provides bike parking at shopping centers that were built prior to city bike parking code. Encourages bike trips for retail shopping while reducing automobile trips. Increases visibility of bicycling as an option for shopping. Addresses geographic inequity of city-provided bike parking.

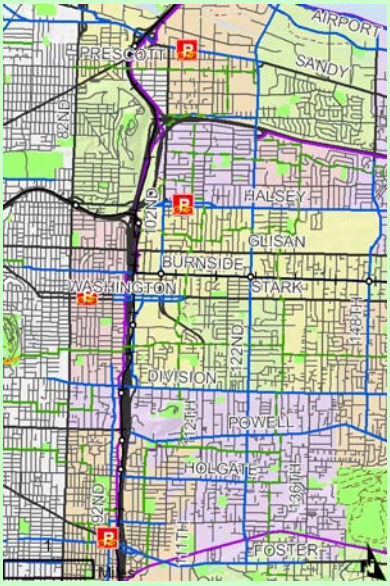
Quantity: Initially 8-12 locations with 2-8 spaces at each.

Cost estimate: $15,000 (low-confidence planning-level estimate)

Funding and partnerships: A combination of funds from GTR, EECBG and the PBOT bicycle parking fund, supplemented. Partnership with EPAP bike subcommittee to identify and engage willing owners/managers of shopping centers. Expenditure of public funds on private property requires legal/policy clarification.

P-2. On-Street Bicycle Parking for Traditional Business Districts

TIME FRAME
2011-13



Neighborhoods: Parkrose, Parkrose Heights, Hazelwood, Montavilla, Lents

Description: Bicycle parking within the street right-of-way, either in the sidewalk furnishing zone or in the parking lane as "bike corrals." This type of bike parking is most appropriate in traditional business districts where building entrances are close to the street edge. Potential locations in East Portland include:

- Parkrose (NE Sandy Blvd: 105th – 109th)
- Gateway (NE Halsey/Weidler: 102nd – 112th)
- Eastern Montavilla (SE Stark/Washington: 82nd – 92nd)
- Lents (SE 92nd Ave: Reedway - Woodstock).

Benefits: Addresses geographic inequity of city-provided bike parking. Helps increase bike usage for trips to local businesses, and can boost local business patronage in general. On-street bike parking, including bike corrals, have been extremely successful in many Portland business districts.

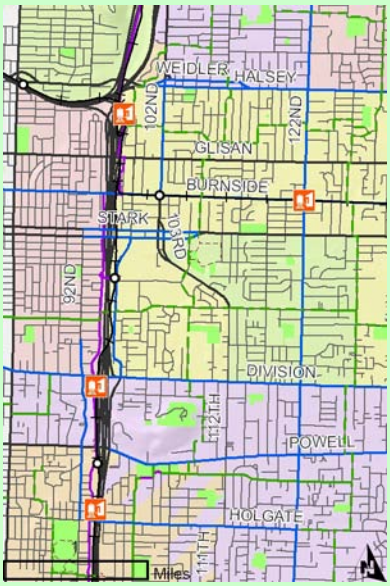
Quantity: 80 staple racks (20 in each business district)

Cost estimate: $5,000 (low-confidence planning-level estimate)

Funding and partnerships: Funding through PBOT bicycle parking fund. Buy-in from local business associations and business owners is key. Bike parking on NE Sandy Blvd will require partnership with ODOT, unless side streets are used.

P-3. East Portland Bike & Rides

TIME FRAME
2014-15



Neighborhoods: Hazelwood, Powellhurst-Gilbert, Lents

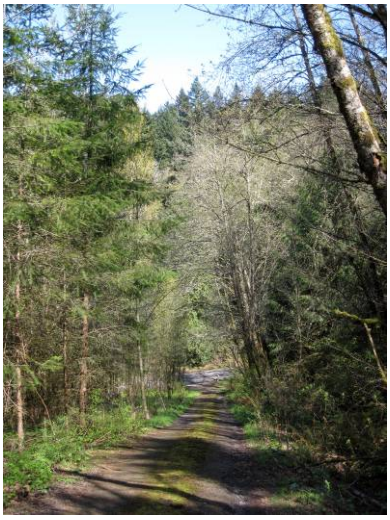
Description: Permanent, high-quality, long-term bicycle parking facilities at 3 MAX Green Line stations: **Gateway Transit Center, SE Holgate Blvd, and SE Division St**. Gateway TC will include a full "bike and ride" facility, improved rail crossings to the I-205 Multi-Use Path, and a last-mile bike share fleet. Holgate and Division station improvements will upgrade existing lockers to electronic (card-access) and add more spaces.

Benefits: Leverages regional investment in light rail transit by boosting ridership through improved bicycle access. Extends the effective reach of the transit system. Leverages existing and planned bikeway facilities in East Portland, including buffered bike lanes on SE Holgate and Division.

Quantity: 3 bike & rides

Funding and partnerships*: Part of East Portland Active Transportation to Transit* grant application to Metro Regional Flexible Funds 2013-2014. TriMet a major partner.

6.8. Support for Trail Projects



East Portland in Motion pledges city cooperation on five trail projects that would be managed primarily by other agencies. Unlike most other projects recommended in this report, trails cross expanses of land *between* roads rather than on them, resulting in fewer opportunities for PBOT to make a direct contribution. PBOT is nevertheless a key player in planning the city's low-stress bike and pedestrian network (which includes trails), and is the agency that permits trails to cross city-controlled roadways. Most trails listed in this section will be developed by multi-agency project teams, with Metro, Portland Parks and Recreation and ODOT among the major implementers.

Also unlike the sidewalk and bikeway projects, these trail projects are longer-term efforts. Within the five-year scope of *East Portland in Motion*, many of these projects may see only feasibility studies and master plans, with design and construction occurring later. As an exception, three projects provide shorter-term opportunities to make safety improvements to East Portland's existing multi-use trails.

The five trail projects supported in *East Portland in Motion* were chosen because of their unique opportunity to increase active transportation options for residents and workers in East Portland. Trail projects described in this section are either:

- Regional trails that help implement Metro's region-wide trail and greenway vision; or
- Local connections, including short trails and ped/bike bridges, that provide important connections between neighborhoods, open spaces and employment areas.

Portions of neighborhood greenways that will be built as off-street trails are not included in this section, with the exception of the Gateway Green access bridge and trail. They are accounted for in section 6.5.

Due to PBOT's limited role in trail projects, cost estimates are not provided.

T-1. Gateway Green Parkrose Access

TIME FRAME
2012-14

Neighborhood: Parkrose

Description: Modification of existing ODOT access bridge for ped/bike use; paving of driveway linking bridge to NE Fremont St at 105th Ave through PWB facility; new multi-use trail from south end of bridge to I-205 Multi-Use Path. New and reconfigured fencing to prevent public access to UPRR tracks and PWB facility.

Benefits: Provides direct, low-stress connection to proposed Gateway Green Park, I-205 Multi-Use Path and Gateway Regional Center from Parkrose. Adds a public use to underutilized bridge structure. Connects with proposed Parkrose Neighborhood Greenway (project G-4). Could serve as eastern extension of future Sullivan's Gulch Trail.

Length: 0.31 mile (1,645') total length; 625' of driveway paving, 250'x12' bridge modification; 770' of new trail.

Funding and partnerships: Project is called out in *Gateway Green Declaration of Cooperation* (December 2010). PBOT and ODOT are to negotiate with UPRR for access adjacent to railroad. PWB a key partner in satisfying security and operational requirements at water facility. PPR is lead agency in Gateway Green development. Seek Metro Nature in Neighborhoods funding and/or ODOT funds for construction.

T-2. Ikea Trail

TIME FRAME
2013-15

Neighborhood: Airport Way / Columbia Corridor

Description: Multi-use trail between Cascade Station Ikea parking lot and NE Alderwood Rd, using existing paved access road to PWB facility, and paving remaining 360 feet of gravel road (NE Glass Plant Rd / NE 105th Ave). Wayfinding signage/pavement markings in Ikea parking lot to indicate connection with NE Cascades Pkwy.

Benefits: Fills a critical accessibility gap between Cascade Station and employment areas east of I-205. Links to I-205 Multi-Use Path via NE Alderwood Rd bike lanes, improving bicycle access to Cascade Station from East Portland and Vancouver, WA. Connects with Columbia Slough Trail. Provides low-stress ped/bike bypass of I-205/Airport Way interchange.

