5 Pedestrian Element

Walking is the most affordable and accessible of all transportation modes. It is also clean, low-impact, and healthy for the individual. A safe and comfortable pedestrian environment allows people of all ages and abilities to travel independently. This chapter summarizes strategies used in evaluating the future needs of the city of Milwaukie's pedestrian network, recommends improvements for the network, outlines pedestrian needs for the next ~~20~~ 22 years, and identifies projects that address the city's needs.

GOALS AND POLICIES

Milwaukie has developed a set of goals to guide the development of its transportation system (see Chapter 2). Listed below are the specific TSP Goals that guide the City's policies on pedestrian access and connectivity:

- **Goal 1 Livability** guides the City to provide convenient, accessible and coordinated pedestrian facilities and to minimize barriers to pedestrian travel.
- **Goal 2 Safety** calls for the design and maintenance of safe and accessible walkways.
- **Goal 3 Provide Travel Choices** directs the City to provide an integrated network of walkways that connect people with transit.
- **Goal 4 Quality Design** calls for pedestrian facilities to be integrated with street and development planning in a context-sensitive manner.
- **Goal 5 Reliability and Mobility** calls for enhanced connectivity, which particularly benefits pedestrians.
- **Goal 6 Sustainability** guides the City to increase the use of walking as a low-impact form of travel.

NEEDS

There are generally three different types of pedestrian trips: residential, service, and recreational trips. The deficiencies in Milwaukie's pedestrian system affect each group differently, but common to all three are the needs for connectivity, access and safety. The most common overall need is to provide a safe and interconnected system that makes pedestrian travel a viable option, especially for residential trips less than 1/2 mile in length and recreational trips less than one mile in length.

Facilities

Throughout Milwaukie, pedestrian facilities are generally deficient. Although some arterial and collector streets in the city provide limited sidewalks as shown in Figure 3-2, the north and east areas have many collectors and arterials lacking sidewalks. Many of the neighborhood and local streets throughout the city do not have pedestrian facilities. The perimeter of the city is well-served by three off-street multiuse paths, the Springwater Trail, Kellogg Creek Trail into Riverfront Park, and Trolley Trail, though gaps in the trail network exist to the east and south. Improvements are needed throughout the city, but especially on key connecting corridors that link neighborhoods to schools, parks, and commercial centers.

The Portland-Milwaukie Light Rail (PMLR) project, which is currently under construction, is building new sidewalks and pedestrian crossings around the new station in the south downtown area and will also significantly improve pedestrian facilities at the new station areas at Tacoma St and Park Ave.

City policy directs most development to fill in sidewalk gaps directly adjacent to new development. There is currently no policy to allow development to fill gaps in the pedestrian network if the gap is not adjacent to the developing site. The City should explore a different policy to collect fees from new development to help improve connections and crossings that may not be adjacent to the developing parcel.

Connectivity

Milwaukie's pedestrian network is disconnected, largely due to the lack of convenient crossings of large regional facilities: Hwys 99E and, Hwy 224, and the Union Pacific Railroad. The wide design and high vehicle speeds of these roadways result in potentially unsafe and unpleasant pedestrian crossings. Without direct connections across these barriers, pedestrians are forced to travel out of direction and sometimes use busy arterial and collector streets to meet their destinations. Even where pedestrian crossings do exist, many are deficient. The use of asphalt on railroad crossings is a concern for pedestrians, since asphalt is more likely to buckle than concrete and results in uneven walking surfaces. Uneven walking surfaces are particularly problematic for elderly and disabled individuals. Numerous dead-end and curvilinear streets throughout the city also contribute to the disconnected pedestrian network. Connectivity improvements are needed in two key areas: (1) crossing improvements at most highways, railroads, and arterials,[1] and (2) connections to schools, parks, and transit routes.

~~Facilities~~

~~Throughout Milwaukie, pedestrian facilities are disconnected and deficient. Although some arterial and collector streets in the city provide limited sidewalks as shown in Figure 3-2, the north and east areas have many collectors and arterials lacking sidewalks. Many of the neighborhood and local streets throughout the city do not have pedestrian facilities. The perimeter of the city is well- served by two off-street multiuse paths, the Springwater Trail, and the Milwaukie Riverfront trail, though gaps in the trail network exist to the east and south. Improvements are needed throughout the city, but especially on key connecting corridors that link neighborhoods to schools, parks, and commercial centers.~~

~~Policy~~

~~City policy directs most development to fill in sidewalk gaps directly adjacent to new development. There is currently no policy to allow development to fill gaps in the pedestrian~~

[1] Any potential new crossing location would need to meet Oregon Department of Transportation (ODOT) crossing guidelines and criteria to make sure the crossing is warranted and safe.

~~network if the gap is not adjacent to the developing site. The City should explore a different policy to collect fees from new development to help improve connections and crossings that may not be adjacent to the developing parcel.~~

FACILITIES

The most common type of pedestrian facility is a concrete sidewalk that is separated from the roadway by an extruded curb. Sidewalks must be built to current City of Milwaukie design standards and comply with the Americans with Disabilities Act, which requires at least 4 ft of unobstructed sidewalk.[2] Wider sidewalks are desirable to promote pedestrian travel on all roadways.

Some of Milwaukie's streets are not only important local connections, but are also designated as regionally important pedestrian streets. Streets identified in the Metro 2004 RTP as transit/mixed use corridors (streets in downtown Milwaukie, 17th Ave, Harrison St, King Rd, and 32nd Ave) are areas that are served by quality transit service and will generate substantial pedestrian traffic near neighborhood-oriented retail development, schools, parks, and bus stops. These corridors should include such pedestrian design features as wide sidewalks with buffering from traffic, pedestrian-scale lighting, benches, bus shelters, and street trees.

