Seattle Department of Transportation

CITY OF SEATTLE PEDESTRIAN MASTER PLAN

APPENDICES

June 2017

Seattle Department of Transportation

CONTENTS

Pedestrian Master Plan

APPENDIX 1: PUBLIC INVOLVEMENT PLAN

BACKGROUND

SDOT updated the city's Pedestrian Master Plan (PMP). The project assessed the progress the city has made to date on implementing the PMP since it was adopted in 2009; updated the Plan data, prioritization methodology and strategies and actions; established performance targets; and compiled the information into a citywide PMP document. The project is citywide (see Appendix A: Project Map).

KEY MESSAGES

Key outcomes and deliverables of the PMP update include:

- Assessment of the progress made implementing the 2009 PMP
- Assessment of whether our current prioritization methodology is still in alignment with best practices
- Updated GIS data used for prioritization with new, current data
- Review of the performance measures developed in the 2009 plan
- Updated implementation strategies and actions with any new, innovative implementation tools not included in the 2009 plan, including neighborhood greenways
- A Pedestrian Master Plan document (in lieu of the web-based 2009 plan)

PROJECT TEAM

Project managers: Michelle Marx, Ian Macek
PIO: N/A
Outreach support: Allison Schwartz

PUBLIC OUTREACH

Objectives

- Educate the public about the current PMP, including the Plan's prioritization methodology and how the Plan has guided SDOT walkability investments since 2009;
- Get feedback from the public on the key pedestrian improvement priorities (both type and location) the City should be prioritizing as part of the Plan update;
- Inform the public about the new low cost sidewalk concepts, and get feedback on the various design options;
- Get public feedback on other strategies and actions the Plan update should include to improve walkability in Seattle; and,
- Receive public comments on the draft PMP to inform the Mayor's recommended Plan.

Strategies

- Work with the Seattle Pedestrian Advisory Board (SPAB) as the key public sounding board, attending their regular monthly meetings to review ongoing progress and key deliverables. These meetings are open to the public. SDOT staff will also schedule special work sessions with the SPAB to discuss key issues as needed.
- Work with the Department of Neighborhoods (DON) and the Office of Immigrant and Refugee Affairs (OIRA) on a strategy for engaging residents citywide. This may include making the project team available for District Council briefings. The project team will work with OIRA on holding focus groups and/or conducting targeted survey outreach with translators to engage more difficult to reach populations.
- Brief and get feedback from City Boards and Commissions, as well as other community groups and organizations to inform them about the PMP update.
- Engage residents citywide via a digital public survey to get feedback on the updated prioritization and updated toolbox items. The survey will be translated into the Tier 1 languages.

- Use social media, ethnic media, and blog posts to notify residents to take the PMP update survey.
- Attend public events/meetings, and hold two, joint PMP/Trails update public open houses to provide information about the Plan update and encourage participation in the citywide survey.
- Work with advocacy organizations (such as Feet First and Seattle Neighborhood Greenways) to help get the word out about the project and encourage participation in the citywide survey.
- Maintain project website, and post SPAB presentation materials, public events, and key deliverables.
- Maintain project email list, and send out notifications for public meetings, public survey, and when key deliverables are released.

Anticipated Concerns

- Reaching all of the various stakeholder groups citywide with a limited budget

Media & Stakeholders

See Appendix B: Stakeholder List

Public Project Contact

Michelle Marx
Email: Michelle.marx@seattle.gov

Demographics

Appendix C: Demographic Information

Zip code(s): Citywide

Census tract(s): Citywide

Translation need(s): Tier I Languages

BUDGET

Total Funds: $ 130,000 total project budget

Funding sources:

Funding dedicated to outreach/engagement:Total outreach budget: $30,000

OUTREACH DEVELOPMENT TIMELINE APPENDIX D: ACTIVITIES LOG & IOPE ELEMENTS

When	What	Why	Complete
June 2015	Website update	Update the project website with the PMP update info	✔
August 17-24	Project team work sessions	Project Team work sessions to develop draft survey questions.	
August 25/26	Steering Committee Meeting	Meet with Steering Committee to review the draft public survey	✔
August 26-31	Revise draft survey	Revise based on Steering Committee review	✔
September 3	E-Team Briefing	Review survey and outreach messaging with the E-Team for input	✔
September 3-8	Revise draft survey	Revise draft survey/messaging based on input from E-Team	✔
September 9	SPAB meeting	Review draft survey with the SPAB	✔
August 31 – Sept 11	Develop project postcards, outreach boards, and misc. materials in preparation for attending public events	Work with SDOT Communications to develop a handout and interactive boards to gather public feedback on pedestrian improvement priorities	✔
Mid-September	Revise public survey	Revise based on input from SPAB and consultant review	✔
September 28-October 2	Translation of survey	Translate survey into the Tier I languages	✔
September 28-October 2	Survey creation and testing	Digitize survey using Survey Monkey and test	✔
Early October	Release public survey	Use digital media, project website, project mailing list, ethnic media, and partner organizations to spread the word about the public survey	✔
September, October, November 2015	Attend public events and meetings and brief City Boards and Commissions (see outreach event log)	Inform residents about the PMP update, and to distribute survey	✔
January 2016	Release and distribute Public Survey Report	Inform participants of feedback received via the public survey	✔
July 2016	Release public review draft of updated Plan	Provide an opportunity for the public to review and comment on the draft Plan	✔
July - September 2016	Brief City Boards and Commissions, and work with DON to brief district and community councils on draft Plan	Provide an opportunity for the public to review and comment upon the draft Plan	✔
Fall/Winter 2016 - 2017	Review public comments to create Mayor's recommended PMP	Revise Plan to reflect public comments	✔

OUTREACH EVENT LOG

Event	Date	Location	Complete
Summer Parkways	9/12/15	Central District Block Party	✔
Feet First Walks	9/12/15	Citywide	✔
Seattle Design Festival (Feet First booth)	9/12/15 – 9/13/15	Downtown/Pioneer Square	✔
Freight Advisory Board	9/15/15	City Hall	✔
Seattle Design Commission	9/17/15	City Hall	✔
Commission for People with Disabilities	9/17/15	City Hall	✔
Park(ing) Day	9/18/15	Downtown	✔
Summer Parkways	9/19/20	Ballard Salmon Bay Park	✔
Planning Commission	9/24/15	City Hall	✔
Freight Master Plan Open House	9/25/15	Ballard Library	✔
Immigrant and Refugee Commission	10/6/15	City Hall	✔
Freight Master Plan Open House	10/6/15	Seattle College Georgetown	✔
Urban Forestry Commission	10/7/15	SMT	✔
Bicycle Advisory Board	10/7/15	City Hall	✔
Uptown Urban Design Framework Public Meeting	10/8/15	Seattle Center	✔
PMP/Trails Update Open House	October 2015	Two meetings, north and south	✔
City Boards and Commissions meetings, and community meetings	Summer/fall 2016	Citywide	✔

SCHEDULE & MAJOR MILESTONES

Project Launch: 2/2015
Outreach: Sept & Oct 2015, July - Aug 2016
Draft Plan: July 2016
Final Plan: Spring 2017

Webpage: http://www.seattle.gov/transportation/pedMasterPlan.htm

Live? Yes

PLEASE NOTE

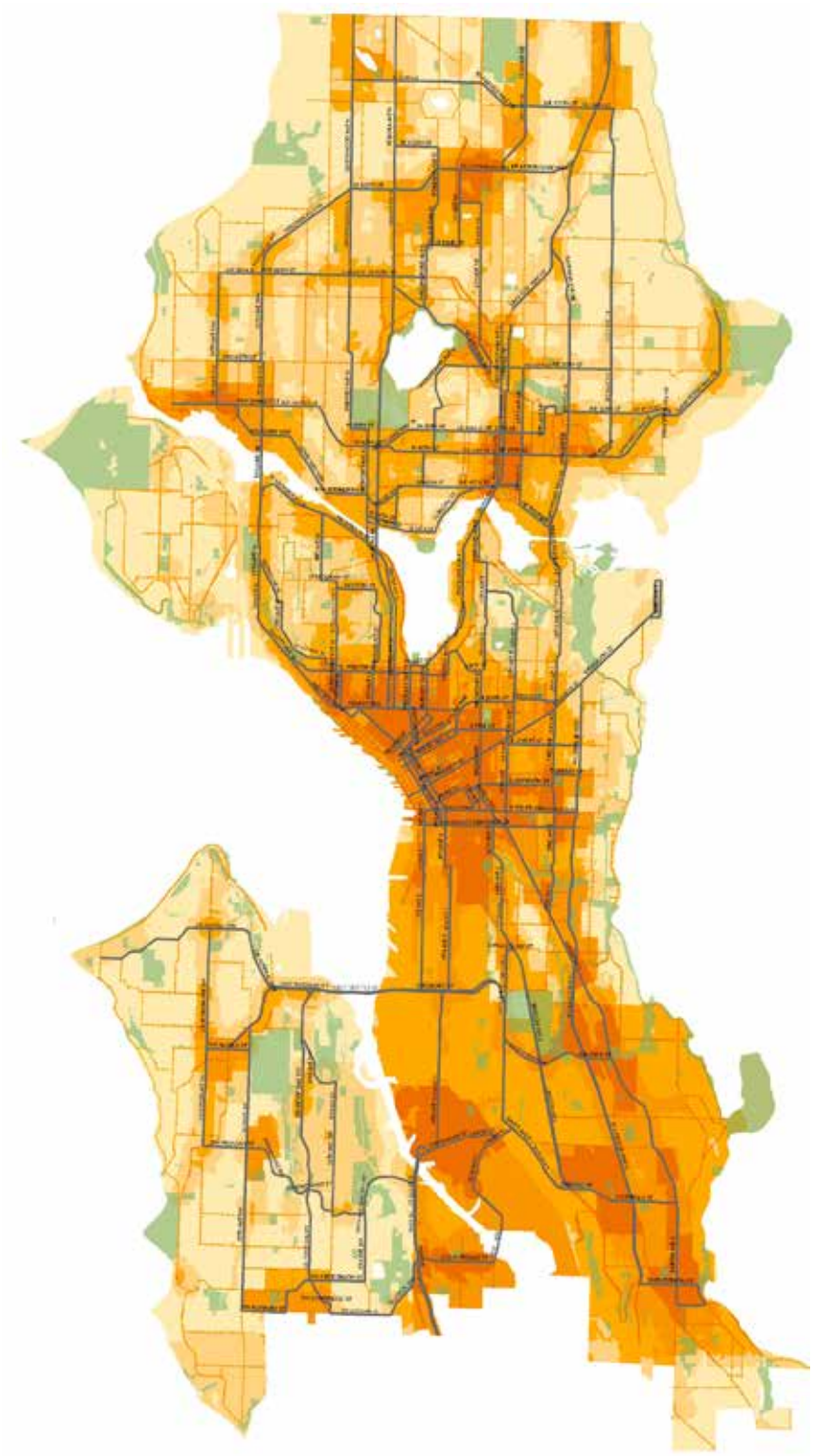
This is a living document intended to guide SDOT staff through the public involvement process. The contents of this Public Involvement Plan cover sheet are intended to provide an overview of the public involvement/ outreach plan, but in some cases does not demonstrate the full extent of work. In such cases, the appendices should be referenced for a full project description.