Length: 0.25 mi

Funding and partnerships: Coordination with Port of Portland, which owns underlying property and has plans for wetland mitigation here; with PWB to allow access and alleviate security concerns at water facilities, with FAA due to PDX approach encumbrances, and with Ikea on parking lot issues. Potential to discuss corporate sponsorship with Ikea.

T-3. Cross Levee Trail

TIME FRAME
2014-16

Neighborhood: Argay

Description: Paved multi-use trail atop Cross Levee, a north-south levee extending from NE Marine Dr to NE Sandy Blvd at the 14300 block. Crossing improvements at NE Marine Dr, NE Airport Way, UPRR and NE Sandy Blvd. Potential trailhead parking.

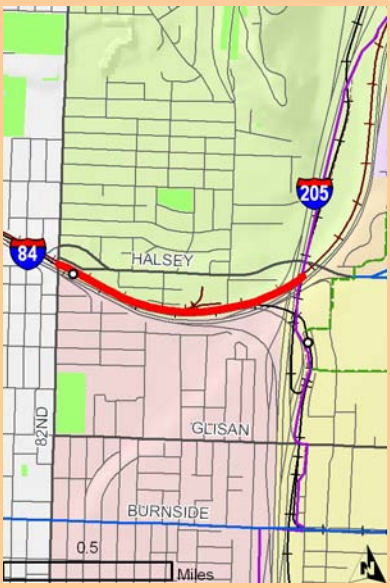
Benefits: Provides low-stress access to Marine Drive Trail, Columbia River and Columbia Slough natural area from the Argay neighborhood. Avoids bike/ped conflicts with industrial truck traffic along NE 138th Ave. Helps implement Metro's regional trail and greenway vision, as well as PBOT's vision of extending the proposed 130's Neighborhood Greenway northward to the Columbia River.

Length: 0.77 mile

Funding and partnerships: Metro is in process of securing trail easements with property owners and the Multnomah County Drainage District. Trail also crosses PPR and BES properties. Crossing UPRR a major issue. Funding may include Metro Nature in Neighborhoods funding for trail construction, ODOT funds for improvements at NE Sandy Blvd, PBOT for northern trailhead and crossings at Airport Way and Marine Dr.

T-4. Sullivan's Gulch Trail: 82nd Avenue – I-205 Multi-Use Path

TIME FRAME
2015-16+



Neighborhoods: Madison South, Montavilla

Description: Easternmost portion of proposed Sullivan's Gulch Trail that would connect Central Eastside and Lloyd District with Gateway Regional Center using the Banfield Freeway/MAX corridor. This portion is between NE 82nd Ave and the I-205 MUP. Location and design to be clarified through concept plan expected to be complete in 2012.

Benefits: Entire trail provides safe, quick bicycle/pedestrian route from Outer Northeast Portland to downtown Portland and neighborhoods in between. Portion from 82nd to I-205 MUP provides improved accessibility between Gateway Regional Center and Madison South neighborhood.

Length: 0.78 mile

Funding and partnerships: Concept plan process currently underway, led jointly by PPR and PBOT. Construction will be a multi-agency partnership between PBOT, PPR, ODOT and Metro.

T-5. Scouter Mountain Trail

TIME FRAME
2015-16+

Neighborhood: Pleasant Valley

Description: Trail connecting the Springwater Corridor and Powell Butte Nature Park with East Buttes Natural Area, Scouter Mountain Natural Area, and newer neighborhoods in outer SE Portland and Happy Valley. Trail alignment, surface type, intended users and other characteristics are to be determined through a master planning process.

Benefits: Increases recreational and active transportation opportunities in the developing Pleasant Valley area. Helps implement the Metro regional trail and greenway vision. Improves access to the Springwater Corridor.

Length: Approximately 1.3 miles within City of Portland

Funding and partnerships: Primary implementers are Metro and PPR, with PBOT partnering with potential road crossings and on-street trail segments. Master planning has begun.

One additional trail project drew public interest, but cannot be feasibly developed in the next five years – a **pedestrian/bicycle overcrossing of Interstate 84 at NE 132nd Avenue**. This potential project would:

- Extend the proposed 130s Neighborhood Greenway northward into the Argay neighborhood (and ultimately to the Columbia River);
- Breach a 1.3-mile long barrier between the Argay and Russell neighborhoods caused by Interstate 84 and the Union Pacific Railroad between 122nd and 148th avenues;
- Improve access to Western States Chiropractic College, the I-84 Multi-Use Path, John Luby Park, the future Beach Park, and Parkrose School District's Russell Academy and Shaver Elementary School; and
- Take advantage of existing public right-of-way along the NE 132nd Avenue alignment between NE Rose Parkway in Argay and NE Morris Court in Russell.

6.9. Support for Roadway Improvement Projects

This section includes projects that partially or completely reconstruct the roadway, and that cannot be classified as strictly pedestrian, bicycle or access-to-transit projects. These "**complete street**" projects benefit all modes of traffic, but especially active transportation. Current deficiencies in pedestrian, bicycle and transit infrastructure are among the top reasons these large projects have been initiated.

Planning and public involvement for most of the projects in this section have been underway for several years. As such, these projects were not rated or prioritized as part of *East Portland in Motion*, but rather included to provide support and synergy. Most of these projects are also large and complex, with multiple agencies and stakeholders involved, and with longer time frames than many of the other projects listed in this strategy. Like the trail projects in the previous section, most of these roadway improvement projects are **not under the direct authority of PBOT**, but are nevertheless important to include in a strategy that focuses on active transportation in East Portland.

Several types of projects appear in this section:

- **ODOT safety projects.** ODOT has safety improvements planned for two of its roadways in East Portland – NE Sandy Boulevard and SE Powell Boulevard. The latter is still under scoping, but both will provide significant active transportation infrastructure compared to current conditions.

- **Streetscape enhancement projects funded by the Portland Development Commission.** These projects – Foster/Woodstock in Lents and NE 102nd Avenue in Gateway – aim to stimulate economic development within urban renewal areas. They have strong support from the respective urban renewal advisory committees, and are taking shape through their own public involvement processes. They are funded through tax-increment financing specific to the urban renewal areas, along with federal funds.

- **Ongoing street development.** PBOT's Local Improvement District (LID) program is included here, along with development of the street network in Central Gateway. Both processes rely on private sector action: neighbors banding together to pave their street in the case of LIDs, or large-scale redevelopment of property in the case of Gateway. A limited number of specific street improvement projects are underway and listed in this section.

- **Planning and design projects**. While *East Portland in Motion* is a five-year implementation strategy, it nevertheless must lend support to two major transportation planning efforts taking place in East Portland: the Outer Powell Boulevard Conceptual Design Plan and the Foster-Lents Integrated Partnership.

Because PBOT is not the primary funding agency for these roadway improvement projects, cost estimates are not provided.

R-1. NE 102nd Avenue Streetscape: Phase 2

TIME FRAME
2011-13

Neighborhood: Hazelwood

Description: Upgrades substandard sidewalks to 12-foot "city standard" sidewalks with trees, landscaping and pedestrian-scale lighting on both sides of NE 102nd Ave from NE Glisan St to E Burnside St. Right-of-way acquisition required. Existing crossing improvement at NE Davis St.

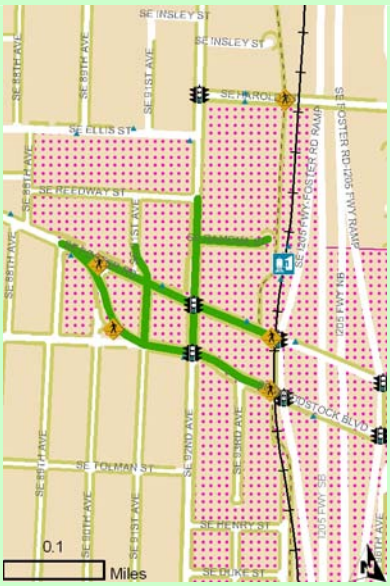
Benefits: Promotes economic development in Gateway Regional Center. Provides more comfortable pedestrian experience for people accessing businesses, homes, #15 bus and MAX Blue Line. Serves significant population of older adults at Russellville Commons and other assisted living facilities.