Milwaukie has three identified off-street multiuse paths in the Metro ~~2004~~ RTP regional trails and greenways system: the Springwater Trail, the Trolley Trail, and the Kellogg Creek greenway. The majority of the Springwater Trail within the city has been constructed. However, there is a gap between the Milwaukie section of the Springwater Trail and the section along the east bank of the Willamette River. The Trolley Trail, a project led by the North Clackamas Parks District, is currently under construction. The final segment of the Trolley Trail within the city will be completed in conjunction with the PMLR project. These facilities will be designed and built according to regional standards, as well as local jurisdictional standards.

RECOMMENDATIONS

Strategies

Milwaukie's pedestrian system is challenged by an incomplete arterial/collector sidewalk system, a lack of local street connectivity, arterial crossings with potential safety and connectivity issues, and a lack of complete multiuse trails (see Chapter 3).

The City has several strategies for addressing pedestrian system needs and guiding project prioritization. The prioritization process helps to focus community investment on those projects that are most effective at addressing critical needs, while deferring other projects of lesser importance. The strategies for pedestrian facilities include:

- Key pedestrian corridors to connect neighborhoods with schools, parks, activity centers, and major transit stops.
- Arterial crossing and safety enhancements.
- Fill gaps in the network where some sidewalks exist.
- Pedestrian corridors that connect to major recreational uses.
- Enforcement of laws that protect pedestrians.
- Education about pedestrian safety and available walking routes.

[2] *Americans with Disabilities Act*, Uniform Building Code.

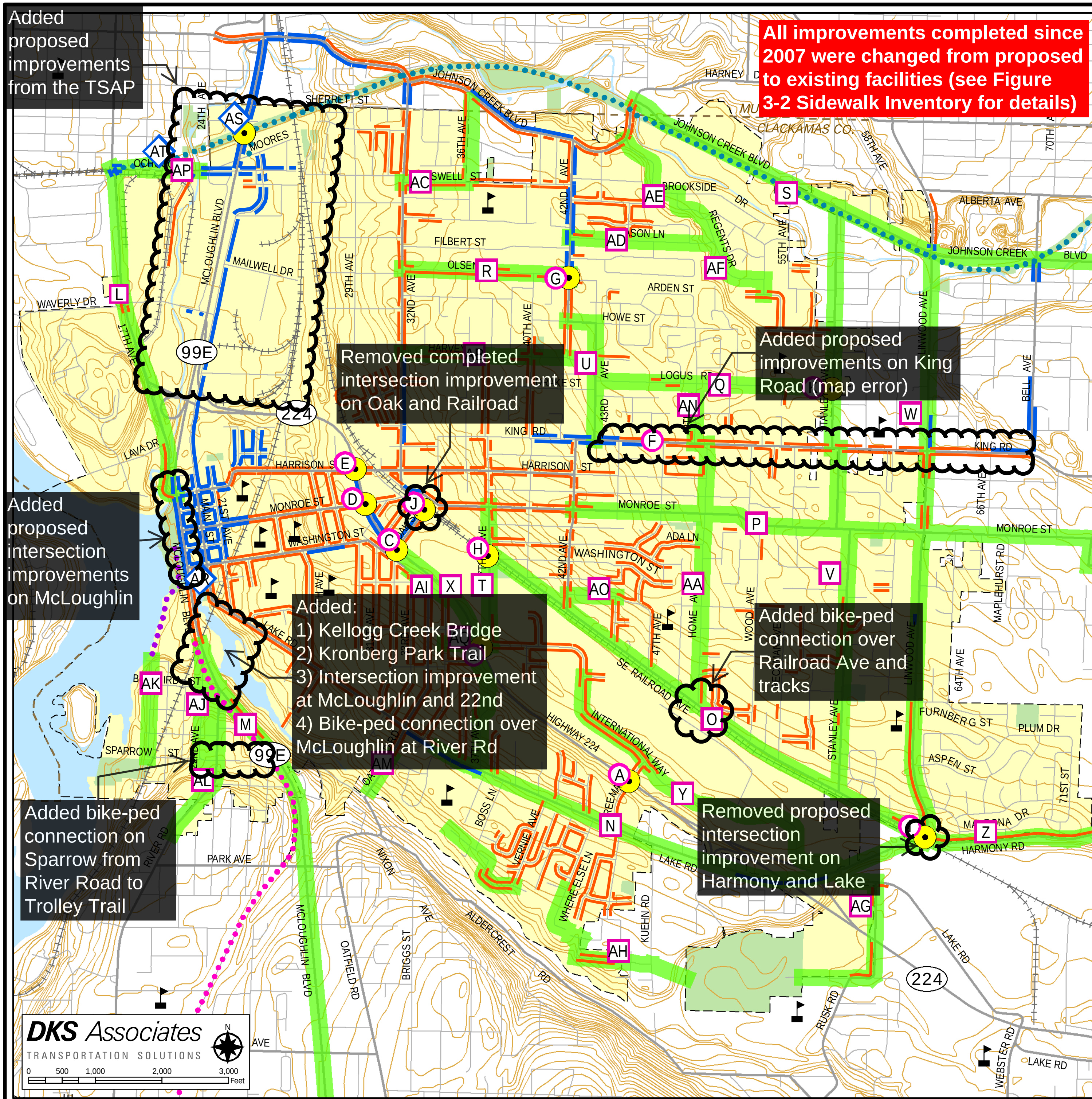
These strategies would be implemented by projects that address needs and deficiencies. The projects fall into three categories:

- **Capital:** projects that require construction of some sort of physical infrastructure. Capital projects typically require ongoing maintenance that must be programmed into the maintenance schedule.
- **Operational:** projects which involve actions that make the existing transportation infrastructure more useable. They can include upkeep of existing facilities, educational campaigns, or distributing information about the use of the transportation network. They are typically smaller in scale and dollars than capital projects, and are implemented more broadly than in one specific location.
- **Policy:** Projects that improve the pedestrian environment that typically do not result in a physical improvement, but rather in a fundamental change in the way pedestrian travel is perceived or treated within Milwaukie. Proposed policy projects are listed below.
    - Ensure overhanging vegetation and other sidewalk obstructions are removed; ensure sidewalk safety hazards are repaired.
    - Enforce speeding laws, utilizing tools such as photo radar, to make the streets generally safer; enforce laws related to pedestrian crossings and crosswalks.
    - Utilize safe routes to schools programs and resources to increase pedestrian safety around schools.
    - Support mixed-use development and services near residential areas to encourage walking; reexamine vehicle-centered policies, such as high amounts of required parking.
    - Construct sidewalks or appropriate walkways everywhere; i.e., complete streets as development occurs or capital funds become available.
    - Educate the general public about pedestrian safety; inform the general public about traffic laws related to pedestrians.

Master Plan

The Pedestrian Master Plan includes a list of projects that could address system needs and achieve the strategies for improving the pedestrian system (see Figure 5-1a). An inset map showing more detail in the downtown area is provided in Figure 5-1b. Some projects from the master plan were selected for inclusion in a Pedestrian Action Plan, which consists of projects that the community has identified for the City to give priority in allocating funding and/or pursuing additional funding. As development occurs, streets are rebuilt, and as other opportunities (grant programs) arise, projects on the master plan should be pursued as well.

The planning-level cost estimates provided for each project in Table 5-1 are based on general unit costs for transportation improvements but do not reflect the unique project elements that can significantly add to project costs. For each of these projects, the City will refine the cost estimate to include right-of-way requirements and costs associated with special design details.



Transportation System Plan

CITY OF MILWAUKIE

FIGURE 5-1a

PEDESTRIAN MASTER PLAN

EXISTING (2007)

December 2007

LEGEND

Existing Sidewalks
- < 5 ft. Width
- 5 ft. - 10 ft. Width
- Springwater Trail
- Kellogg Creek Trail

Proposed Improvement
- Pedestrian Facilities
- Pedestrian Intersection Safety Improvement
- Trolley Trail

- Schools
- Major Roads
- Streets
- Railroad
- 10' Contours
- County Line
- Parks
- Water
- City Limits

PROPOSED PROJECTS

Improve Intersection to Increase Pedestrian Safety
- A Freeman Way/HWY 224
- B 37th Ave/HWY 224
- C Oak St/HWY 224
- D Monroe St/HWY 224
- E Harrison St/HWY 224
- F King Rd crossing improvements
- G Olsen St/42nd Ave
- H Railroad Ave/37th Ave
- I Harmony Rd/Lake Rd
- J Oak St/railroad tracks
- K Stanley Ave/Logus Rd

Provide Pedestrian Facilities Where Not Currently Present

See Table 5-1 for L - AQ project descriptions

Enhance Existing Pedestrian Connection
- AR Construct pedestrian underpass under HWY 99E at Kellogg Creek
- AS Improve ramp at Springwater Trail/HWY 99E
- AT Complete Springwater Trail along Ochoco St