SDOT is committed to being efficient, effective, and responsible. This document is guided by the Inclusive Outreach and Public Engagement (IOPE) policy and illustrates a methodology that aims to build strong and sustainable relationships and partnerships.

Please check with the project manager or public information officer to ensure that you have the latest version of the Public Involvement Plan cover sheet and associated content before messaging this document to other City departments or the general public.

APPENDIX A:
PROJECT AREA MAP & LOCATIONS

PROJECT AREA MAP
Citywide



APPENDIX B: STAKEHOLDER LIST

Shared Stakeholder List with Trails Upgrade Plan: https://docs.google.com/spreadsheets/d/1AmqFzoV8YMOYfTAj-mYobKxdm3sI7nz84u-lXCs-khA/edit#gid=2052982304

STAKEHOLDER CHECKLIST

Incorporated? (Y or N)	Audiences to Consider	Examples
N/A	Adjacent property owners and tenants, including businesses and residents	
Y	Typical users of project area	Pedestrians, cyclists, freight, drivers, commuters, tourists
Y	District Councils	
Y	Community groups and neighborhood organizations	
Y	Cultural and religious organizations	
Y	Chambers of commerce and local business organizations	
Y	City of Seattle Departments	SDOT, Public Utilities, City Light, Department of Parks and Recreation, Fire Department, Police Department, Department of Neighborhoods, Department of Planning and Development, Office of Immigrant and Refugee Affairs
Y	Other agencies	WSDOT, King County Metro Transit, Sound Transit, Community Transit, Port of Seattle
N	Other transportation/utility companies	Puget Sound Energy, charter bus companies, Amazon/Microsoft/other company shuttles, cruise ships
N	Universities and institutions	University of Washington, community colleges
Y	Public facilities	Community centers, parks
N	Schools and childcare facilities	K-12
N	Hospitals	Harborview, Swedish, and Virginia Medical Centers

Incorporated? (Y or N)	Audiences to Consider	Examples
	Social service organizations and facilities (including those serving people with disabilities)	Boys and Girls Club, Lighthouse for the Blind
Y	Bicycle and pedestrian advocacy groups	Cascade Bicycle Club, WA State Bicycle Alliance, Feet First
Y	City of Seattle Advisory Boards	Bicycle, Pedestrian, Freight
Y	City of Seattle Commissions	Commission for People with Disabilities, Seattle Planning Commission, Seattle Design Commission, Urban Forestry Commission, Immigrant and Refugee Commission
N	Railroads	BNSF
N	Major developers/property owners	Vulcan, Clise, etc.
N	Major employers	Amazon, Microsoft, Boeing, Starbucks
N	Event Centers	Seattle Center, CenturyLink Field, Safeco Field
N	Freight	BINMIC
Y	Media Outlets	Seattle Times, PI, Capitol Hill Times, Belltown Messenger, West Seattle Herald, Queen Anne/ Magnolia News, Ballard News Tribune, Skanner, FACTS, The Seattle Medium, La Raza
Y	Populations that may need targeted outreach to due to cultural barriers, language differences, etc.	Working with the Office of Immigrant and Refugee Affairs on targeted outreach

APPENDIX C: DEMOGRAPHIC INFORMATION

GUIDING QUESTIONS

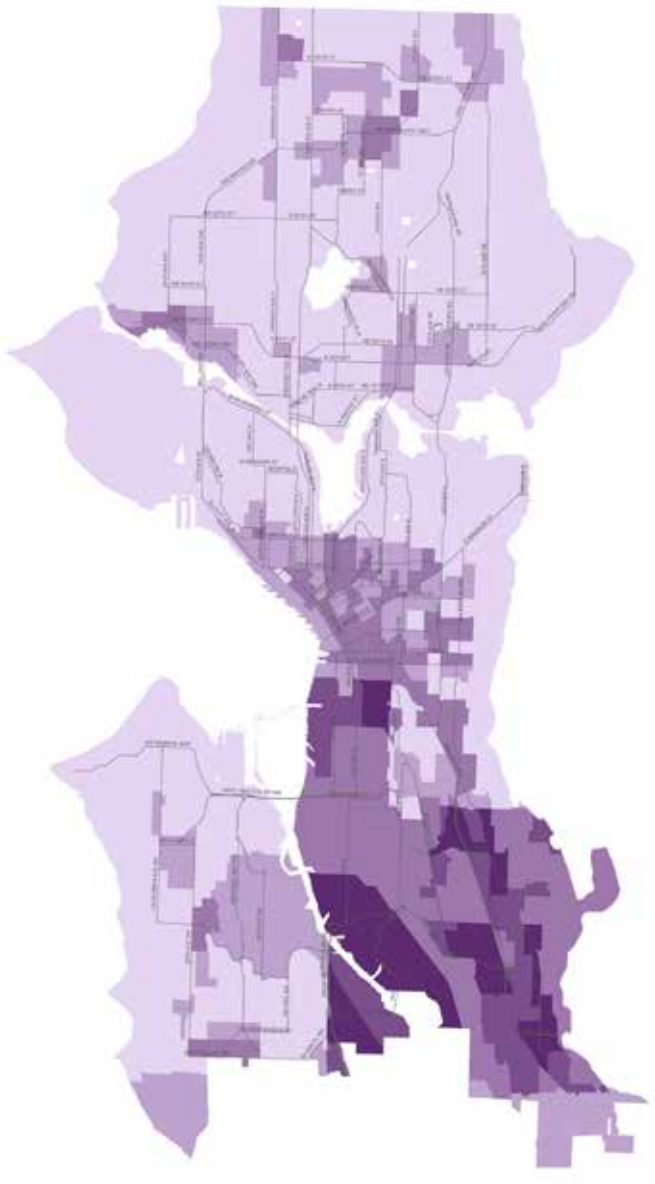
1. **What are the goals of the project?**

   - Safety: Reduce the number and severity of crashes involving pedestrians.
   - Equity: Make Seattle a more walkable city for all through equity in public engagement, service delivery, accessibility, and capital investments.
   - Vibrancy: Develop a connected pedestrian environment that sustains healthy communities and supports a vibrant economy.
   - Health: Get more people walking to improve mobility, health, and prevent disease.

2. **What racial or social inequities currently exist in the project area?**

   With information taken from the 2010 Census, Seattle's population is made up of 69.5% white people,7.9% Black or African American, 13.8% Asian, and 6.6% Hispanic or Latino. According to an American Community Survey, 17.3% of Seattle's population is foreign born. As a whole, recent studies from the American Community Survey also showed a wide disparity in socio-economic wellbeing between different races in Seattle. Minority populations in Seattle are highly concentrated in SE Seattle, north of 85th St, far SW Seattle, the University of Washington, and portions of downtown.

   Analysis from the 2009 Pedestrian Master Plan highlights areas where pedestrian improvements would serve residents with the greatest need (people who have lower incomes, disabilities, and diabetes, who do not own a car, and who are obese and/or less physically active). This analysis (being updated as part of the plan) will help target some of the public outreach.



3. **How do the project goals address or consider the existing racial or social inequities? How will the project increase or decrease racial or social equity?**

   The project goals specifically address equity. In addition, the prioritization process will be updated as part of the plan to review the equity inputs and make additions to align with current city polices (i.e. RSJI).

4. **How will you address the project's impacts (including unintended consequences) on racial or social equity?**

   The RET conducted for the Pedestrian Master Plan Update includes the following strategies for addressing impacts on equity.

   - PROGRAM STRATEGIES:
     - Develop tool/strategies that can improve walking beyond focusing only on sidewalk construction to address pedestrian safety concerns for communities of color.
     - Focus pedestrian programs on the areas with the highest need, and fewest resources, including minority populations.
   - POLICY STRATEGIES:
     - Carry the equity analysis through plan implementation - which includes communities of color as part of the analysis.
     - Update policies to align with needs for those that rely on walking for transportation. Determine if policies are included that target or benefit communities of color.
     - Focus investments on areas with the highest need.
     - Develop tool/strategies that can improve walking beyond focusing only on sidewalk construction to address pedestrian safety concerns for communities of color.
   - PARTNERSHIP STRATEGIES:
     - Work with partners to identify additional funding sources and/ or shared funding opportunities, especially opportunities to reach communities of color.
     - Work with partners during outreach to ensure it reaches communities of color, as well as immigrant and refugee populations.

LANGUAGE NEEDS

Projects are required to provide materials and information in non-English languages if five (or more) percent of the population in that project area speaks a given language. For any project, materials in other languages are available upon request.