Length: 0.25 mile project corridor, 3 million dollars leveraged with federal funds and FHWA.

Funding and partnerships: Funded by Gateway Regional Center URA. Partnership with PDC.

R-2. Foster/Woodstock Streetscape and Ramona Green Street

TIME FRAME
2012-14



Neighborhood: Lents

Description: Upgrades substandard sidewalks to 12-foot "city standard" sidewalks with trees, landscaping, pedestrian-scale lighting and public art on SE Foster Rd, SE Woodstock Blvd, SE 91st Ave and SE 92nd Ave within Lents Town Center. Realigns Foster/91st intersection. Provides "green street" and gateway features along SE Ramona St between 92nd Ave and the Lents TC MAX station. Provides gateway feature at the western couplet split.

Benefits: Promotes economic development, job growth and property redevelopment in the Lents Town Center. Provides a more comfortable and inviting pedestrian realm along heavily traveled arterial streets. Improves access to #14, 10 and 71 buses and MAX Green Line.

Length: 0.84 mile of affected street segments.

Funding and partnerships: Funded by Lents Town Center URA, leveraged with federal funds. Partnership with PDC.

R-3. NE Sandy Boulevard Safety Project: 122nd – 141st

TIME FRAME
2012-14

Neighborhood: Argay

Description: Multi-modal improvements along NE Sandy Blvd from NE 122nd Ave to NE 141st Dr. 6-foot sidewalk with 4-foot planter strip along south side of roadway; 6-foot shoulder bike lanes on both sides of roadway; center left turn lane; traffic signal upgrades at NE 122nd Ave and NE 138th Ave; crossing improvements; durable pavement striping.

Benefits: Provides safety improvements for pedestrians, bicycles and motorists in a High Crash Corridor. Relieves congestion related to left turns. Provides safer access to industrial and retail businesses along Argay's de facto Main Street.

Length: 0.92 mile project corridor.

Funding and partnerships: ODOT funded. Potential partnership with TriMet to improve bus stops.

R-4. Outer Powell Conceptual Design Plan Implementation

TIME FRAME
2015-16+

Neighborhoods: Powellhurst-Gilbert, Lents, Centennial

Description: Planning, design, engineering and reconstruction of SE Powell Blvd from I-205 to the city limit near SE 174th Ave. Preferred design, described in 2011 *Outer Powell Blvd Conceptual Design Plan*, includes two automobile travel lanes, alternating center median / left turn lane, cycle tracks, sidewalks and green furnishing zones. ODOT to pursue shorter term safety improvements along same corridor, based on results of community outreach and available funding.

Benefits: Implements a regionally significant transportation priority. Provides a multi-modal "complete street," greatly improving safety for pedestrians, bicycles, transit riders and motorist in three of Portland's most disadvantaged neighborhoods. Beautifies, improves the environment, and encourages economic development in Outer SE Portland. Leverages Powell Blvd improvements completed in City of Gresham.

Length: 4.1 miles

Funding and partnerships: Roadway controlled by ODOT. ODOT has dedicated funds for shorter term safety improvements. Complete implementation will require significant funding assistance from federal and other sources. Planning and design is an ongoing partnership between ODOT, PBOT, TriMet and corridor stakeholders.

R-5. Local Improvement Districts (LIDs)

TIME FRAME
Ongoing

Neighborhoods: Various

Description: Continuation of PBOT's LID program, along with partial public subsidies from PDC for projects within Lents Town Center and Gateway Regional Center URAs. LIDs bring substandard streets up to city standard by installing paved roadways, sidewalks, curb ramps and stormwater facilities, paid for by property owners. Near term LIDs within URAs include NE 97th Ave: Glisan to Davis in Gateway and SE 118th Ave: Pardee – Raymond Park in Lents.

Benefits: LIDs allow property owners to take action in improving their street, regardless of public sector budget conditions. The cost to the property owner is less than if the property owner were to undertake the improvements individually. PDC subsidies increase these savings.

Quantity: 23 streets are targeted for LIDs within urban renewal areas.

Funding and partnerships: Projects are initiated and funded by adjacent property owners, provided that a majority of property owners consent. PBOT covers overhead costs and any cost overruns. LIDs in Lents Town Center and Gateway Regional Center URAs may be eligible for partial subsidies from PDC.

R-6. Central Gateway Street and Accessway Development

TIME FRAME
Ongoing

Neighborhood: Hazelwood, Mill Pak, Parkrose Heights

Description: Gradual development of an urban street grid within Central Gateway District, as illustrated in the *Central Gateway Street Master Plan Update* (PDC, 2009). Street development, which includes standard multi-modal streets as well as pedestrian/bicycle accessways, is accomplished primarily through property redevelopment, with assistance from PDC through the Gateway Regional Center URA. Near term projects include NE 97th Ave: Glisan – Davis; NE Flanders St: 97th – 99th.

Benefits: Developing an urban-scale street grid in Central Gateway is intended to foster property redevelopment and economic development in this regional center. Streets – laid out at a walkable scale and developed to city standards – will provide a framework for the dense development proposed here, and result in a safe, pleasant environment for pedestrians and bicyclists.

Quantity: 2 project in progress; approximately 70 street or accessway segments planned for future development.

Funding and partnerships: Public/private partnerships between private property owners, developers, PDC and PBOT. Public funds from Gateway Regional Center URA.

R-7. Foster-Lents Integrated Partnership (FLIP)

TIME FRAME
Ongoing

Neighborhoods: Lents, Powellhurst-Gilbert, Pleasant Valley

Description: FLIP is a sustainable infrastructure and economic development strategy for SE Foster Rd and the Johnson Creek Industrial Area. A major transportation goal is the elevated reconstruction of SE Foster Rd within the Johnson Creek floodplain (SE 101st to 113th Ave).

Benefits: Sustainable revitalization of the Johnson Creek Industrial Area will create jobs, improve the environment and revitalize a blighted, underutilized area. Reconstruction of SE Foster Rd, in addition to solving flooding issues, will provide improved facilities for pedestrians and bicyclists.

Length: Approximately 1.2 miles of flood-prone roadway on SE Foster Rd between SE 102nd Ave and the 11400 block.

Funding and partnerships: Public/private partnerships between private stakeholders and multiple public agencies. Planning funds from Lents Town Center URA.

6.10. Recommended Programs

This final section of recommendations focuses on **programs** that will encourage East Portland residents, workers, students and visitors to use the active transportation facilities that will be built as a result of *East Portland in Motion*. Primary components include:

- Continuation, expansion or initiation of PBOT's **Safe Routes to School** program in five East Portland school districts.

- Expanding the **High Crash Corridor** program to other busy roadways in East Portland.

- Bringing the **SmartTrips** program back to East Portland once a critical network of active transportation facilities has been established.

- **Branding** the East Portland active transportation network with a cohesive theme that can be used on wayfinding signage, maps and promotional materials.

6.10.1. Diversity Considerations

In all cases, programmatic approaches to active transportation in East Portland must be **designed for diversity**. A one-size-fits-all approach will not be effective. Designing for diversity means:

- **Diversity of languages**. Nearly 100 different languages are spoken in East Portland. Spanish, Vietnamese, Russian and Chinese should be considered for translation efforts.

- **Diversity of culture**. Outreach must consider different cultures' mobility habits, gender customs, and cultural attitudes toward government. In some cultures, government involvement in private life, even if well-meaning, may be perceived as intrusive or even hostile. Also noteworthy is the strong role that places of worship have in certain communities, offering potential for information sharing if done appropriately.

- **Diversity of income.** Outreach should consider the affordability of different active modes. It should not be assumed that all families or individuals own bicycles. For many East Portland residents, walking and transit are the most practical and affordable ways of getting around.

- **Diversity of age.** As reported earlier, East Portland contains nearly 40% of the city's school-age children and a third of its older adults. The resulting age profile is vastly different from inner Portland, and targeted outreach should reflect this.

6.10.2. Partner Organizations

Tailoring PBOT programs to the diverse populace of East Portland will require the help of partner organizations. Involving **non-governmental organizations** such as the Immigrant and Refugee Community Organization (IRCO), El Programa Hispano, Rose CDC and others, will help make programmatic outreach more appropriate and effective.