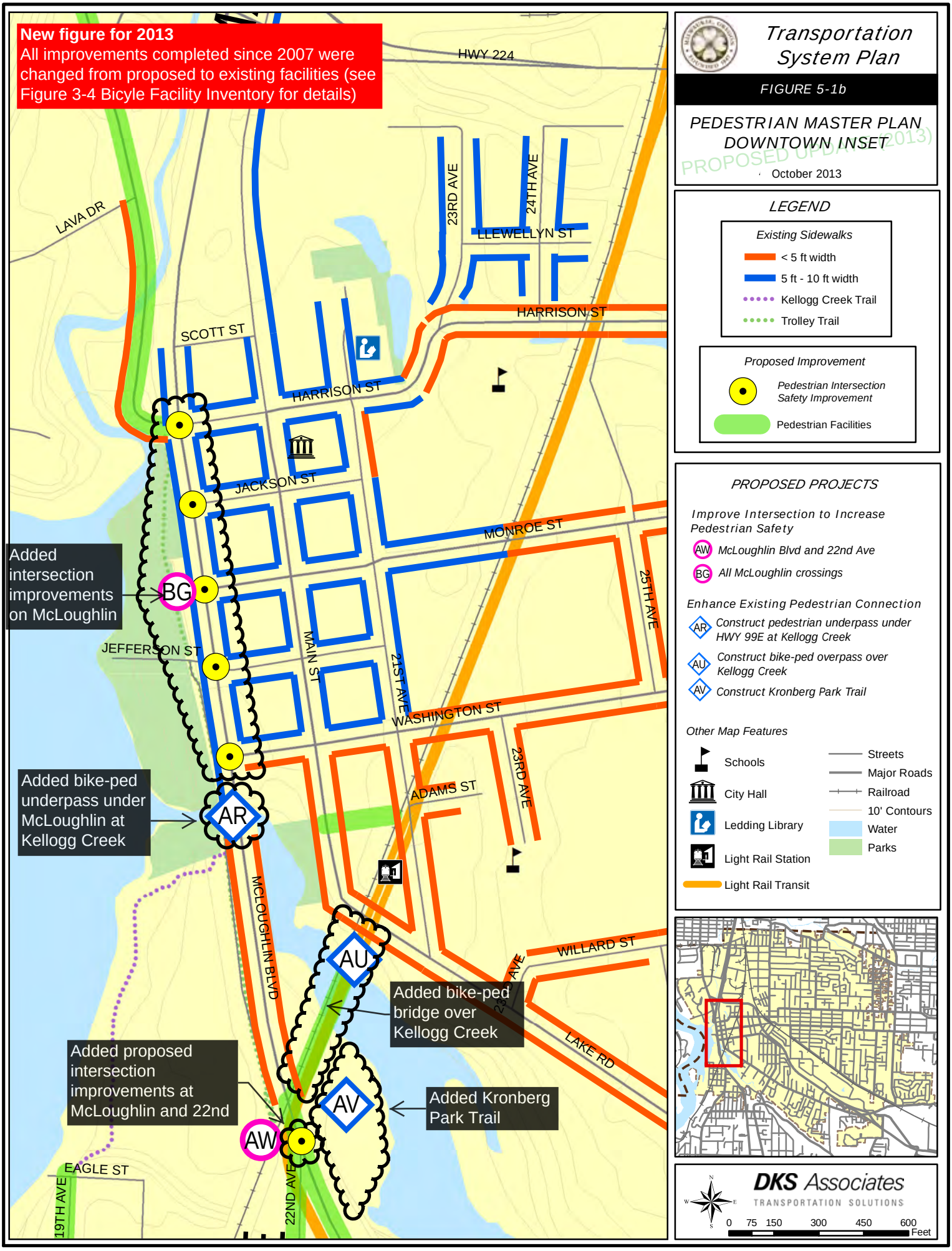

New figure for 2013
All improvements completed since 2007 were changed from proposed to existing facilities (see Figure 3-4 Bicyle Facility Inventory for details)
HWY 224
LAVA DR
23RD AVE
24TH AVE
LLEWELLYN ST
SCOTT ST
HARRISON ST
HARRISON ST
JACKSON ST
MONROE ST
25TH AVE
Added intersection improvements on McLoughlin
BG
JEFFERSON ST
MAIN ST
21ST AVE
WASHINGTON ST
Added bike-ped underpass under McLoughlin at Kellogg Creek
AR
ADAMS ST
23RD AVE
MCLOUGHLIN BLVD
AU
WILLARD ST
23RD AVE
Added bike-ped bridge over Kellogg Creek
LAKE RD
Added proposed intersection improvements at McLoughlin and 22nd
AV
Added Kronberg Park Trail
AW
EAGLE ST
19TH AVE
22ND AVE
Transportation System Plan
FIGURE 5-1b
PEDESTRIAN MASTER PLAN
DOWNTOWN INSET
PROPOSED UPDATE (2013)
October 2013
LEGEND
Existing Sidewalks
< 5 ft width
5 ft - 10 ft width
Kellogg Creek Trail
Trolley Trail
Proposed Improvement
Pedestrian Intersection Safety Improvement
Pedestrian Facilities
PROPOSED PROJECTS
Improve Intersection to Increase Pedestrian Safety
AW McLoughlin Blvd and 22nd Ave
BG All McLoughlin crossings
Enhance Existing Pedestrian Connection
AR Construct pedestrian underpass under HWY 99E at Kellogg Creek
AU Construct bike-ped overpass over Kellogg Creek
AV Construct Kronberg Park Trail
Other Map Features
Schools
City Hall
Ledding Library
Light Rail Station
Light Rail Transit
Streets
Major Roads
Railroad
10' Contours
Water
Parks
DKS Associates
TRANSPORTATION SOLUTIONS
0 75 150 300 450 600
Feet

Table 5-1 Pedestrian Master Plan Projects

Map ID[3]	Priority	Type	Project Name	Project Description[4]	From	To	Cost~~(s)~~ ($1,000s[5])
High Priority Projects							
N/A	High	P	Study of Pedestrian Crossings on Hwy 224	Examine alternatives for improving pedestrian crossings at five intersections along Hwy 224 (Harrison St, Monroe St, Oak St, 37th Ave, Freeman Way)	Harrison St	Freeman Way	$50
A	~~Low~~High	C	~~Hwy 224~~ Intersection Improvements at Hwy 224 and Freeman Way	Improve pedestrian crossing.	Location-specific	Location-specific	$20
B	~~Low~~High	C	~~Hwy 224~~ Intersection Improvements at Hwy 224 and 37th Ave	Improve pedestrian crossing.	Location-specific	Location-specific	$20
C	~~Low~~High	C	~~Hwy 224~~ Intersection Improvements at Hwy 224 and Oak St	Improve pedestrian crossing.	Location-specific	Location-specific	$20
D	~~Low~~High	C	~~Hwy 224~~ Intersection Improvements at Hwy 224 and Monroe St	Improve pedestrian crossing.	Location-specific	Location-specific	~~$15~~ 20
E	~~Low~~High	C	~~Hwy 224~~ Intersection Improvements at Hwy 224 and Harrison St	Improve pedestrian crossing.	Location-specific	Location-specific	$20
L	High	C	17th Ave ~~Sidewalks~~Improvements	Fill in sidewalk gaps on both sides of street; fill in gaps in existing bicycle network with bike lanes; and/or provide multiuse path. ~~and i~~Improve intersection~~s~~ safety at Milport Rd, McBrod Ave, Hwy 224, Lava Dr, and Hwy 99E.	Ochoco St	McLoughlin Blvd	~~$920~~ 1,000

[3] See Figure 5-1.
[4] The projects in this table assume traditional sidewalks on both sides of the street. In some cases it may be appropriate to construct a nontraditional pedestrian facility on one side of the street. See Chapter 10 Street Design for more information on the City's approach to designing pedestrian facilities.
[5] Project costs are order-of-magnitude estimates and are in ~~2007~~2012 dollars. Future costs may be more due to inflation. ~~Costing details can be found in the Technical Appendix.~~ In the case of operational projects, estimated costs are for the entire 22-year planning period.