TRANSLATIONS THRESHOLD

Indicate the agreed-upon threshold for translations as determined by Project Manager and Public Information Officer/outreach team with an explanation of this decision. (e.g. Translations of major project materials in Spanish; translations upon request; only those languages on SPU Language Map)

The project team is working with OIRA and their CBO contacts to translate the public survey materials, and conduct targeted outreach to non-English speaking communities via survey collection and/or focus groups:

The project team is currently working with OIRA on a strategy for organizing focus groups.

The projected cost for translations of survey and focus group activities is $20,000.

APPENDIX D:
ACTIVITIES LOG & IOPE ELEMENTS

ACTIVITIES LOG

See project Activity Log.

IOPE ELEMENTS

In addition to the outreach activities listed on the cover sheet, the project team will ensure that the project's public participation opportunities are inclusive of the affected stakeholders. Accordingly, outreach activities will include:

Events

- Provide materials at events
- Work with OIRA to determine what types of focus groups are possible

Survey

- Develop project survey containing translated text
- Accessible web version of survey
- Work with partners to ensure surveys are disseminated to a wide variety of audiences
    - Ethnic media
    - Boards/Commissions, Feet First, Neighborhood Greenway, disseminate
    - Cards at community centers
    - UW Transportation, CTR, SDOT neighborhood, affinity groups etc. listservs

Web

- When the survey is completed and translated, develop translated text block on the website explaining that project materials in other languages can be provided upon request

Advertising/Media

- Targeted ethnic media
- Social media

Pedestrian Master Plan

APPENDIX 2: PUBLIC SURVEY REPORT

OVERVIEW

ABOUT THE PEDESTRIAN MASTER PLAN UPDATE

The Seattle Department of Transportation (SDOT) is updating the City's Pedestrian Master Plan (PMP). Adopted in 2009, the PMP establishes a vision to make Seattle the most walkable and accessible city in the nation.

The Plan's goals of safety, equity, vibrancy, and health drive decisions about where to provide new sidewalks, curb ramps, crosswalks, signs, and many other improvements that make it easier to walk in our neighborhoods.

The PMP Update will:

- Refresh the Plan's prioritization methodology and the data used in the prioritization process
- Update implementing strategies and actions
- Establish performance targets to measure the Plan's effectiveness over time

The updated Plan will help determine the types and locations of pedestrian improvements the City will make over the course of the next several years, based on safety, demand, and equity factors.

PURPOSE OF THE PUBLIC SURVEY

To make sure the updated prioritization methodology reflects priorities of Seattle residents, we put together an online survey that received over 4,700 responses citywide. The survey was a key component of our outreach and engagement strategy. It also served as an opportunity to get initial public reaction to a variety of low-cost walkway improvements the City is considering for residential streets without sidewalks.

The survey feedback described in this report informed the updated prioritization methodology as well as the updated strategies and actions.

DISTRIBUTION METHODS

The survey was posted online on SDOT's home page for approximately six weeks, between October 21 and December 7, 2015. During that time, SDOT worked with other City departments, outside agencies, advocacy organizations, and media outlets to electronically distribute the survey as broadly as possible across the city. The public survey was advertised and distributed on the following channels:

- PMP Update project email list
- SDOT social media
- Department of Neighborhoods District Coordinator newsletters
- Safe Routes to School networks
- Parent Teacher Student Associations
- Partner organizations newsletters: Seattle Neighborhood Greenways, Feet First, Cascade Bicycle Club, Downtown Seattle Association, and Commute Seattle
- Office of Immigrant and Refugee Affairs (OIRA) social media
- Senior networks ("Aging your Way," Villages)
- University of Washington student networks
- Other press and social media outlets: KUOW, Nextdoor, MyNorthwest.com, other neighborhood blogs and newsletters

In addition to disseminating the survey electronically, we held two public open houses to inform attendees about the Pedestrian Master Plan Update, and to advertise the public surveys and solicit survey responses. The Pedestrian Master Plan Update open houses were held jointly with the Trails Upgrade Plan, a concurrent SDOT project seeking to make pedestrian improvements throughout the city.

The two public open houses were held in October. The first was held in North Seattle, at the Northgate Library, and the second was held in Southeast Seattle, in Hillman City. At both events, SDOT gathered digital survey responses in real time, and asked attendees to circulate the link to the survey to others in their neighborhoods.

Throughout the survey period, the project team also briefed various City Boards and Commissions on the PMP Update and the public survey. In addition to soliciting survey feedback from board/commission members, the project team requested that members distribute the survey to their social and professional networks. Boards and Commissions briefed during this period include:

- Seattle Planning Commission
- Seattle Design Commission
- Pedestrian Advisory Board
- Bicycle Advisory Board
- Freight Advisory Board
- Urban Forestry Commission
- Commission for People with Disabilities
- Immigrant and Refugee Commission

The project team also worked closely with the Department of Neighborhoods (DON) to help circulate the survey to neighborhood groups across the city. SDOT staff attended a series of District and Neighborhood Council meetings to brief council members on the Plan update and to help advertise the public survey. Throughout the survey period, SDOT staff monitored incoming survey responses, and worked with DON on targeted outreach to neighborhoods with low response rates in order to gather more responses from underrepresented areas of the city.

Table 1 lists the community briefings attended.

TABLE 1: COMMUNITY BRIEFINGS

PMP & Urban Trails Upgrade Plan Open Houses
Ballard Summer Parkway
Freight Advisory Board
Seattle Design Commission
Commission for People with Disabilities
Park(ing) Day
Seattle Comprehensive Plan Open Houses
Central District Summer Parkway
District Council and Community Council meetings
Freight Master Plan Open Houses
"Seattle at Work" event
Immigrant and Refugee Commission
Bicycle Advisory Board
Seattle Planning Commission
Urban Forestry Commission

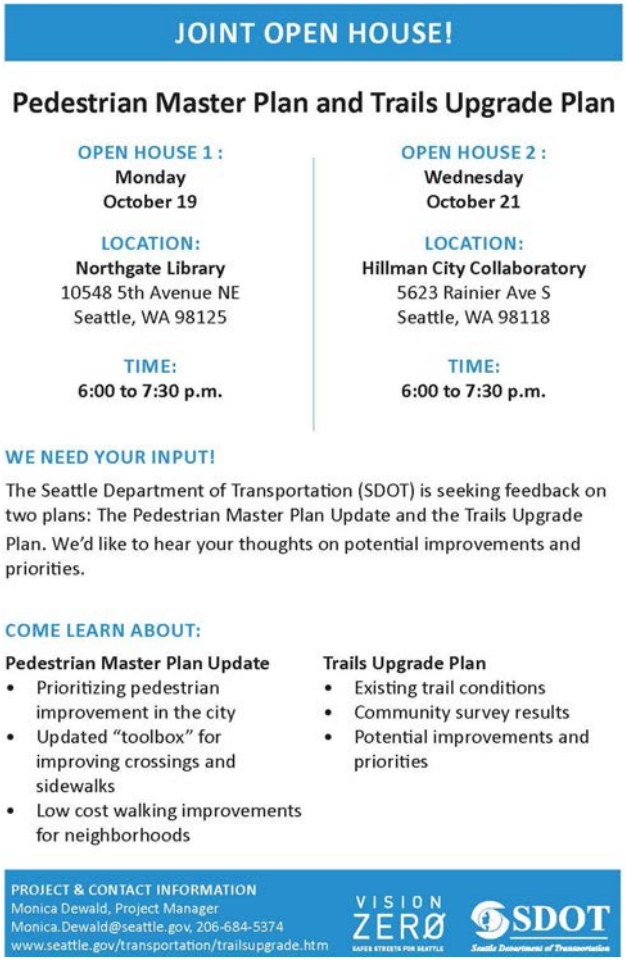
Another important step in disseminating the survey was making it available in languages other than English. SDOT worked with the Office of Immigrant and Refugee Affairs (OIRA) to determine the following eight languages for translation for both our print and online surveys:

- Vietnamese
- Spanish
- Laotian
- Cambodian
- Korean
- Thai
- Russian
- Chinese (simplified)

To help reach non-English speaking segments of the city's population, SDOT staff worked with OIRA to identify community business organizations and individuals to assist with targeted outreach to minority communities.

The project team worked with Asian Counseling and Referral Service (ACRS) to hold a focus group to help gather survey responses from native Vietnamese and Chinese speakers. With assistance from ACRS, SDOT engaged a Vietnamese translator to help communicate the survey in real time to attendees.

The project team also engaged an OIRA-identified community member to assist with gathering survey responses from the East African community. This targeted outreach resulted in a total of 100 survey responses from the East African community.



PMP PUBLIC ENGAGEMENT BY THE NUMBERS

4,700 Total survey responses

Over 6,000 Written comments

45 Neighborhoods represented

15 Different languages translated

- Korean
- Thai
- Russian
- Chinese
- Vietnamese
- Spanish
- Laotian
- Cambodian
- African languages (Somali, Amharic, Tigrinya, Oromo, Swahili, Dinka, Lingala)

3 Outdoor summer events

Over 25 community briefings

2 Pedestrian Master Plan open houses

WHO RESPONDED

We received a total of approximately 4,700 survey responses from across the city, exceeding the initial projection of 3,600 responses.

Figure 1 shows the number of responses divided by north, central and south areas of Seattle. We recieved the most responses from the northern part of the city (2,322). We received a similar number of responses from the central (854) and south (844) sections. A list of responses received according to neighborhood of residence is included in the Appendix.