PBOT should also dovetail on existing **community health programs** offered by the Multnomah County Health Department, school districts, and non-profit health organizations such as Community Health Partnership and Oregon Public Health Institute.

PBOT's Transportation Options division should also continue to partner with community and advocacy organizations such as the Community Cycling Center to offer **safe bicycling education** programs, for both youth and adults, possibly in conjunction with free bicycle repairs.

6.10.3. Recommended Programs

E-1. Safe Routes to School: Parkrose School District

TIME FRAME
2011-16

Neighborhoods: Parkrose, Sumner, Argay, Parkrose Heights, Russell, Woodland Park, Hazelwood, and the City of Maywood Park

Description: Continued partnership between PBOT and Parkrose School District on active transportation education and encouragement. Continue programs in elementary schools: Prescott, Russell, Sacramento and Shaver. Evaluate middle school pilot project for a rebuilt Parkrose Middle School.

Benefits: Encourages and provides education on walking and biking to and from school and reducing automobile traffic, while pursuing engineering and enforcement efforts that increase the safety of doing so.

Quantity: 5 schools

Cost estimate: Portion of approximately $200,000 annual budget for Safe Routes to School programmatic (non-capital) expenditures east of 82nd Avenue.

Funding and partnerships: PBOT Safe Routes to School annual budget. Partnership with Parkrose School District. Coordination with Portland Police Bureau on enforcement initiatives.

E-2. Safe Routes to School: Portland Public Schools east of 82nd Ave

TIME FRAME
2011-16

Neighborhoods: Madison South, Montavilla, Powellhurst-Gilbert, Lents, Hazelwood.

Description: Continued partnership between PBOT and PPS schools east of 82nd Avenue on active transportation education and encouragement. Schools include Creative Science, Harrison Park, Kelly, Lee and Lent.

Benefits: **Benefits**: Encourages and provides education on walking and biking to and from school and reducing automobile traffic, while pursuing engineering and enforcement efforts that increase the safety of doing so.

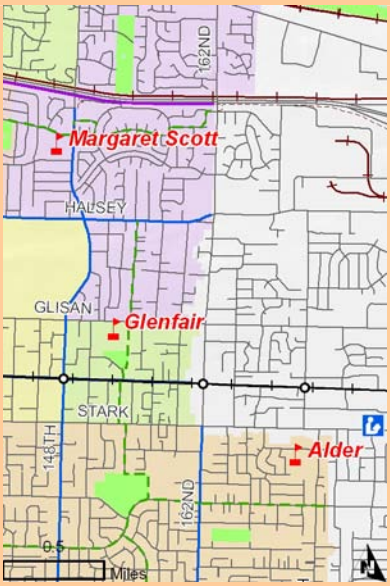
Quantity: 5 schools

Cost estimate: Portion of approximately $200,000 annual budget for Safe Routes to School programmatic (non-capital) expenditures east of 82nd Avenue.

Funding and partnerships: PBOT Safe Routes to School annual budget. Partnership with Portland Public School students, teachers, staff and families. Coordination with Portland Police Bureau on enforcement initiatives.

E-3. Safe Routes to School: Reynolds School District

TIME FRAME
2011-16



Neighborhoods: Wilkes, Glenfair, Centennial and Hazelwood.

Description: Continued partnership between PBOT and Reynolds School District on active transportation education and encouragement. Build on recently established partnerships with Glenfair and Margaret Scott schools. Include Alder Elementary School in partnership. Formalize relationship by moving from an MOU to an IGA.

Benefits: Encourages and provides education on walking and biking to and from school and reducing automobile traffic, while pursuing engineering and enforcement efforts that increase the safety of doing so. Strengthens partnership with newly joining school district.

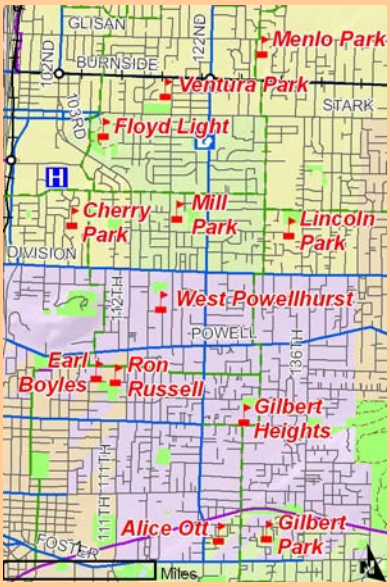
Quantity: 3 schools

Cost estimate: Portion of approximately $200,000 annual budget for Safe Routes to School programmatic (non-capital) expenditures east of 82nd Avenue.

Funding and partnerships: PBOT Safe Routes to School annual budget. Partnership with Reynolds School District students, teachers, staff and families. Coordination with Portland Police Bureau on enforcement initiatives.

E-4. Safe Routes to School: David Douglas School District

TIME FRAME
2011-16



Neighborhoods: Hazelwood, Mill Park, Powellhurst-Gilbert, Lents, Pleasant Valley and Montevilla.

Description: Continued partnership between PBOT and David Douglas School District on active transportation education and encouragement. Continue partnerships with David Douglas elementary schools: Cherry Park, Earl Boyles, Gilbert Heights, Gilbert Park, Lincoln Park, Menlo Park, Mill Park, Ventura Park and West Powellhurst. Build relationships with the 6 new David Douglas principals. Evaluate providing bike safety education at middle schools: Alice Ott, Ron Russell and Floyd Light.

Benefits: Encourages and provides education on walking and biking to and from school and reducing automobile traffic, while pursuing engineering and enforcement efforts that increase safety. Strengthens partnership with largest school district almost entirely within East Portland.

Quantity: 12 schools

Cost estimate: Portion of approximately $200,000 annual budget for Safe Routes to School programmatic (non-capital) expenditures east of 82nd Avenue.

Funding and partnerships: PBOT Safe Routes to School annual budget. Partnership with David Douglas students, teachers, staff and families. Coordination with Portland Police Bureau on enforcement initiatives.

E-5. Safe Routes to School: Centennial School District

TIME FRAME
2012-16

Neighborhoods: Centennial, Pleasant Valley, Hazelwood.

Description: New partnership between PBOT and Centennial School District on active transportation education and encouragement. Pursue partnership with Centennial elementary schools within City of Portland: Harold Oliver, Lynch View, Lynch Wood.

Benefits: Creates partnership with the only school district not currently participating in Portland SR2S. Encourages and provides education on walking and biking to and from school and reducing automobile traffic, while pursuing engineering and enforcement efforts that increase the safety of doing so.

Quantity: 3 schools

Cost estimate: Portion of approximately $200,000 annual budget for Safe Routes to School programmatic (non-capital) expenditures east of 82nd Avenue.

Funding and partnerships: PBOT Safe Routes to School annual budget. Partnership with Centennial School District students, teachers, staff and families. Coordination with Portland Police Bureau on enforcement initiatives.

E-6. 122nd Avenue High Crash Corridor Safety Project

TIME FRAME
2011-12

Neighborhoods: Parkrose, Argay, Parkrose Heights, Russell, Hazelwood, Mill Park, Powellhurst-Gilbert, Pleasant Valley

Description: Education, enforcement and engineering solutions to increase safety on 122nd Avenue, a city-designated high crash corridor. Pursue traffic safety education with residents, businesses and other users of the corridor. Work with PPB to increase enforcement of speeding and other violations. Construct engineering improvements called out in projects S-1, S-2, S-3, X-2 and X-4.

Benefits: Increases safety for all modes on a roadway with high volume, high vehicle speeds, and a disproportionate number of crashes involving pedestrian fatalities, drunk driving and distracted driving.

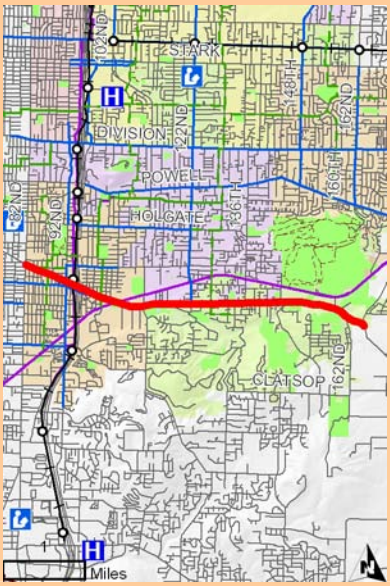
Length: 6.4 miles

Cost estimate: Approximately $33,000 for non-capital expenditures. Engineering projects accounted separately in previous sections.