Map ID[3]	Priority	Type	Project Name	Project Description[4]	From	To	Cost~~(s)~~ ($1,000s[5])
O	High	C	Railroad Ave ~~Sidewalks~~ Capacity Improvements	Pedestrian aspect: Fill in sidewalk gaps on both sides of street or construct multiuse path on one side~~(part of Railroad Avenue road widening project)~~.	37th Ave	Harmony Rd	~~$1,625~~ 1,800
P	High	C	Monroe St ~~Sidewalks~~ Neighborhood Greenway	Fill in sidewalk gaps on both sides of street.	42nd Ave	City limit	~~$1,631~~ 1,800
U	~~Low~~High	C	43rd Ave Sidewalks	Fill in sidewalk gaps on both sides of street.	Howe St/42nd Ave	King Rd/43rd Ave	~~$550~~ 600
V1	High	C	Stanley Ave ~~Sidewalks~~ Neighborhood Greenway (north)	Fill in sidewalk gaps on both sides of street.	Johnson Creek Blvd	~~Railroad Ave~~ King Rd	~~$4,304~~ $1,900
V2	High	C	Stanley Ave Neighborhood Greenway (south)	Fill in sidewalk gaps on both sides of street.	King Rd	Railroad Ave	$2,800
W2	~~Low~~ High	C	Linwood Ave Sidewalks (south)	Fill in sidewalk gaps on both sides of street (part of Linwood Ave road-widening project).	King Rd	Railroad Ave	$2,150
Y	~~Low~~High	C	International Way Sidewalks	Fill in sidewalk gaps on both sides of street.	Criterion Ct	Lake Rd	~~$767~~ 840
Z	~~Low~~High	C	Harmony Rd Sidewalks	Fill in sidewalk gaps on both sides of street.	Linwood Ave	City limits	~~$38~~ 40
AL	~~Low~~High	C	River Rd Sidewalks	Fill in sidewalk gaps on both sides of street.	McLoughlin Blvd	City limits	~~$626~~ 690
AR	High	C	Kellogg Creek Dam Removal and Hwy 99E Underpass	Replace Hwy 99E bridge over Kellogg Creek, remove dam, restore habitat. Construct bike/ped~~estrian~~ undercrossing between downtown Milwaukie and Riverfront Park.	~~Site~~Location-specific	~~Site~~Location-specific	~~$9,000~~ 9,900
AU	High	C	Kellogg Creek Bike/Ped Bridge	Construct bike/ped overpass over Kellogg Creek in conjunction with light rail bridge.	Lake Rd	Kronberg Park	$2,500
AV	High	C	Kronberg Park Trail	Construct multiuse path to connect bike/ped bridge to safe crossing of Hwy 99E.	Kellogg Creek Bridge	River Rd	$300
AW	High	C	Intersection Improvements at McLoughlin Blvd and 22nd Ave	Improve safety of Trolley Trail crossing at 22nd Ave.	Location-specific	Location-specific	$200

Map ID[3]	Priority	Type	Project Name	Project Description[4]	From	To	Cost~~(s)~~ ($1,000s[5])
AX	High	C	Improved Connection to Springwater Trail at 29th Ave and Sherrett St	Pave the connection to Springwater Trail at 29th Ave and Sherrett St. (TSAP)	Location-specific	Location-specific	$20
AY	High	C	Improved Connection from Springwater Trail to Pendleton Site (Ramps)	Construct ramps to improve existing connection of Springwater Trail to Pendleton site at Clatsop St. (TSAP)	Location-specific	Location-specific	$630
AY	High	C	Improved Connection from Springwater Trail to Pendleton Site (Widened Undercrossing)	Widen existing undercrossing to improve connection of Springwater Trail to Pendleton site at Clatsop St. (TSAP)	Location-specific	Location-specific	$100
AZ	High	C	Improved Connection from Springwater Trail to Tacoma Station	Construct stairs to connect Springwater Trail to Tacoma station. (TSAP)	Location-specific	Location-specific	$80
BL	High	C	Adams St Connector	Construct pedestrian- and bicycle-only facility on Adams St between 21st Ave and Main St	21st Ave	Main St	$450
N/A	~~Low~~High	C	Intersection Curb Ramp Improvements	Install curb ramps at all intersections with sidewalks (approximately 700 intersections).	Citywide	Citywide	~~$5~~ 3,500
Medium Priority Projects							
F	~~High~~Med	C	King Rd Blvd Treatments	Install street boulevard treatments: widen sidewalks and improve multiple crossings.	~~42nd~~43rd Ave	Linwood Ave	~~$500~~ 550
~~J~~	~~Med~~	~~C~~	~~Railroad Crossing Pedestrian Improvements at Oak~~	~~Improve intersection for pedestrians.~~	~~Location specific~~	~~Location specific~~	~~$15~~
M	Med	C	McLoughlin Blvd Sidewalks	Fill in sidewalk gaps on both sides of street.	Washington St	Southern city limits	~~$596~~ 650
N	Med	C	Lake Rd Sidewalks	Fill in sidewalk gaps on both sides of street.	~~Kuehn Rd~~ Where Else Ln	Hwy 224	~~$2,049~~ 2,200
Q	~~High~~Med	C	Logus Rd Sidewalks	Fill in sidewalk gaps on both sides of street.	43rd Ave	49th Ave	~~$771~~ 850
T	Med	C	37th Ave Sidewalks	Fill in sidewalk gaps on both sides of street.	Lake Rd	Harrison St	~~$794~~ 870
AE	Med	C	Brookside Dr Sidewalks	Fill in sidewalk gaps on both sides of street.	Johnson Creek Blvd	Regents Dr	~~$15~~ 20