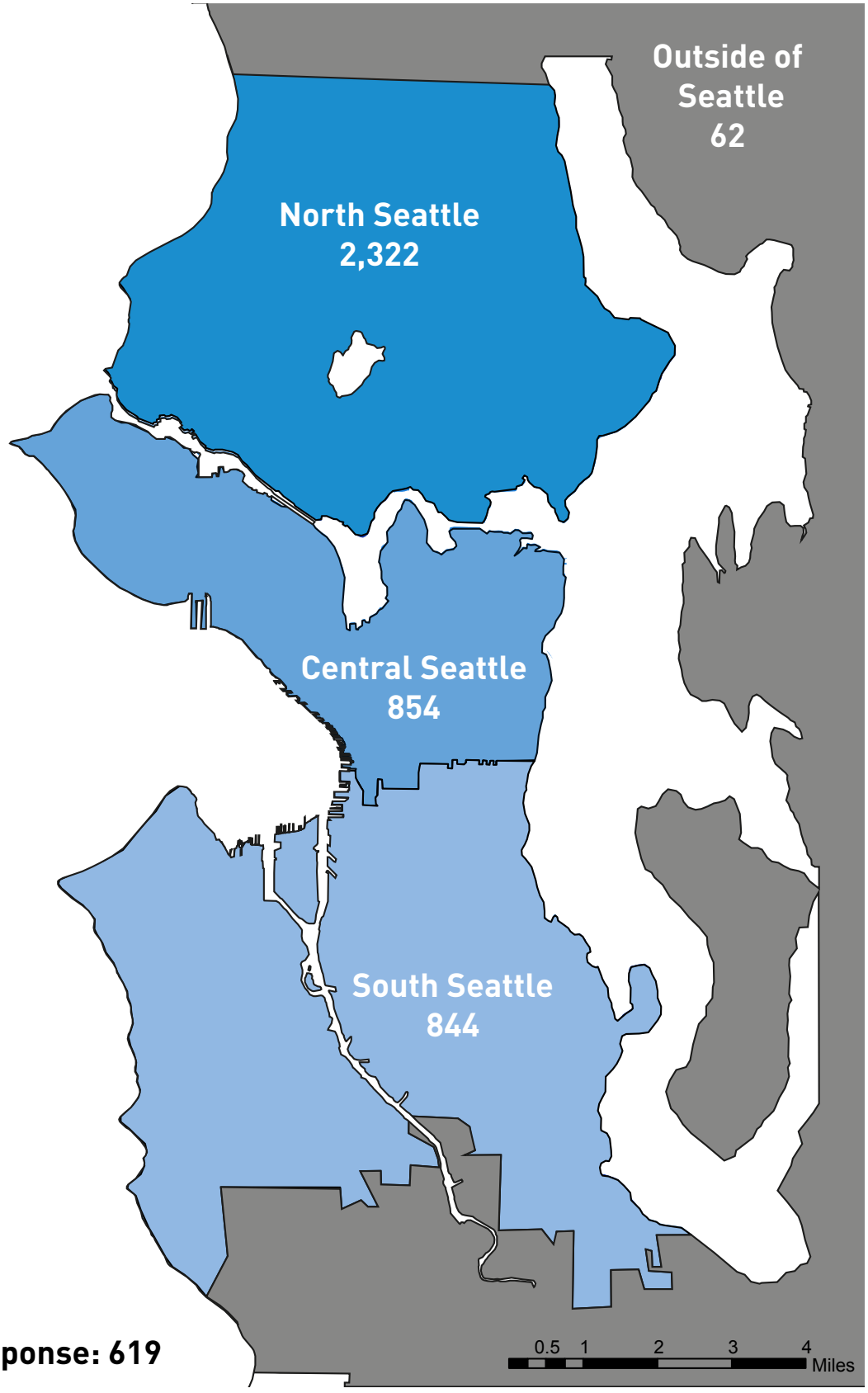
To ensure we received survey responses from as broad a cross-section of Seattle residents as possible, the project team worked with OIRA staff to set initial survey response targets for various segments of the city's population. These targets were based on assuming an overall survey response target of 3,600 responses, and aiming for a response rate roughly proportionate to the overall ratio each group represents as part of the overall population of the city (according to 2010 census data). Table 2 summarizes both the initial target number of responses for each group, as well as the actual number of survey responses received.

While the total number of responses received was higher than the initial projection, generally speaking, the total number of responses received from most non-white groups was somewhat lower than these groups' overall proportion of the city's population (with the exception of American Indian/Alaska Native and Native Hawaiian/Pacific Islander, both of which constituted a slightly higher proportion of survey responses than their proportion of the city's overall population).

TABLE 2: SURVEY RESPONDENTS BY RACE

RACE	*TARGET RESPONSES*	*RESPONSES RECEIVED*
Total Responses	*3,600*	*4,678*
White	*2,502*	*3,295*
Asian	*497*	*203*
Black/African American	*284*	*162*
American Indian/Alaska Native	*29*	*46*
Native Hawaiian or other Pacific Islander	*14*	*17*
Two or More	*184*	*132*
Other	*86*	*75*
Prefer not to say	*-*	*391*

FIGURE 1: NUMBER OF RESPONSES BY AREA



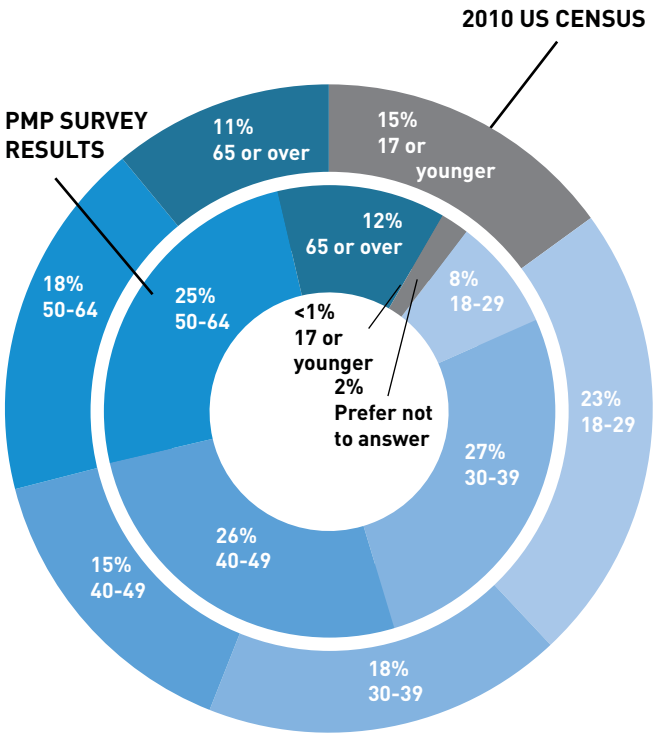
Other or No Response: 619

We also compared the percentage of responses received for each age group to the percentage these age groups represent of the city's population as a whole (according to the 2010 census). The figure at right shows that approximately half of all responders were between the ages of 40 and 64, while the 2010 census estimates that this group constitutes approximately 33% of the city's overall population. This discrepancy may be due in part to the tendency of older people to be more civically engaged, and thus more likely to respond to a public survey. Additionally, this skewed representation may also be due in part to the low rate of survey responses received from people 17 or younger (minors), a group that constitutes approximately 15% of the overall Seattle population.

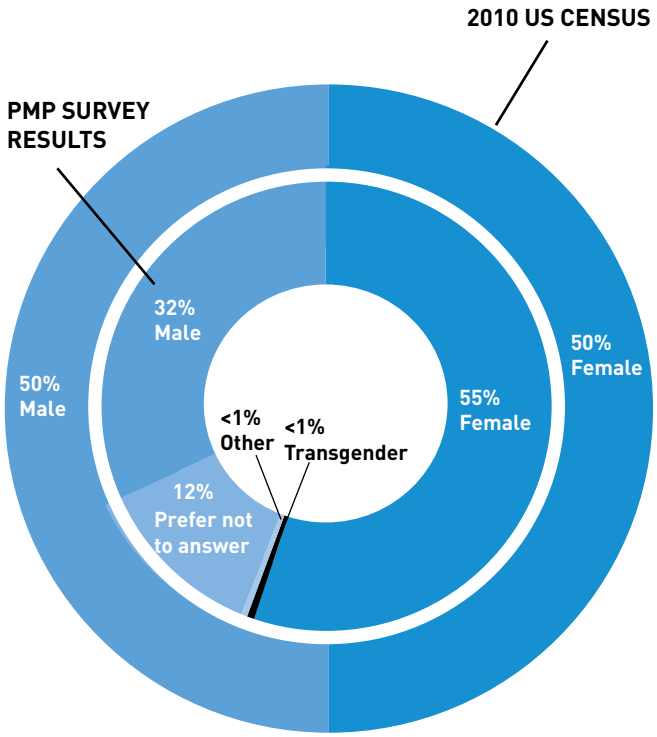
In comparing the total number of survey responses from males and females against the composition of the city's overall population, we found that the survey responses were generally consistent with the ratio of the larger population, with only a slightly higher response rate from female citizens.

The figures on page 10 summarize additional self-reported demographic information provided by survey responders, including family status, vehicles per household, and typical walking patterns.