Funding and partnerships: PBOT High Crash Corridor annual budget. Partnership with Portland Police Bureau on enforcement initiatives.

E-7. Foster Road High Crash Corridor Safety Project

TIME FRAME
2011-12



Neighborhoods: Lents, Powellhurst-Gilbert, Pleasant Valley

Description: Education, enforcement and engineering solutions to increase safety on SE Foster Rd, a city-designated high crash corridor. Pursue traffic safety education with residents, businesses and other users of the corridor. Work with PPB to increase enforcement of speeding and other violations. Construct engineering improvements called out in project X-9.

Benefits: Increases safety for all modes on a roadway with high volume, high vehicle speeds, and a disproportionate number of crashes involving pedestrian fatalities, drunk driving and distracted driving.

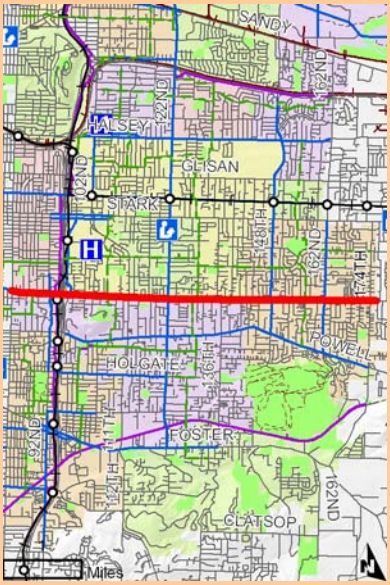
Length: 4.3 miles within EPIM study area

Cost estimate: Approximately $33,000 for non-capital expenditures. Engineering projects accounted separately in previous sections.

Funding and partnerships: PBOT High Crash Corridor annual budget. Partnership with PPB on enforcement initiatives; with PDC on engineering projects.

E-8. Division Street High Crash Corridor Safety Project

TIME FRAME
2012-13



Neighborhoods: Montavilla, Powellhurst-Gilbert, Hazelwood, Mill Park, Centennial

Description: Education, enforcement and engineering solutions to increase safety on SE Division, a city-designated high crash corridor. Pursue traffic safety education with residents, businesses, transit riders and other users of the corridor. Work with PPB to increase enforcement of speeding and other violations. Construct engineering improvements called out in projects S-10, S-13 and X-3.

Benefits: Increases safety for all modes on a roadway with high volume, high vehicle speeds, high transit patronage, and a disproportionate number of crashes involving pedestrian fatalities, drunk driving and distracted driving.

Length: 4.7 miles within EPIM study area

Cost estimate: Approximately $33,000 for non-capital expenditures. Engineering projects accounted for separately in previous sections.

Funding and partnerships: PBOT High Crash Corridor annual budget. Coordinate with PPB on enforcement initiatives. Collaborate with TriMet on education initiatives related to accessing the #4 bus.

E-9. Marine Drive High Crash Corridor Safety Project

TIME FRAME
2012-13

Neighborhoods: Parkrose, Argay, Wilkes

Description: Education, enforcement and engineering solutions to increase safety on NE Marine Dr, a city-designated high crash corridor. Work with PPB to increase enforcement of speeding and other violations.

Benefits: Increases safety for all modes on a roadway with high volume, high vehicle speeds, and a disproportionate number of crashes involving pedestrian fatalities, drunk driving and distracted driving.

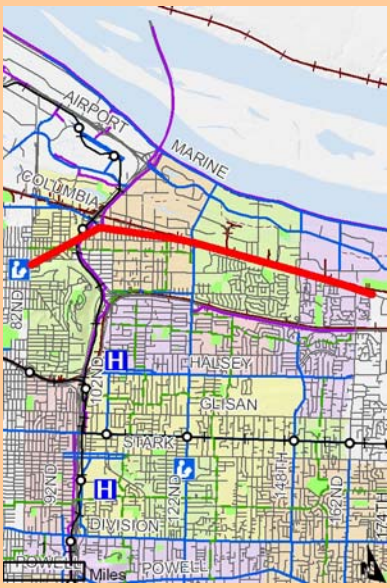
Length: 5.2 miles within EPIM study area

Cost estimate: Approximately $33,000 for non-capital expenditures

Funding and partnerships: PBOT High Crash Corridor annual budget. Coordinate with PPB on enforcement initiatives.

E-10. Sandy Boulevard High Crash Corridor Safety Project

TIME FRAME
2013-14



Neighborhoods: Madison South, Sumner, Parkrose, Argay, Wilkes

Description: Education, enforcement and engineering solutions to increase safety on NE Sandy Blvd, a city-designated high crash corridor. Pursue traffic safety education with residents, businesses and other users of the corridor. Work with PPB to increase enforcement of speeding and other violations. Construct engineering improvements called out in project S-5. Partner with ODOT on efforts within state jurisdiction (east of NE 99th Ave), including project R-3.

Benefits: Increases safety for all modes on a roadway with high volume, high vehicle speeds, and a disproportionate number of crashes involving pedestrian fatalities, drunk driving and distracted driving.

Length: 4.5 miles within EPIM study area; 1.0 mile controlled by PBOT

Funding and partnerships: PBOT High Crash Corridor annual budget. Partnership with ODOT on portion east of NE 99th Ave. Coordinate with PPB on enforcement initiatives.

E-11. Powell Boulevard High Crash Corridor Safety Project

TIME FRAME
2013-14

Neighborhoods: Powellhurst-Gilbert, Lents, Centennial

Description: Education, enforcement and engineering solutions to increase safety on SE Powell Blvd, a city-designated high crash corridor. Pursue traffic safety education with residents, businesses and other users of the corridor. Work with PPB to increase enforcement of speeding and other violations. Partner with ODOT on safety projects and long-term roadway improvements (project R-4).

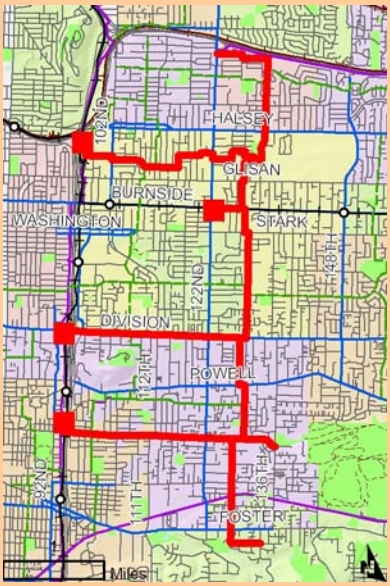
Benefits: Increases safety for all modes on a roadway with high volume, high vehicle speeds, and a disproportionate number of crashes involving pedestrian fatalities, drunk driving and distracted driving.

Length: 4.8 miles within EPIM study area

Funding and partnerships: PBOT High Crash Corridor annual budget. Partnership with ODOT on all project efforts. Coordinate with PPB on enforcement initiatives.

E-12. SmartTrips: East Portland Active Transportation to Transit

TIME FRAME
2014-15



Neighborhoods: Parkrose Heights, Russell, Woodland Park, Hazelwood, Mill Park, Powellhurst-Gilbert, Montavilla, Lents, Pleasant Valley, Centennial

Description: Implementation of SmartTrips program in East Portland in FY 2014-2015. Focus on areas affected by East Portland Active Transportation to Transit RFF projects (130's Neighborhood Greenway; Division Street sidewalks, crossings and buffered bike lane; Pacific/Oregon/Holladay Neighborhood Greenway; Bike & Rides at MAX stations). Potential service area: ½ mile buffer of above projects, totaling approximately 70,000 residents.

Benefits: SmartTrips is a comprehensive approach to reduce drive-alone trips and increase biking, walking, public transit ridership, carpooling, car sharing and combining trips. Key components include free materials delivered to homes and businesses, as well as organized activities that familiarize residents and workers with alternative transportation choices in their neighborhoods.

Service area population: approximately 70,000

Funding and partnerships: Dedicate PBOT SmartTrips budget for FY 2014-2015 to this project, supplemented by funds from East Portland Active Transportation RFF grant. Coordinate with TriMet, ODOT and Multnomah County Health Department.