Map ID[3]	Priority	Type	Project Name	Project Description[4]	From	To	Cost~~(s)~~ ($1,000s[5])
AT	~~High~~Med	C	Springwater Trail Completion	Contribute to regional project to complete Springwater Trail ("Sellwood Gap") along Ochoco St.	17th Ave	19th Ave	~~$80~~ 90
BA	Med	C	Bicycle and Pedestrian Overpass over Railroad Ave	Establish a dedicated bicycle and pedestrian connection across Railroad Ave and the railroad tracks.	Railroad Ave	International Way	$2,200
BB	Med	C	Bicycle/Pedestrian Improvements to Main St	Construct multiuse path or other improved bike/ped facilities on Main St to provide safer connection between downtown and Tacoma station. (TSAP)	Hanna Harvester Dr	Tacoma station	$2,900
BC	Med	C	Bicycle/Pedestrian Connection from Eastern Neighborhoods to Tacoma Station Area	Establish bike/ped connection over existing railroad tracks and light rail to Tacoma station area. (TSAP)	Olsen St & Kelvin St	Mailwell Dr	$4,000
BD	Med	C	Improved Connection from Springwater Trail to McLoughlin Blvd	Construct stairs or other facility to connect Springwater Trail to west side of McLoughlin Blvd. (TSAP)	Location-specific	Location-specific	$500
BE	Med	C	Bicycle/Pedestrian Connection over Johnson Creek	Construct bike/ped bridge over Johnson Creek along Clatsop St at 23rd Ave to connect Tacoma station area with adjacent neighborhood. (TSAP)	Location-specific	Location-specific	$400
BF	Med	C	Improved Bicycle/Pedestrian Connections on West Side of Tacoma Station Area	Improve bike/ped connections to adjacent neighborhood to west of Tacoma station area at Ochoco St and Milport Rd. (TSAP)	Location-specific	Location-specific	$500
N/A	~~High~~Med	C	Downtown Streetscape Improvements	Install sidewalk bulbouts, lighting, and pedestrian amenities.	Downtown	Downtown	~~$6,700~~ 7,300[6]
N/A	Med	O	Pedestrian Walkway Amenities	Install amenities, such as benches, along key walking routes.	Citywide	Citywide	~~$50~~ 60
Low Priority Projects							
G	Low	C	Intersection Improvements at Olsen St and 42nd Ave	Improve pedestrian crossing.	Location-specific	Location-specific	$20

[6] Estimated $500,000 per block face.

Map ID[3]	Priority	Type	Project Name	Project Description[4]	From	To	Cost~~(s)~~ ($1,000s[5])
H	Low	C	Intersection Improvements at Railroad and 37th Aves	Improve pedestrian crossing.	Location-specific	Location-specific	$10
~~I~~	~~Low~~	~~C~~	~~Intersection Improvements at Harmony and Lake~~	~~Improve pedestrian crossing.~~	~~Location specific~~	~~Location specific~~	~~$15~~
K	Low	C	Intersection Improvements at Stanley Ave and Logus Rd	Improve pedestrian crossing.	Location-specific	Location-specific	~~$15~~ 20
R	Low	C	Olsen St Sidewalks	Fill in sidewalk gaps on north side of street.	32nd Ave	42nd Ave	~~$432~~ 470
S	Low	C	Johnson Creek Blvd Sidewalks	Fill in sidewalk gaps on both sides of street.	Harney ~~Dr~~St	City limits	~~$378~~ 410
W1	Low	C	Linwood Ave Sidewalks (north)	Fill in sidewalk gaps on both sides of street (part of Linwood Ave road-widening project).	Johnson Creek Blvd	~~Railroad Ave~~ King Rd	~~$2,960~~ 1,050
X	Low	C	Hwy 224 Sidewalks	Fill in sidewalk gaps on both sides of street.	Oak St	37th Ave	~~$420~~ 460
AA	Low	C	Home Ave Sidewalks	Fill in sidewalk gaps on both sides of street.	Railroad Ave	King Rd	~~$756~~ 830
AB	Low	C	Harvey St Sidewalks	Fill in sidewalk gaps on both sides of street.	32nd Ave	42nd Ave	~~$534~~ 590
AC	Low	C	Roswell St Sidewalks	Fill in sidewalk gaps on both sides of street.	32nd Ave	36th Ave	~~$192~~ 210
AD	Low	C	Mason Lane Sidewalks	Fill in sidewalk gaps on both sides of street.	42nd Ave	Regents Dr	~~$671~~ 740
AF	Low	C	Regents Dr Sidewalks	Fill in sidewalk gaps on both sides of street.	Brookside Dr	Winsor Dr	~~$494~~ 540
AG	Low	C	Rusk Rd Sidewalks	Fill in sidewalk gaps on both sides of street.	Lake Rd	North Clackamas Park	~~$662~~ 730
AH	Low	C	Pedestrian Connection to North Clackamas Park	Create pedestrian connection between the school and the park.	~~North Clackamas Park~~ Rowe Middle School	~~Rowe Middle School~~ North Clackamas Park	~~$1,284~~ 1,400