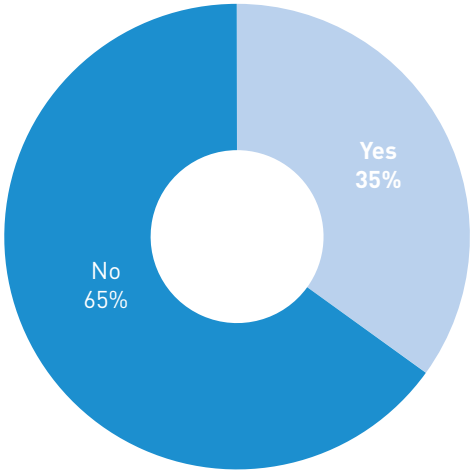
SURVEY RESPONSES BY AGE



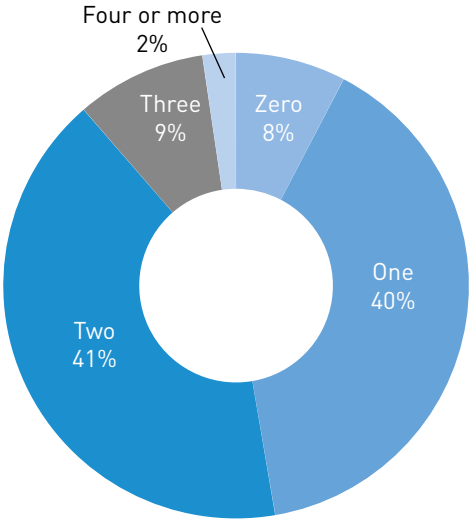
SURVEY RESPONSES BY GENDER



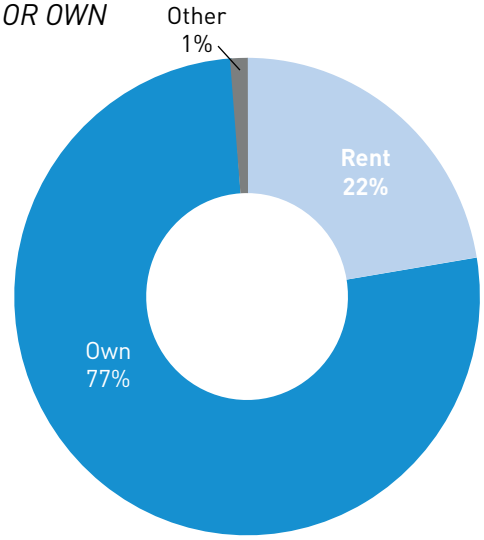
CHILDREN UNDER 17 IN HOUSEHOLD



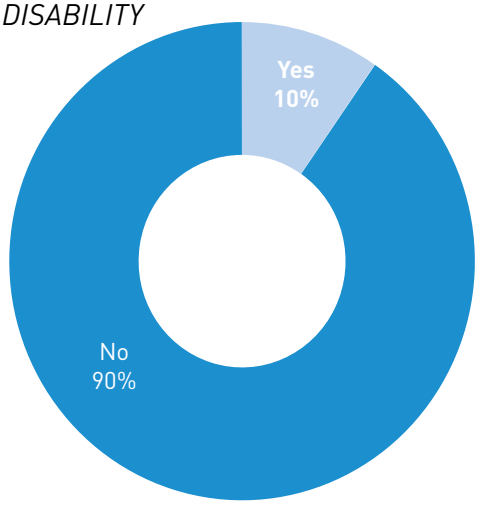
VEHICLES PER HOUSEHOLD



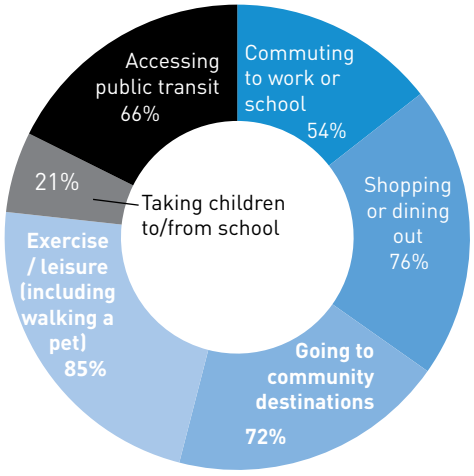
RENT OR OWN



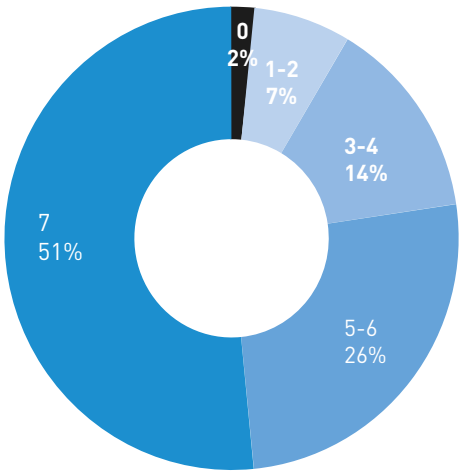
RESPONDENT OR FAMILY MEMBER HAS A DISABILITY



REASONS TO WALK



WALKING FREQUENCY (DAYS/WEEK WALKING MORE THAN ONE BLOCK)



SURVEY RESULTS

The Pedestrian Master Plan Update public survey asked for feedback on two principal topics to help inform the ongoing update to the Plan. The first set of questions were intended to help SDOT better understand the types and locations of pedestrian improvements that are most important to people. The second set of questions were intended to gather feedback on the various low-cost design options the City is evaluating as a means of providing more walking improvements to more neighborhoods. In addition, the survey included a general, open-ended question, asking respondents to tell us the single, most important thing we can do to improve walking in Seattle. The following section summarizes the responses we received to these questions.

GENERAL SURVEY QUESTIONS: PRIORITIZING WALKING IMPROVEMENTS

To help provide input on the types and locations of pedestrian improvements to prioritize within the update, the survey asked respondents to provide feedback on three key questions about walking conditions in Seattle:

- What makes it difficult or unpleasant for you to walk?
- Where should the City prioritize walking improvements first?
- What types of pedestrian improvements should we build first?

We asked respondents to provide a numbered rating for each possible answer options, from one (which was either "not a problem" or "not very important") to six (which was either "absolute barrier to walking" or "extremely important").

TABLE 3: QUESTION #1, "WHAT MAKES IT DIFFICULT OR UNPLEASANT FOR YOU TO WALK?"

Higher score means absolute barrier to walking.

Percent Giving Highest Score	Average Point Value
46%	Busy streets with no sidewalks 4.74
28%	Residential streets with no sidewalks 4.15
21%	Not enough safe ways to cross busy streets 4.15
23%	Drivers not stopping for people crossing streets 4.15
20%	People driving too fast 4.07
31%	Other 3.74
13%	Poor Lighting 3.73
13%	Blocked sidewalks 3.58
10%	Tripping hazards on sidewalks 3.48
9%	Sidewalks that do not provide a buffer 3.18
6%	Sidewalks that are too narrow 3.00
7%	Not enough time to cross with signal 2.89
8%	Missing curb ramps at intersections 2.59

Tables 3, 4, and 5 provide a summary of responses to each of the three questions. The tables show both the weighted average from all responses for each answer option (with score values ranging from one to six), as well as the percentage of respondents giving that option the highest rating of six ("absolute barrier to walking" or "extremely important"). The tables are organized in the order of overall ranking given to each factor, with those answer options receiving the highest weighted average at the top. The percentage of respondents giving that factor the highest score (six) is shown on the left side of the table.

For question #1("What makes it difficult or unpleasant for you to walk?"), the majority of respondents placed emphasis on walking facilities along and across busy streets, with the highest scoring answer option "busy streets with no sidewalks" (48% of respondents gave this answer the highest score of six points). "Not enough safe ways to cross busy streets" was tied for second in terms of overall score (21% of respondents gave this option the highest score of six points). Taken together, it can be concluded that most survey respondents place great emphasis on walking conditions both along and across busy streets.

Two other factors tied for second in terms of overall scores. Those two factors were "residential streets with no sidewalks" (28% of respondents gave this option the highest score of six points) and "drivers not stopping for people crossing streets" (23% of respondents gave this option the highest score of six points). Results are shown in Table 3.

TABLE 4: QUESTION #3, "WHAT TYPES OF PEDESTRIAN IMPROVEMENTS SHOULD WE BUILD FIRST?"

Higher score means build these now.

Percent Giving Highest Score	Average Point Value
49%	Build sidewalks where they are missing on busy arterial streets 5.07
35%	Provide more safe ways to cross busy arterial streets 4.68
32%	Provide safe walking paths where they are missing on residential streets 4.44
46%	Other 4.01
18%	Repair and maintain existing sidewalks in areas with the most people walking 3.88
18%	Provide safe walking paths on neighborhood greenways 3.86
22%	Reduce speeds on residential streets 3.66
19%	Reduce speeds on busy arterial streets 3.56
12%	Provide a buffer between people walking on sidewalks and cars on busy streets 3.43

The responses to question #1 correspond very closely to the responses to question #3. When asked "What types of pedestrian improvements should we build first?," the greatest number of respondents answered that the City should focus on improving walking conditions along busy streets, shown in Table 4. The top two answer options were "build sidewalks where they are missing on busy arterial streets," and "provide more safe ways to cross busy arterial streets." The third highest response to question #3 was to "provide safe walking paths where they are missing on residential streets."

Table 5 shows the responses received to question #2, "where should the City prioritize walking improvements first?" The majority of respondents weighted most highly "places where the most pedestrians are injured" (51% of respondents gave this option the highest score of six points). The next two most popular answers were to prioritize walking improvements "on streets connecting families and children to schools" and "on streets connecting people to transit stops." The fourth highest response was "to serve people who rely on walking the most."

TABLE 5: QUESTION #2, "WHERE SHOULD THE CITY PRIORITIZE WALKING IMPROVEMENTS FIRST?"

Higher score means extremely important improvement location.

Percent Giving Highest Score	Average Point Value
51%	Places where the most pedestrians are injured 5.15
48%	On streets connecting families and children to schools 5.05
38%	On streets connecting people to transit stops 4.87
38%	To serve people who rely on walking the most 4.76
36%	Along and across busy arterial streets 4.75
32%	On streets connecting people to community facilities 4.70
29%	On streets connecting people to neighborhood businesses 4.67
30%	On residential streets without sidewalks 4.23
22%	In areas with the most people walking 4.06
37%	Other 3.74

LOW-COST WALKING PATHS

In addition to collecting feedback on the types and locations of improvements to prioritize moving forward, the survey also helped us get feedback on low-cost walking improvements we're considering. These options can help provide walking improvements to more neighborhoods faster, potentially at as much as one-half the cost of a traditional concrete sidewalk.