E-13. East Portland Active Transportation Network Branding

TIME FRAME
2014-16

Neighborhoods: All Portland neighborhoods east of 82nd Avenue

Description: Thematic wayfinding signage and promotional materials that draw attention to active transportation facilities implemented through *East Portland in Motion*, including neighborhood greenways, trails and enhanced sidewalk projects. Capital improvements may include sign-toppers for existing street signs and bicycle wayfinding signs, as well as larger map displays. Also an opportunity to upgrade street and bicycle signage to current standards. Design theme to be determined.

Benefits: Draws attention to newly built active transportation facilities that provide increased transportation options and safety in East Portland. Leverages SmartTrips efforts described in project E-10.

Service area population: approximately 165,000

Funding and partnerships: Pursue grant from regional, state and/or federal sources, and/or include signage improvements within budgets of individual capital projects. Promotional materials to be developed in concert with, or as part of, SmartTrips program (synergy and avoiding duplication on these two programs is critical). Coordinate with TriMet, ODOT, PDC on projects that integrate with their facilities and projects.

6.11. Implementation Matrix and Map

Table 18 lists all recommended projects and programs described in the previous nine sections. Information is simplified in order to fit on one page, and includes:

- Project identification number (which appears on the accompanying map)
- Project name
- Anticipated years of construction
- Potential funding sources
- Project units (length or number of features)

The accompanying *Recommended Projects* map locates all projects that have defined geographic bounds.

For more detailed information about each project or program, refer back to the appropriate description box in sections 6.2 through 6.10.

In total, *East Portland in Motion* recommends:

- 20 sidewalk projects, collectively providing 8.1 miles of sidewalk infill;
- 56 crossing improvements (including nine as part of sidewalk projects and 20 as part of neighborhood greenways);
- Ten neighborhood greenway projects collectively adding 29.5 miles to the low-stress bikeway network;
- Five separated in-roadway bikeway projects totaling 7.2 miles;
- Three bicycle parking projects providing as many as 476 bike parking spaces;
- 13 active transportation programs;
- Coordination with regional partners on five trail projects potentially building three miles of new off-street trails; and
- Coordination with ODOT or PDC on seven roadway improvement projects.

Table 18: Implementation Matrix

For additional information on each project, please see sections 6.2 through 6.10 in the report.

For abbreviations/acronyms, see page iv in the report.

SIDEWALK INFILL - TYPE 1 (existing curb & stormwater)

ID#	Project	Years	Potential Funding Sources	Length (mi)
S-1	SE 122nd Ave Complete and Green Main Street	2011-14	ODOT FF, Lents URA, HB 2001 EP	1.03
S-2	SE 122nd Ave Sidewalk Infill: Ramona - Foster	2012-13	HB 2001 EP, Lents URA	0.13
S-3	SE 122nd Ave Sidewalk Infill: Powell - Holgate	2012-13	HB 2001 EP, Lents URA	0.22
S-4	SE 160th Ave Sidewalk Infill: Burnside - Stark	2012-13	HB 2001 EP	0.11
S-5	NE Sandy Blvd Sidewalk Infill: 86th - 92nd	2012-13	HB 2001 CW	0.10
S-6	NE Weidler St Sidewalk Infill: 99th - 112th	2012-13	HB 2001 EP, Gateway URA	0.18
S-7	SE 112th Ave Sidewalk Infill: Powell - Holgate	2012-13	HB 2001 EP, PPR	0.10
S-8	NE Glisan St Sidewalk Infill: 148th - 162nd	2012-14	HB 2001 EP	0.57
S-9	SE Stark St Sidewalk Infill: 126th - City Limit	2012-14	HB 2001 EP	0.82
S-10	SE Division St Sidewalk Infill: 148th - City Limit	2012-14	HB 2001 EP	0.51
S-11	NE 102nd Ave Sidewalk Infill: I-84 - Weidler	2012-14	HB 2001 EP, Gateway URA	0.43
S-12	SE 162nd Ave Sidewalk Infill: Salmon - Powell	2012-14	HB 2001 EP	0.99
S-13	SE Division St Sidewalk Infill: 98th - 145th	2013-15	Metro RFF, HB 2001 EP	0.54
S-14	NE 148th Ave Sidewalk Infill: Halsey - Glisan	2014-15	HB 2001 EP	0.52
S-23	Unfunded Next Tier Sidewalk Projects - Type 1 (not mapped)	Ongoing	HB 2001 CW, other available funding	3.68
	TOTAL			6.25

SIDEWALK INFILL - TYPE 2 (curb & stormwater not present)

ID#	Project	Years	Potential Funding Sources	Length (mi)
S-15	SE 136th Ave Innovative Sidewalk Pilot Project	2012-14	HB 2001 EP, PPR, BES, PBOT ATF	0.52
S-16	NE Prescott St Innovative Sidewalk Infill: 105th - 116th	2012-14	HB 2001 EP	0.35
S-17	NE Fremont St Shared Pathway: 102nd - 112th	2012-14	PBOT ATF	0.49
S-18	SE 117th Ave Sidewalk: Mill Park ES	2012-14	ODOT SR2S	0.06
S-19	SE Ramona St Sidewalk Infill: 122nd - 136th	2012-14	ODOT TE	0.31
S-20	SE Holgate Blvd Shared Pathway: 122nd - 130th	2012-14	ODOT TE	0.34
S-21	SE Holgate Blvd Shared Pathway: 130th - 136th	2013-14	Metro RFF, HB 2001 EP	0.33
S-22	Unfunded Next Tier Sidewalk Projects - Type 2 (not mapped)	Ongoing	HB 2001 CW, other available funding	5.14
	TOTAL			2.40

CROSSING IMPROVEMENTS associated with sidewalk projects

ID#	Project	Years	Potential Funding Sources	Crossings
S-1	SE 122nd Ave at Schiller St, Raymond St	2012-14	ODOT FF, Lents URA, HB 2001 EP	2
S-3	SE 122nd Ave at Boise St	2012-13	HB 2001 EP, PBOT Ped Safety fund	1
S-4	SE Stark St at 160th Ave	2012-13	HB 2001 EP, PBOT Ped Safety fund	1
S-5	NE Sandy Blvd at 91st Ave	2012-13	HB 2001 CW, PBOT Ped Safety fund, HCC	1
S-6	NE Halsey/Weidler at 106th Ave	2012-13	HB 2001 EP, Ped Safety fund, Gateway URA	2
S-9	SE Stark St at 133rd/135th Ave	2012-14	HB 2001 EP, PBOT Ped Safety fund	1
S-12	SE 162nd Ave at Salmon St	2012-14	HB 2001 EP, PBOT Ped Safety fund	1
	TOTAL			9

CROSSING IMPROVEMENTS associated with neighborhood greenways

ID#	Project	Years	Potential Funding Sources	Crossings
G-1	130s Greenway at Glisan, Burnside, Stark, Division, Powell	2012-14	Metro RFF, PBOT ATF	5
G-5	Knott/Russell Greenway at 102nd, 122nd, 148th	2013-14	PBOT ATF	3
G-6	100s Greenway Central at Division, Powell	2013-14	Metro RFF, ODOT, PBOT ATF	2
G-7	Pacific/Oregon/Holladay Greenway at 102nd, 122nd	2013-14	Metro RFF, PBOT ATF	2
G-8	Woodland Park Greenway at 102nd/Bell	2014-15	PBOT ATF	1
G-9	100s Greenway North at Glisan/108th	2014-16	PBOT ATF	1
G-10	150s Greenway at Halsey, Glisan, Burnside, Stark, Division, Powell	2015-16	PBOT ATF, Metro RFF, ODOT	6
	TOTAL			20

CROSSING IMPROVEMENTS funded by ODOT, Metro

ID#	Project	Years	Potential Funding Sources	Crossings
X-1	NE 102nd Ave at Skidmore St	2012-14	ODOT SR2S, PBOT Ped Safety fund	2
X-2	SE 122nd Ave at Stephens St, Lincoln St	2012-14	ODOT SR2S, PBOT Ped Safety fund	2
X-3	SE Division St: 101st - City Limit	2013-15	Metro RFF, PBOT Ped Safety fund	8
X-4	SE 122nd Ave at Clinton St, Tibbetts St	2013-15	Metro RFF, PBOT Ped Safety fund	2
X-5	82nd Avenue Safety Improvements	2015-16	ODOT	5
	TOTAL			19