Map ID[3]	Priority	Type	Project Name	Project Description[4]	From	To	Cost~~(s)~~ ($1,000s[5])
AI	Low	C	Washington St Sidewalks	Fill in sidewalk gaps on both sides of street.	~~35th~~32nd Ave	~~37th~~35th Ave	~~$115~~ 130
AJ	Low	C	22nd Ave Sidewalks	Fill in sidewalk gaps on both sides of street.	McLoughlin Blvd	Sparrow St	~~$325~~ 360
AK	Low	C	19th Ave Sidewalks	Fill in sidewalk gaps on both sides of street.	Kellogg Creek Trail	Sparrow St	~~$305~~ 330
AM	Low	C	Oatfield Rd Sidewalks	Fill in sidewalk gaps on both sides of street.	Guilford Ct	City limits	~~$132~~ 150
AN	Low	C	49th Ave Sidewalks	Fill in sidewalk gaps on both sides of street.	Logus Rd	King Rd	~~$250~~ 270
AO	~~Med~~Low	C	Franklin St Sidewalks	Install sidewalks on both sides of street to connect to ~~Hector~~ Campbell Elementary School.	42nd Ave	45th Ave	~~$200~~ 220
AP	Low	C	Ochoco St Sidewalks	Construct sidewalks on Ochoco St to connect bus stops to Goodwill.	19th Ave	McLoughlin Blvd	~~$$$~~ $1,300
AQ	Low	C	Edison St Sidewalks	Fill in sidewalk gaps on both sides of street.	35th Ave	37th Ave	~~$116~~ 130
~~AS~~	~~Low~~	~~C~~	~~Springwater Trail Ramp Improvement at McLoughlin~~	~~Improve ramp at Springwater Trail and McLoughlin Blvd.~~	~~Location specific~~	~~Location specific~~	~~$15~~
AY	Low	C	Improved Connection from Springwater Trail to Pendleton Site (Tunnel)	Construct tunnel under Springwater Trail to improve connection to Pendleton site at Clatsop St. (TSAP)	Location-specific	Location-specific	$1,200
BG	Low	C	Intersection Improvement at all Crossings of McLoughlin Blvd	Improve all existing crossings of McLoughlin Blvd (e.g., extended time for crossing, signage). (ODOT to do.)	Location-specific	Location-specific	—
BH	Low	C	Bike/Ped Path on Sparrow St	Establish a dedicated bicycle and pedestrian connection on Sparrow St, connecting River Rd to Trolley Trail	River Rd	Trolley Trail	$350
BI	Low	C	Bike/Ped Overpass over McLoughlin Blvd at River Rd	Establish a dedicated bicycle and pedestrian connection across McLoughlin Blvd.	Kronberg Park	River Rd	$2,500

Map ID[3]	Priority	Type	Project Name	Project Description[4]	From	To	Cost~~(s)~~ ($1,000s[5])
BJ	Low	C	Crossing Improvements for McLoughlin Blvd at Ochoco St and Milport Rd	Construct improvements at Ochoco St and Milport Rd to improve bike/ped crossing of McLoughlin Blvd (per ODOT, this will require full intersection improvements). (TSAP)	Location-specific	Location-specific	$8,320
BK	Low	C	Bicycle/Pedestrian Connection between McLoughlin Blvd and Stubb St	Establish bike/ped connection to McLoughlin Blvd sidewalk at west end of Stubb St. (TSAP)	Location-specific	Location-specific	$20
N/A	~~Med~~Low	O	Pedestrian Walkway Signage	Provide maps and wayfinding signage on streets that identify ways to get around the city.	Citywide	Citywide	$10

Notes:

C = Capital Project
O = Operational Project
P = Policy Project

High = High priority
Med = Medium priority
Low = Low priority

TSAP = Tacoma Station Area Plan

The Pedestrian Master Plan project list includes several enhanced pedestrian crossing projects. These crossings are located on major roadways with volumes and speeds that would require significant crossing enhancements based on published guidelines in the *Traffic Control Devices Handbook*.[7] Table 5-2 provides a description of possible crossing enhancements.

Table 5-2 Potential Measures for Enhancing Pedestrian Crossings

Improvement	Description	Illustration	Cost Range
Marked Crosswalk	White thermoplastic markings at street corner. Alternative material could include nonwhite color or textured surfaces.		$1,000 to ~~$1,500~~2,000 per crossing. Textured crossing materials beyond thermoplastic markings could be more expensive depending on materials used.
New Corner Sidewalk Ramp	Construct ADA compliant wheelchair ramps consistent with City standards.		$3,000 to $5,000 per corner.
Median Refuge	Construct new raised median refuge area. Minimum width 6 ft, and minimum length of 30 ft. Curb can be mountable to allow emergency vehicles to cross, if required.		~~$5,000 to $15,000~~ $10,000 to $20,000, depending on overall length and amenities.
Pedestrian Countdown Timer Signal	Install supplemental pedestrian signal controls to indicate the time remaining before crossing vehicles get 'green' signal indication.		~~$1,000~~2,500 per signal head ($10,000 per intersection)
Curb Extensions	Construct curb extension on road segments with on-street parking. Reduces pedestrian crossing area, and exposure to vehicle conflicts.		~~$5,000 to $8,000,~~ $20,000 to $30,000, depending on design amenities and aesthetic treatments.

Source: DKS Associates

[7] *Traffic Control Devices Handbook*, Institute of Transportation Engineers, 2001; Chapter 13, Table 13-2.