While the type of design appropriate for a particular street will vary, we wanted to hear respondent's thoughts on six different low-cost design options we are considering:

1. Stamped and stained asphalt sidewalk with curb
2. Stained asphalt sidewalk with curb
3. Curb-separated walking path at same level as cars
4. Shared walking space with traffic calming features to slow cars
5. Traditional concrete sidewalk with curbs on one side of the street only, with rain gardens
6. Walking path at same level as cars, set behind landscaping

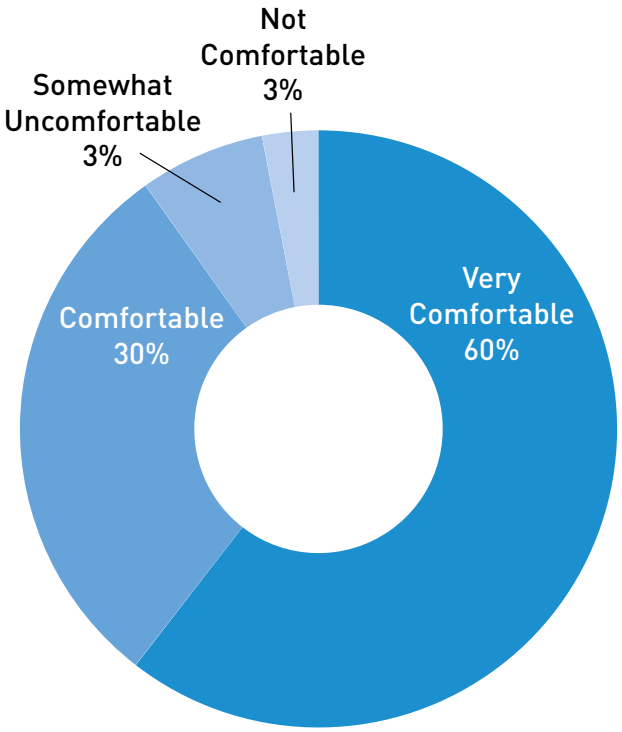
For each option, we asked respondents to tell us how comfortable they and members of their household or family would feel on each type of walking path. The following pages provide a summary of the feedback for each type of low-cost walking path.

[Rainier Summer Streets]

1. STAMPED AND STAINED ASPHALT SIDEWALK WITH CURB

This option is a raised walkway, separated from vehicular traffic by an extruded curb. The asphalt sidewalk is stamped and stained to look like brick. There is no landscaping or other buffer between the roadway and the walking path.

90% of respondents reported that they and members of their household or family would feel comfortable or very comfortable on this type of walking path.



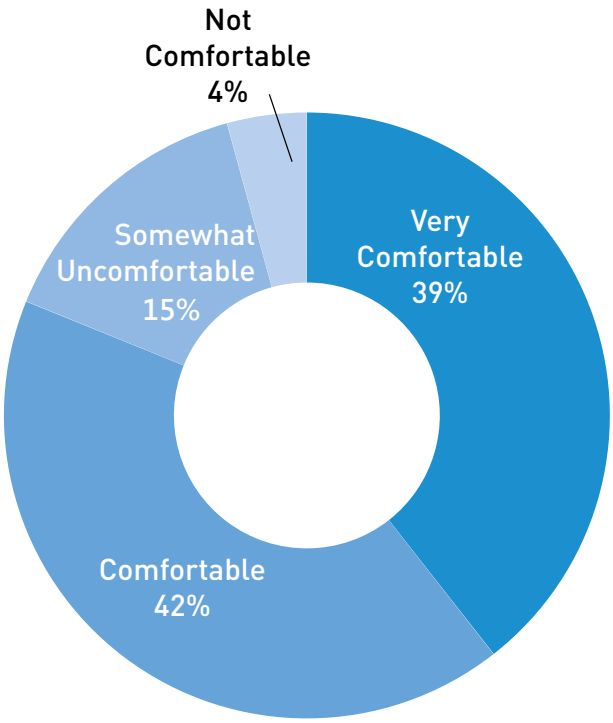
[NE 105th St]

"I really like the stamped asphalt sidewalks as I use them often and find them just as good, and sometimes better than, 'traditional' concrete. I know that they are considerably less-expensive to put in, thus more sidewalks could be put in for every dollar spent. I like that a lot!"

2. STAINED ASPHALT SIDEWALK WITH CURB

This option is a raised walkway, separated from vehicular traffic by an extruded curb. The asphalt is stained gray to appear similar to concrete. There is no landscaping or other buffer between the roadway and the walking path.

81% of respondents reported that they and members of their household or family would feel comfortable or very comfortable on this type of walking path.



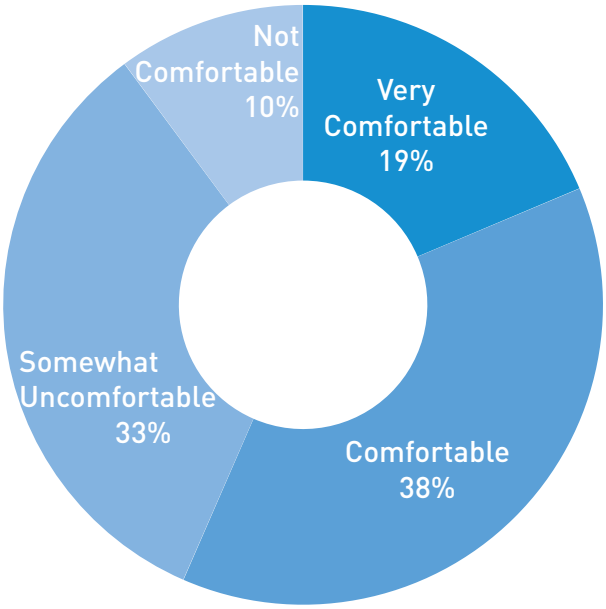
[N 87th St.]

"Comfortable so long as the raise is sufficient to keep cars from parking here or drivers thinking this is a parking strip."

3. CURB-SEPARATED WALKING PATH AT SAME LEVEL AS CARS

This option is a walking path at the same level as the roadway, separated from cars by a curb or wheel-stops. There is no landscaping or other buffer between the roadway and the walking path.

71% of respondents reported that they and members of their household or family would feel comfortable or very comfortable on this type of walking path.



"Very comfortable if the difference between walking and driving spaces are made extremely obvious (i.e., difference in color/material) to drivers."

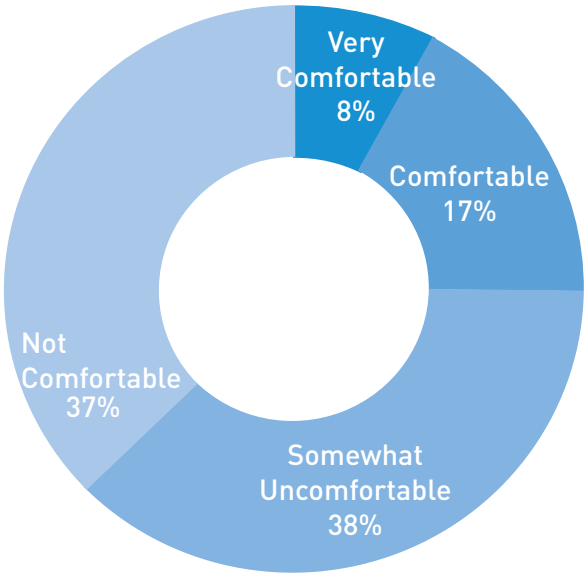
[N 97th St & Fremont Ave N]

[28th Ave NW]

4. SHARED WALKING SPACE WITH TRAFFIC CALMING FEATURES TO SLOW CARS

In this option, people walking and people driving share the roadway space. Traffic calming features such as chicanes, landscape elements, and speed humps are used to slow cars.

25% of respondents reported that they and members of their household or family would feel comfortable or very comfortable on this type of walking path.



[Shared road]

[Longfellow Shared Space Street, Santa Monica, CA]

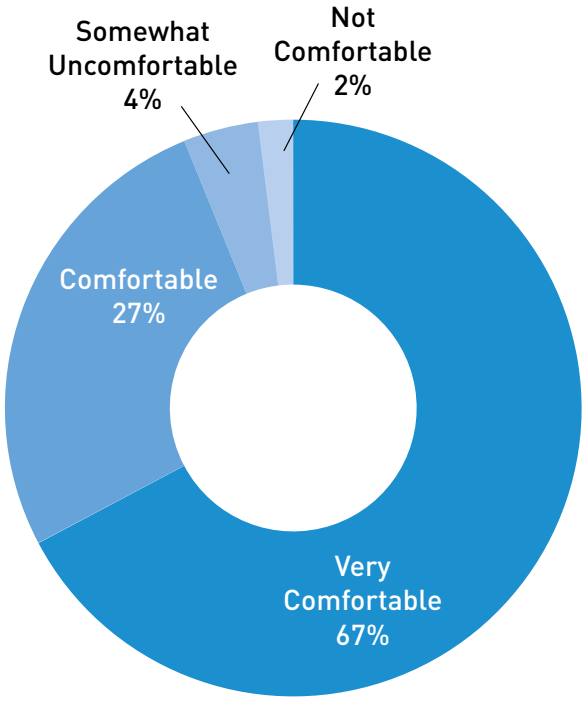
[Speed hump]

"In some neighborhoods where traffic is very low on the road this would be ok, but some roads that are more busy I would not be comfortable walking on."

5. TRADITIONAL CONCRETE SIDEWALK WITH CURBS ON ONE SIDE OF THE STREET ONLY, WITH RAIN GARDENS

With this option, project costs would be shared with other City agencies where stormwater retention features are needed. Sidewalks could be built concurrently with drainage improvements.

94% of respondents reported that they and members of their household or family would feel comfortable or very comfortable on this type of walking path.



"Sidewalks on only one side of the street seems like a good budget option. Rain gardens are great -- be sure landscaping stays small enough to preserve visibility and safety."