CROSSING IMPROVEMENTS at multi-use trails

ID#	Project	Years	Potential Funding Sources	Crossings
X-6	NE Glisan St at I-205 Multi-Use Path	2012-13	PBOT, ODOT, Gateway URA	1
X-7	SE 136th Ave at Springwater Corridor	2013-15	PBOT, PPR	1
X-8	SE Division St at I-205 Multi-Use Path	2014-15	PBOT, ODOT, TriMet	1
	TOTAL			3

CROSSING IMPROVEMENTS - other

ID#	Project	Years	Potential Funding Sources	Crossings
X-9	SE Foster/Woodstock at 97th Ave	2012-13	PBOT Ped Safety fund, Lents URA	1
X-10	NE 122nd Ave at Davis St	2014-15	PBOT Ped Safety fund	1
X-11	SE Stark St at 113th Ave	2014-15	PBOT Ped Safety fund, Gateway URA	1
X-12	NE Halsey St at 114th Ave	2015-16	PBOT Ped Safety fund, Gateway URA	1
X-13	NE Halsey St at 136th Pl / 137th Ave	2015-16	PBOT Ped Safety fund	1

X-14	Maintenance of Existing Pedestrian Signals (not mapped)	Ongoing	PBOT Signals Rehab & Reconsctruction funds	
X-15	Unfunded Next Tier Crossing Improvements (not mapped)	Ongoing	PBOT Ped Safety fund, other available funding	
	TOTAL			5

NEIGHBORHOOD GREENWAYS

ID#	Project	Years	Potential Funding Sources	Length (mi)
G-1	130s Neighborhood Greenway	2012-14	Metro RFF, PBOT ATF	6.49
G-2	4M Neighborhood Greenway (Market/Mill/Millmain/Main)	2012-13	PBOT ATF	4.37
G-3	80s Neighborhood Greenway: Southern Section	2012-13	PBOT ATF	3.07
G-4	Parkrose Neighborhood Greenway	2012-14	PBOT ATF	1.65
G-5	Knott/Russell Neighborhood Greenway	2013-14	PBOT ATF	3.70
G-6	100s Neighborhood Greenway: Central Section	2013-14	PBOT ATF	2.00
G-7	Pacific/Oregon/Holladay Neighborhood Greenway	2014-15	Metro RFF, PBOT ATF	2.10
G-8	Woodland Park Neighborhood Greenway	2014-15	PBOT ATF	1.00
G-9	100s Neighborhood Greenway: Northern Section	2014-16	PBOT ATF	2.23
G-10	150s Neighborhood Greenway	2015-16	PBOT ATF	2.88
	TOTAL			29.49

SEPARATED IN-ROADWAY BIKEWAYS

ID#	Project	Years	Potential Funding Sources	Length (mi)
B-1	Bicycle Safety Improvements at Intersections (not mapped)	2011-13	PBOT ATF	
B-2	NE Glisan Bike Lane Pilot Project: 148th - 162nd	2012-13	PBOT ATF	0.69
B-3	SE Division Buffered Bike Lane: Phase 1	2013-14	Metro RFF	1.80
B-4	NE Prescott Bike Lane: 81st - 122nd	2015-16	PBOT ATF	2.32
B-5	SE Cherry Blossom / 112th Bike Lane	2015-16	PBOT ATF	2.41
	TOTAL			7.22

BICYCLE PARKING

ID#	Project	Years	Potential Funding Sources	Spaces
P-1	East Portland Bike & Shop Pilot Project	2011-13	PBOT Bike Parking fund, EECBG, GTR	96
P-2	On-Street Bicycle Parking for Traditional Business Districts	2011-13	PBOT Bike Parking fund	80
P-3	East Portland Bike & Rides	2014-15	Metro RFF	300
	TOTAL			476

TRAILS (support for projects led by other agencies)

ID#	Project	Years	Potential Funding Sources	Length (mi)
T-1	Gateway Green Parkrose Access	2012-14	ODOT, PPR, PWB, PBOT	0.31
T-2	Ikea Trail	2013-15	PBOT, PWB, Port of Portland, Ikea	0.25
T-3	Cross Levee Trail	2014-16	Metro, PPR, BES, Multnomah County, PBOT	0.77
T-4	Sullivans Gulch Trail: 82nd - I-205 MUP	2015-16+	Metro, PPR, PBOT	0.78
T-5	Scouter Mountain Trail	2015-16+	Metro, PPR, PBOT	1.30
	TOTAL			3.10

ROADWAY IMPROVEMENTS (support for projects led by other agencies)

ID#	Project	Years	Potential Funding Sources	Length (mi)
R-1	NE 102nd Ave Streetscape: Phase 2	2011-13	Gateway URA	0.25
R-2	Foster/Woodstock Streetscape & Ramona Green Street	2012-14	Lents URA, RFF	0.84
R-3	NE Sandy Blvd Safety Project: 122nd - 141st	2012-14	ODOT	0.92
R-4	Outer Powell Conceptual Design Plan Implementation	2015-16+	ODOT, PBOT, Metro, TriMet	4.08
R-5	Local Improvement Districts (with PDC funding)	Ongoing	Property owners, Lents & Gateway URAs	
R-6	Central Gateway Street and Accessway Development	Ongoing	Gateway URA, private redevelopment	
R-7	Foster-Lents Integrated Partnership: SE Foster Rd Elevation	Ongoing	Lents URA, regional & federal grants	1.22
	TOTAL			7.31