ACTION PLAN

The Pedestrian Action Plan (Table 5-3) identifies the highest priority projects that are reasonably expected to be funded with local funds by ~~2030~~2035, which meets the requirements of the State's Transportation Planning Rule.[8] The action plan project list is ~~the result of~~ based upon a 2007 citywide project ranking process. In 2007, ~~A~~all of the modal master plan projects were ranked by the TSP Advisory Committee after consideration of the Working Groups' priorities, other public support for the project, and how well each project implements the TSP goals and policies. For the 2013 TSP Update, City staff reassessed the prioritization of all projects, incorporating public comments gathered at and around a public meeting in June 2013. Action plan projects that were completed since 2007 were removed from the action plan and new projects identified as top priorities were added.~~The highest-ranking pedestrian projects that are reasonably expected to be funded (see Chapter 13) with local funds are shown in Table 5-3.~~

Table 5-3 Pedestrian Action Plan

Map ID	Project Name	Project Description	From	To	Project Cost ($1,000s)	Direct Funding or Grant Match
L	17th Ave ~~Sidewalks~~ Improvements	Fill in sidewalk gaps on both sides of street; fill in gaps in existing bicycle network with bike lanes; and/or provide multiuse path. ~~and~~ iImprove intersection~~s~~ safety at Milport Rd, McBrod Ave, Hwy 224, Lava Dr, and Hwy 99E.	Ochoco St	McLoughlin Blvd	$1,000	~~Direct~~ Match
BL	Adams St Connector	Construct pedestrian- and bicycle-only facility on Adams St between 21st Ave and Main St	21st Ave	Main St	$450	Match
O	Railroad Ave ~~Sidewalks~~ Capacity Improvements	Pedestrian aspect: Fill in sidewalk gaps on both sides of street or construct multiuse path on one side~~(part of Railroad Avenue road widening project)~~.	37th Ave	Harmony Rd	$1,800	Match
P	Monroe St ~~Sidewalks~~ Neighborhood Greenway	Fill in sidewalk gaps on both sides of street.	42nd Ave	City limits	$1,800	Match
AR	Kellogg Creek Dam Removal and Hwy 99E Underpass	Replace Hwy 99E bridge over Kellogg Creek, remove dam, restore habitat. Construct bike/ped~~estrian~~ undercrossing between downtown Milwaukie and Riverfront Park.	~~Site~~Location-specific	~~Site~~Location-specific	$9,900	Match
V1	Stanley Ave Neighborhood Greenway (north)	Fill in sidewalk gaps on both sides of street.	Johnson Creek Blvd	King Rd	$1,900	Match
V2	Stanley Ave Neighborhood Greenway (south)	Fill in sidewalk gaps on both sides of street.	King Rd	Railroad Ave	$2,800	Match
A-E	Intersection Improvements at Hwy 224 Crossings	Improve pedestrian crossings at Freeman Way, 37th Ave, Oak St, Monroe St, and Harrison St	Location-specific	Location-specific	$100 ($20 each)	Match

[8] *OAR Chapter 660*, Department of Land Conservation and Development, Division 012, Transportation Planning, adopted on March 15, 2005, effective April 2005.

AU	Kellogg Creek Bike/Ped Bridge	Construct bike/ped overpass over Kellogg Creek in conjunction with light rail bridge.	Lake Rd	Kronberg Park	$2,500	Match
AV	Kronberg Park Trail	Construct multiuse path to connect bike/ped bridge to safe crossing of Hwy 99E	Kellogg Creek Bridge	River Rd	$300	Match
AW	Intersection Improvements at McLoughlin Blvd and 22nd Ave	Improve safety of Trolley Trail crossing at 22nd Ave.	Location-specific	Location-specific	$200	Match
W2	Linwood Ave Sidewalks (south)	Fill in sidewalk gaps on both sides of street (part of Linwood Ave road-widening project).	King Rd	Railroad Ave	$2,150	Match
N/A	Study of Pedestrian Crossings on Hwy 224	Examine alternatives for improving pedestrian crossings at five intersections along Hwy 224 (Harrison St, Monroe St, Oak St, 37th Ave, Freeman Way)	Harrison St	Freeman Way	$50	Match
~~AT~~	~~Springwater Trail Completion~~	~~Contribute to regional project to complete Springwater Trail ("Sellwood Gap") along Ochoco Street.~~	~~17th Ave~~	~~19th Ave~~		~~Direct~~
~~Q~~	~~Logus Road Sidewalks~~	~~Fill in sidewalk gaps on both sides of street.~~	~~43rd Ave~~	~~49th Ave~~		~~Match~~
~~N/A~~	~~Downtown Streetscape Improvements~~	~~Install sidewalk bulbouts, lighting, and pedestrian amenities.~~	~~Downtown~~	~~Downtown~~		~~Match~~
~~F~~	~~King Road Boulevard Treatments~~	~~Install street boulevard treatments: widen sidewalks and improve crossings.~~	~~43rd Ave~~	~~Linwood Ave~~		~~Match~~

REGIONAL TRANSPORTATION PLAN (RTP) COMPLIANCE

The projects identified in the master plan list and further refined in the action plan list are ~~compatible~~ consistent with the ~~2004~~ Metro 2035 Regional Transportation Plan (RTP). The RTP includes specific goals that can be used to measure the success of regional planning efforts to improve the overall transportation system. Specifically, the master plan and action plan projects identified in this chapter comply with Metro's goals for regional mobility and non-single-occupant-vehicle (non-SOV) modal targets. Chapter 8 includes a discussion of the performance measures and targets that the City has adopted to achieve the relevant RTP goals.

Three of the goals in the 2035 RTP relate to the regional pedestrian system in particular:

- Reduce the number of pedestrian fatalities plus serious injuries by 50% compared to 2005.
- Triple the walking mode share compared to 2005.
- Increase by 50% the number of essential destinations accessible within 30 minutes by trails or within 15 minutes by sidewalks for all residents compared to 2005.

All of the master plan and action plan projects identified in this chapter will contribute significantly toward meeting these regional goals.