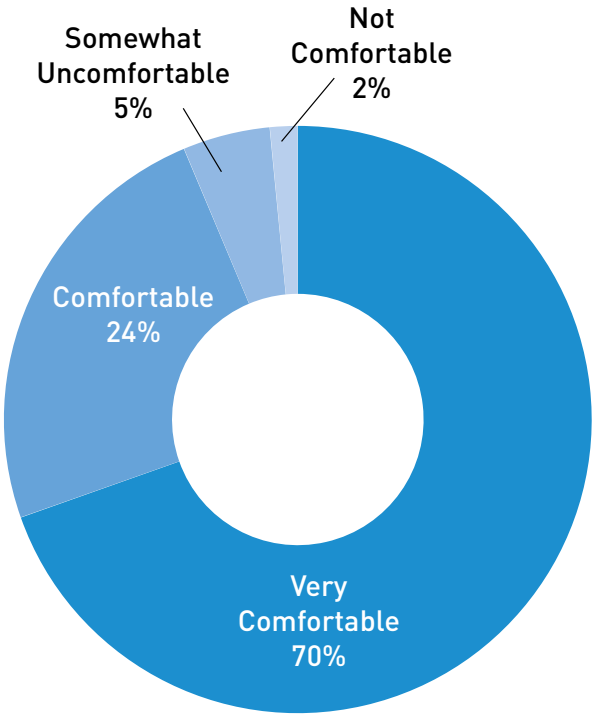
[2nd Ave NW]

[2nd Ave NW]

6. WALKING PATH AT SAME LEVEL AS CARS, SET BEHIND LANDSCAPING

This option is a walking path at the same level as the roadway, but is separated by landscaping. The walking path is not raised, and there is no curb.

94% of respondents reported that they and members of their household or family would feel comfortable or very comfortable on this type of walking path.



"Great buffer between cars and pedestrians. I really love the winding path through the landscape. Seems like a very pleasant place to walk and safe too."


[17th Ave NE Green Street]


[At-grade sidewalk behind landscaping]

WRITTEN COMMENTS ON LOW-COST WALKING IMPROVEMENTS

In addition to the quantitative feedback received for each of these low-cost design options, we received over 2,700 written comments describing what respondents do or do not like about these low-cost walking paths. The principal themes that emerge from these comments were as follows:

- Necessity of a clear barrier between pedestrians and traffic
- Need for durable/long-lasting sidewalks
- Need to build for universal access
- Desire to maintain neighborhood aesthetics
- Need to build the sidewalks wide enough for comfort
- Opinion that building low-cost is a good way to build more
- We need to build sidewalks to connect people
- Desire to build sidewalks on both sides of the street
- Worry about loss of parking

The full list of written comments can be found on the project website [http://www.seattle.gov/transportation/pedMasterPlan.htm].

OPEN-ENDED SURVEY QUESTION

The survey included an open-ended question, asking respondents to tell us "what is the single, most important thing we can do to improve walking in Seattle?" In addition to posing this question within the survey, we also asked the same question at various community events we attended, including Park(ing) Day and Summer Parkways.

We received approximately 3,500 responses to the question. The principal themes that emerge from the written comments are as follows:

- Add crosswalks at busy intersections and make sure that pedestrians are visible and protected on existing sidewalks
- No matter the sidewalk type, it is important that sidewalks of some sort are built where currently there are none
- Lower vehicle speeds, especially in residential areas
- Build sidewalks to connect people both to neighborhood centers and to transit
- Repair existing sidewalks and ensure that they are kept clear of overgrown vegetation
- Install more pedestrian lighting
- Focus on pedestrian safety around schools
- Teach drivers, bikers and pedestrians to pay attention of each other
- Build sidewalks on busy roads
- Build sidewalks that provide universal access
- Restrict sidewalk closures due to construction
- Widen sidewalks
- Lower crime to make walking safer
- Reduce crosswalk wait time
- Build sidewalks on both sides of the street

The graphic below shows the most commonly used words in response to this question. The size represents the relative number of uses for each word.

The full list of written comments can be found on the project website [http://www.seattle.gov/transportation/pedMasterPlan.htm]..

NEXT STEPS

We will use the public feedback summarized in this report to update the Plan's prioritization methodology and implementing strategies and actions.

A public review draft of the updated Pedestrian Master Plan will be available on SDOT's website in early April, 2015.

To be included on the project email list and see project updates, please visit www.seattle.gov/transportation/pedMasterPlan.htm.

APPENDIX

Seattle Pedestrian Master Plan Update: What are Your Walking Priorities?

Thank you for taking the Pedestrian Master Plan Survey! Your thoughts will help us improve walkability in Seattle over the next several years.

In 2009, Seattle's 20-year Pedestrian Master Plan set out to make Seattle the most walkable city in the nation. The Plan goals of safety, equity, vibrancy, and health drive decisions about where to provide new sidewalks, curb ramps, crosswalks, signs, and many other improvements that make it easier to walk in our neighborhoods.

As part of our update to the Pedestrian Master Plan, **we need your input** on the types of pedestrian improvements you think are most important, and where you think we should build them. We will use your feedback help identify the highest priority areas to focus improvements.

The survey will take less than ten minutes to fill out. Thank you!

1. What makes it difficult or unpleasant for you to walk?

Please rate the following conditions that can make it difficult or unpleasant for people to walk, from 1 (not a problem) to 6 (absolute barrier).

	1 Not a problem	2	3	4	5	6 Absolute barrier
Busy streets with no sidewalks	☐	☐	☐	☐	☐	☐
Residential streets with no sidewalks	☐	☐	☐	☐	☐	☐
Tripping hazards on sidewalks	☐	☐	☐	☐	☐	☐
Sidewalks that are too narrow	☐	☐	☐	☐	☐	☐
Sidewalks that do not provide a buffer (such as street trees, landscaping, or parked cars) between people walking and moving cars	☐	☐	☐	☐	☐	☐
Not enough safe ways to cross busy streets (such as traffic signals, stop signs, or crosswalks)	☐	☐	☐	☐	☐	☐
Missing curb ramps (wheelchair ramps) at intersections	☐	☐	☐	☐	☐	☐
People driving too fast	☐	☐	☐	☐	☐	☐

Poor lighting	☐	☐	☐	☐	☐	☐
Drivers not stopping for people crossing streets	☐	☐	☐	☐	☐	☐
Not enough time to cross street with signal	☐	☐	☐	☐	☐	☐
Blocked sidewalks (by parked cars, utility poles, etc.)	☐	☐	☐	☐	☐	☐
Other (please specify) _____	☐	☐	☐	☐	☐	☐

2. Where should the City prioritize walking improvements first?

Please rate how important each of the following improvement locations is, from 1 (not very important), to 6 (extremely important).

	1 Not very important	2	3	4	5	6 Extremely important
In areas with the most people walking (e.g., Downtown, University District, Capitol Hill, etc.)	☐	☐	☐	☐	☐	☐
On streets connecting people to transit stops	☐	☐	☐	☐	☐	☐
To serve people who rely on walking the most (e.g., low-income and transit dependent residents)	☐	☐	☐	☐	☐	☐
On streets connecting people to local community facilities such as parks, libraries, and community centers	☐	☐	☐	☐	☐	☐
Along and across busy streets	☐	☐	☐	☐	☐	☐
On streets connecting people to neighborhood businesses (grocery stores, coffee shops, restaurants, etc.)	☐	☐	☐	☐	☐	☐
Places where the most people walking are injured	☐	☐	☐	☐	☐	☐
On residential streets without sidewalks	☐	☐	☐	☐	☐	☐

On streets connecting families and children to schools	☐	☐	☐	☐	☐	☐
Other (please specify) _____	☐	☐	☐	☐	☐	☐

3. What types of walking improvements should we build first?

Please rate how important each of the following improvement types is, from 1 (not very important, so we should build later), to 6 (extremely important, so we should build now).

	1 Not very important (build later)	2	3	4	5	6 Extremely important (build now)
Repair and maintain existing sidewalks in areas with the most people walking (e.g., Downtown, University District, Capitol Hill, etc.)	☐	☐	☐	☐	☐	☐
Provide safe walking paths where they are missing on residential streets	☐	☐	☐	☐	☐	☐
Provide a buffer (such as street trees, landscaping, or parked cars) between people walking on sidewalks and cars on busy streets	☐	☐	☐	☐	☐	☐
Build sidewalks where they are missing on busy streets	☐	☐	☐	☐	☐	☐
Provide safe walking paths on neighborhood greenways*	☐	☐	☐	☐	☐	☐
Provide more safe ways to cross busy streets	☐	☐	☐	☐	☐	☐
Reduce speeds on busy streets	☐	☐	☐	☐	☐	☐
Reduce speeds on residential streets	☐	☐	☐	☐	☐	☐
Other (please specify) _____	☐	☐	☐	☐	☐	☐

*Neighborhood greenways are calm residential streets with low car volumes and speeds. They provide safe, calm routes for people walking and biking to connect to destinations like parks, schools, shops, and restaurants. See www.seattle.gov/transportation/greenways.htm for more information.

4. How comfortable would you feel walking on residential streets with the following types of walking paths?

Background: Many streets in Seattle are missing sidewalks. Because it would cost the City about $3.6 billion and would take many years to build traditional concrete sidewalks where they are currently missing, the City is launching a new program to provide lower-cost options for residential streets without sidewalks. These options can get walking improvements to more neighborhoods faster, potentially at as much as one-third the cost.

While the type of improvement appropriate for a particular street will vary, **we'd like to hear your thoughts on different options we are considering.**

The following questions will show images of different types of walking paths. Please tell us how comfortable you and members of your household or family would feel on each type.

4.a. Stamped and stained asphalt sidewalk with curb (raised walkway)

- ☐ Very comfortable
- ☐ Comfortable
- ☐ Somewhat uncomfortable
- ☐ Not comfortable

4.b. Stained asphalt sidewalk with curb (raised walkway)

- ☐ Very comfortable
- ☐ Comfortable
- ☐ Somewhat uncomfortable
- ☐ Not comfortable

4.c. Curb-separated walking path at same level as cars

- ☐ Very comfortable
- ☐ Comfortable
- ☐ Somewhat uncomfortable
- ☐ Not comfortable

4.d. Shared walking space (people walking and driving share the roadway space) with traffic calming features to slow cars, including curved roadways, landscape elements, and speed humps.