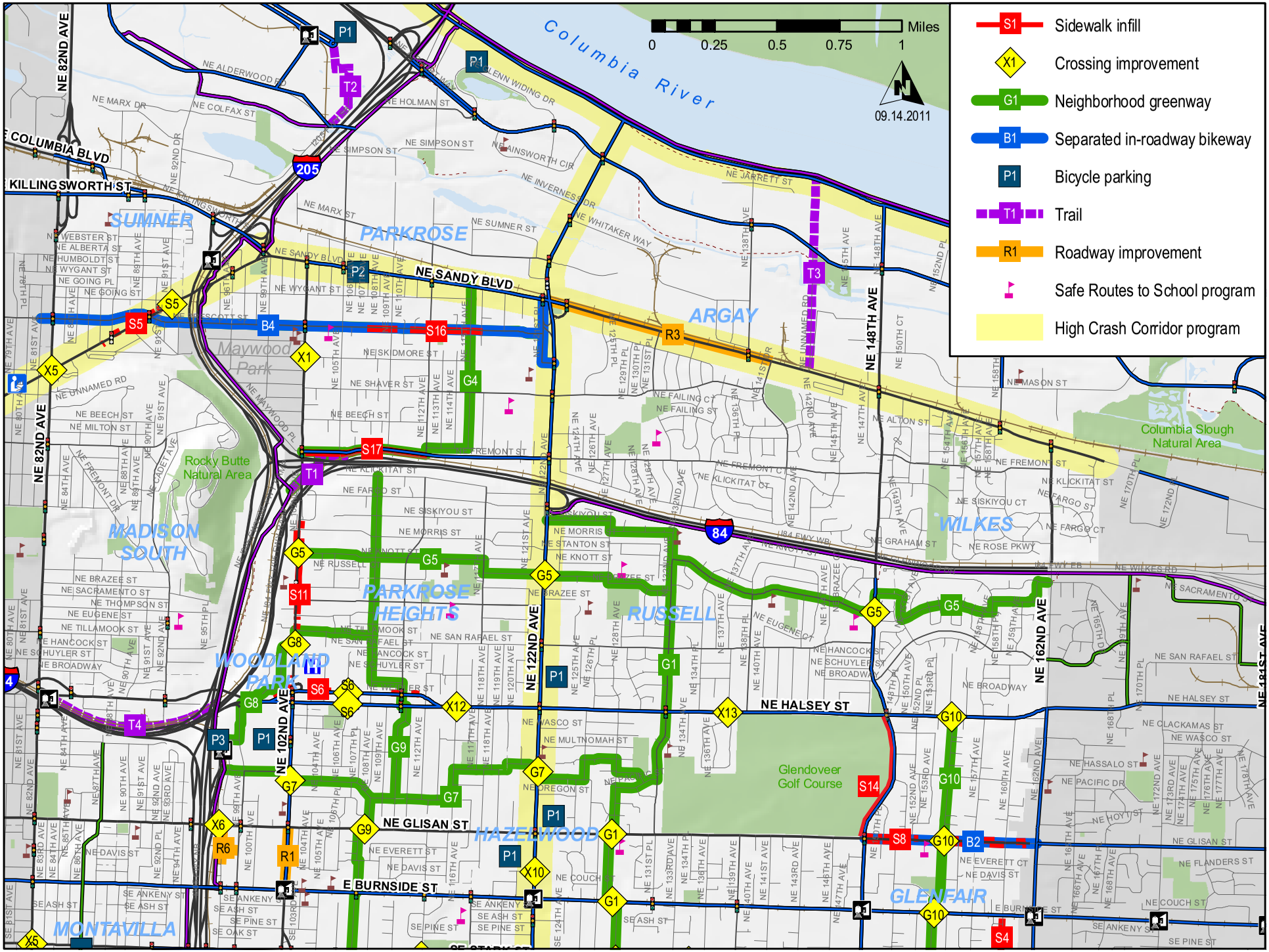
PROGRAMS

ID#	Program	Years	Potential Funding Sources	Schools
E-1	Safe Routes to School: Parkrose SD	2011-16	PBOT SR2S	5
E-2	Safe Routes to School: PPS east of 82nd Avenue	2011-16	PBOT SR2S	5
E-3	Safe Routes to School: Reynolds SD	2011-16	PBOT SR2S	3
E-4	Safe Routes to School: David Douglas SD	2011-16	PBOT SR2S	12
E-5	Safe Routes to School: Centennial SD	2012-16	PBOT SR2S	3
E-6	122nd Avenue High Crash Corridor Safety Project	2011-12	HCC non-capital funds	
E-7	Foster Road High Crash Corridor Safety Project	2011-12	HCC non-capital funds	
E-8	Division Street High Crash Corridor Safety Project	2012-13	HCC non-capital funds	
E-9	Marine Drive High Crash Corridor Safety Project	2012-13	HCC non-capital funds	
E-10	Sandy Boulevard High Crash Corridor Safety Project	2013-14	HCC non-capital funds, ODOT	
E-11	Powell Boulevard High Crash Corridor Safety Project	2013-14	HCC non-capital funds, ODOT	
E-12	Smart Trips: East Portland Active Transportation to Transit	2014-15	PBOT Transportation Options, Metro RFF	
E-13	East Portland Active Transportation Network Branding	2014-16	PBOT Transportation Options, Metro RFF	
	TOTAL			28

For additional information on each project, please see sections 6.2 through 6.10 in the report.

For abbreviations/acronyms, see page iv in the report.

Details, funding and phasing for all projects and programs are subject to modification if circumstances change or unforeseen opportunities or constraints arise.


Miles
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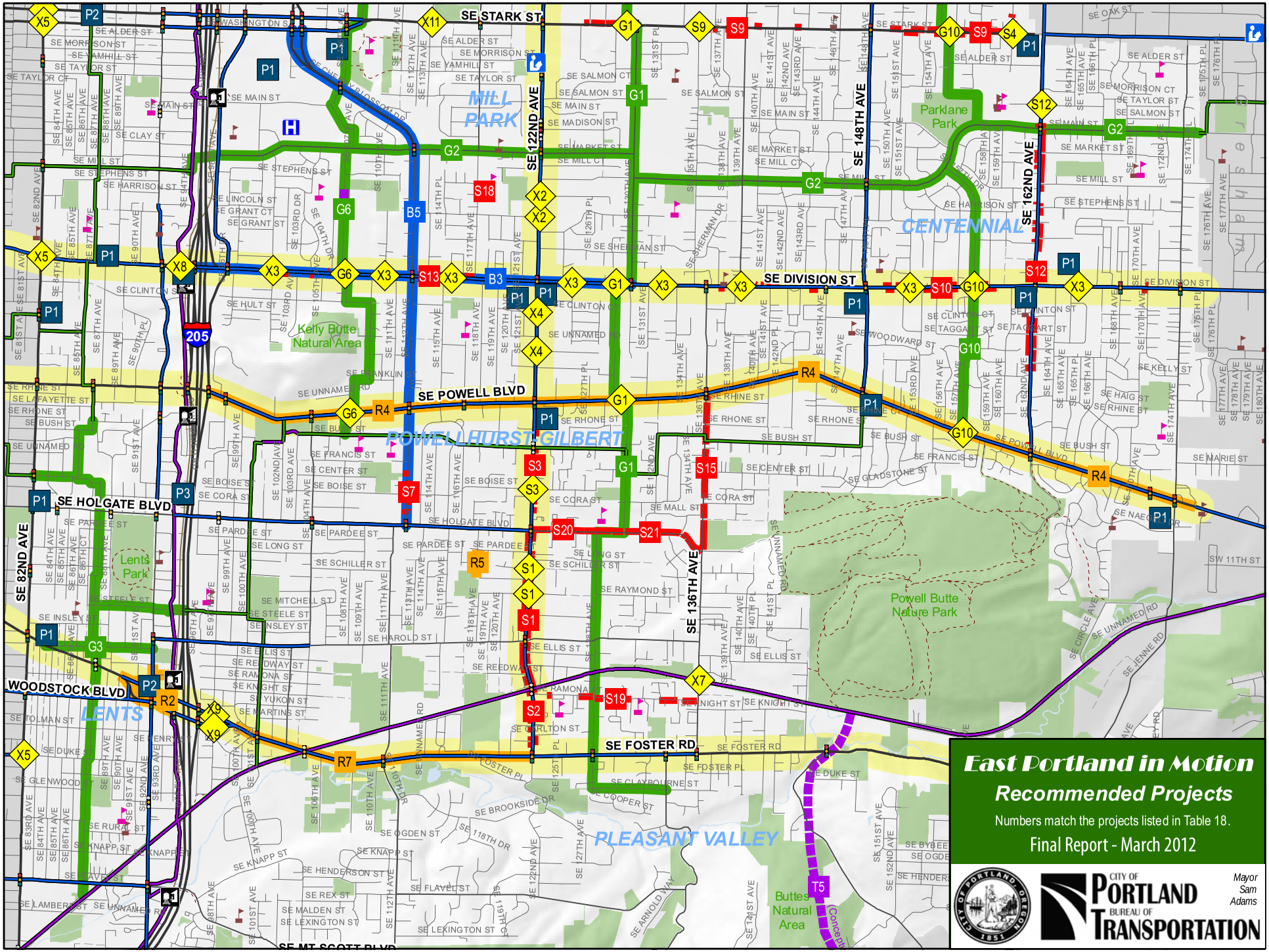
0.75
1
09.14.2011
Sidewalk infill
Crossing improvement
Neighborhood greenway
Separated in-roadway bikeway
Bicycle parking
Trail
Roadway improvement
Safe Routes to School program
High Crash Corridor program
Columbia River
SUMNER
PARKROSE
ARGAY
MADISON SOUTH
PARKROSE HEIGHTS
RUSSELL
WILKES
WOODLAND PARK
HAZELWOOD
GLENFAIR
MONTAVILLA
Maywood Park
Rocky Butte Natural Area
Columbia Slough Natural Area
Glendoveer Golf Course
NE SANDY BLVD
NE HALSEY ST
NE GLISAN ST
E BURNSIDE ST
E COLUMBIA BLVD
KILLINGSWORTH ST
NE 82ND AVE
NE 102ND AVE
NE 122ND AVE
NE 148TH AVE
NE 162ND AVE
205
84


East Portland in Motion
Recommended Projects
Numbers match the projects listed in Table 18.
Final Report - March 2012
CITY OF PORTLAND BUREAU OF TRANSPORTATION
Mayor Sam Adams
SE STARK ST
SE DIVISION ST
SE POWELL BLVD
SE HOLGATE BLVD
SE FOSTER RD
WOODSTOCK BLVD
SE 82ND AVE
SE 122ND AVE
SE 136TH AVE
SE 148TH AVE
SE 162ND AVE
MILL PARK
CENTENNIAL
POWELL HURST-GILBERT
LENTS
PLEASANT VALLEY
Kelly Butte Natural Area
Lents Park
Parklane Park
Powell Butte Nature Park
Buttes Natural Area
205