- ☐ Very comfortable
- ☐ Comfortable
- ☐ Somewhat uncomfortable
- ☐ Not comfortable

4.e. Traditional concrete sidewalk with curbs on one side of the street only, with rain gardens.

- ☐ Very comfortable
- ☐ Comfortable
- ☐ Somewhat uncomfortable
- ☐ Not comfortable

4.f. Walking path at same level as cars, set behind landscaping (no curb).

- ☐ Very comfortable
- ☐ Comfortable
- ☐ Somewhat uncomfortable
- ☐ Not comfortable

In the box below, please tell us more about what you do or don't like about these lower-cost walking improvements for residential streets.

[Limit online survey answer to 500 characters]

5. What is the single, most important thing we can do to improve walking in Seattle?

[Limit online survey answer to 500characters]

6. Tell us a Little About You

a. Do you live in the City of Seattle? Yes___ No___

b. What is your home zip code? _____

c. What neighborhood do you live in? _____

d. Do you work in the City of Seattle? Yes___ No___

e. What neighborhood do you work in? _____

f. How many vehicles does your household own? _____

g. During a typical week, how many days do you walk more than one block in the City of Seattle?

- ☐ 0
- ☐ 1-2
- ☐ 3-4
- ☐ 5-6
- ☐ 7

h. Which of the following activities would typically involve you walking more than one block on streets in the City of Seattle? (Select all that apply to you.)

- ☐ Commuting to work or school
- ☐ Shopping or dining out
- ☐ Going to libraries, community centers, parks, or other community destinations

☐ Exercise / leisure (including walking a pet)

☐ Taking children to / from school

☐ Accessing public transit

i. Do you have one or more children (17 or younger) living in your household currently?

☐ Yes

☐ No

We aim to reach out to and hear from a broad cross-section of Seattle. By answering the following optional questions you'll help us better understand who is engaging with us.

Please select your gender identity:

☐ Male
☐ Female
☐ Transgender
☐ Other _____

Please select your age category:

☐ 17 or younger
☐ 18-29
☐ 30-39
☐ 40-49
☐ 50-64
☐ 65 or over
☐ Prefer not to answer

Do you:

☐ Rent
☐ Own
☐ Other _____

Do you, or a member of your family, have a disability?

☐ Yes
☐ No

What is your race? Select all that apply.

☐ American Indian/Alaska Native
☐ Asian
☐ Black/African American
☐ Native Hawaiian or other Pacific Islander
☐ White
☐ Other
☐ Two or more of these
☐ Prefer not to answer

Are you of Hispanic, Latino, or Spanish origin?

☐ Yes
☐ No

What language do you speak at home? _____

Thank you for completing the survey. We will use your feedback will update the priorities in the Pedestrian Master Plan. We expect to release a draft of the updated Plan for public review in February, 2016.

To be included on the project email list and receive project updates, please visit www.seattle.gov/transportation/pedMasterPlan.htm.

WHERE RESPONDENTS LIVE

NEIGHBORHOOD	NUMBER OF RESPONSES				
Lake City	288	Hillman City	44	North Beach/Blue Ridge	14
Ballard	247	Ravenna	42	Puget Ridge	14
Greenwood	214	Mount Baker	40	Madison Park	13
Upper Queen Anne	210	Northgate	34	Alki	12
Wedgewood	175	Olympic Hills	34	Highland Park	12
Rainier Beach	159	Belltown	33	Madrona	12
Broadview	146	Downtown	33	Holly Park	12
Lower Queen Anne	135	Eastlake	32	View Ridge	11
Capitol Hill	133	University District	32	Fauntleroy	10
Maple Leaf	123	Lichton Springs	30	Interbay	9
Crown Hill	120	Bryant	27	Westlake	9
West Seattle	109	Roosevelt	27	Lakeridge	5
Pinehurst	106	Matthews Beach	26	Pioneer Square	5
Beacon Hill	106	Seward Park	24	International District	4
Columbia City	103	Cedar Park	22	Jackson Park	4
Haller Lake	82	Delridge	20	Othello	4
Central District	81	Portage Bay	20	Rainier View	4
Wallingford	76	South Lake Union	20	Yesler Terrace	4
Magnolia	69	First Hill	19	Judkins Park	3
Phinney Ridge	68	Sand Point	19	Rainier Valley	3
Montlake	66	High Point	18	Roxhill	3
Meadowbrook	64	Brighton	16	Windermere	3
South Park	59	Victory Heights	16	Loyal Heights	2
Fremont	58	Arbor Heights	15	SoDo	1
Green Lake	58	Laurelhurst	15	Outside of Seattle	62
Bitter Lake	54	Leschi	15	Other	18
Georgetown	51	Madison Valley	14	No Response	601

Pedestrian Master Plan

APPENDIX 3: EVALUATION OF THE 2009 PMP PERFORMANCE MEASURES

The 2009 Pedestrian Master Plan included 12 performance measures to gauge the City's progress on meeting the goals of the PMP. Each performance measure identifies a "baseline" or starting point to compare with information gathered for the current update. The 2009 Plan also identifies a desired "trend" for each measure, to describe the direction desired for each outcome. By establishing whether a trend is moving in the direction of the desired outcome, it is possible to determine the progress made towards meeting the plan's goals.

Table 1 provides the baseline data for each measure (as reported in 2008, typically). The table also provides the most current data for each measure for comparison with the baseline. Each of the measures are explained further on the following pages.

TABLE 1: PMP PERFORMANCE MEASURES EVALUATION

Goal	Performance Measure	Baseline Measurement	Desired Trend	Evaluation	On Track?
Safety Reduce the number and severity of crashes involving pedestrians.	Rate of crashes involving pedestrians	Total reported crashes/pedestrian trips (as identified in PSRC Household Travel Survey) Pedestrian crashes per 100,000 residents	Decreasing rate	Collision rates per pedestrian trips 2006:[1] 113 pedestrian collisions per 100,000 pedestrian trips 2014:[2] 74 pedestrian collisions per 100,000 pedestrian trips Collision rates per 100,000 residents: 2008:[3] 79 pedestrian collisions per 100,000 residents 2015:[4] 78 pedestrian collisions per 100,000 residents	Collision rates by walking trips: Yes Collision rates per 100,000 residents:[5] No; no significant change
	Change in vehicle speeds on identified corridors	Measured 85th percentile vehicle speed on identified corridors[6]	Reduction in 85th percentile vehicle speeds	Percentage of corridors with 85th percentile speeds at or below the posted speed limit 2011:[7] 30% 2015:[8] 40%	No[9]

[1]2015 SDOT Traffic Report, Puget Sound Regional Council 2006 Household Activity Survey data
[2]2015 SDOT Traffic Report, Puget Sound Regional Council 2014 Puget Sound Regional Travel Survey data
[3]2015 SDOT Traffic Report
[4]SDOT Traffic Operations
[5]While number of pedestrian related collisions, and thus the collision rate, may fluctuate from year to year, Seattle has seen an overall decrease in the linear collision rate over time, as shown in Figure XX.
[6]Corridors identified in the 2009 PMP for evaluation include Aurora Ave N, Stone Way N, 24th Ave NW, Rainier Ave S, and Fauntleroy Way SW. 85th percentile refers to the speed at which 85 percent of motorists are traveling at, or below.
[7]2011 SDOT Traffic Report
[8]SDOT Traffic Operations
[9]While a 10% increase in the number of corridors with 85th percentile speeds at or below the speed limit is an improvement, the increase is only in one corridor, and has not been consistent over time. Therefore, we have indicated that no significant change has occurred on this measure.

TABLE 1: PMP PERFORMANCE MEASURES EVALUATION (CONTINUED)

Goal	Performance Measure	Baseline Measurement	Desired Trend	Evaluation	On Track?
	School participation in pedestrian safety, education, and encouragement programs	Total number of public schools that participated in a program	Increasing school participation	Number of new public schools served per year[10] 2008: 5 2010: 21 2012: 16 2015: 46	Yes
	Driver and pedestrian behaviors and awareness of pedestrian laws	Knowledge, Attitude, and Behavior (KAB) survey results[11]	Increasing awareness and optimal behavior	Percentage of drivers who say they already do enough to stop for pedestrians 2008: 69% 2014: 68% Percentage of pedestrians that say they already do enough to be safe and pay attention to vehicles 2008: 77% 2014: 79% Percentage of survey respondents who reported they are aware of each of the four vehicle/pedestrian regulations noted in survey. 2008: 71% 2014: 68%	No; no significant change

[10]SDOT Safe Routes to School (SRTS) Program

[11]The KAB survey was administered in 2008 and again in 2014. The full 2014 survey report is provided in Appendix

TABLE 1: PMP PERFORMANCE MEASURES EVALUATION (CONTINUED)

Goal	Performance Measure	Baseline Measurement	Desired Trend	Evaluation	On Track?
Equity Make Seattle a more walkable city for all through equity in public engagement, service delivery, and capital investments.	City investments toward Top Tier projects in High Priority Areas[12]	Inventory/proposed project list	Increasing percentage of Top Tier projects completed in high priority areas	Along the Roadway projects:[13] Between 2008 and 2015, 2% (113) of the along the roadway projects identified in the 2009 PMP were constructed. Crossing the Roadway projects:[14] Between 2008 and 2015, 4% (91) of the crossing the roadway projects identified in the 2009 PMP were constructed.	Yes
	Public communication about pedestrian issues	Hits on Seattle Pedestrian Master Plan web page	Increasing number of "hits" on website	2008: unknown 2015: 31,441	Not tracked
	Transit ridership	Number of boardings and alightings per service hour (citywide bus ridership)[15]	Increasing rate of ridership per service hour	Boardings per service hour 2010:[16], [17] 58.37 2015:[18] 62.66	Yes
	Mode share (more people walking)	Percentage of trips made on foot (as measured in the PSRC Household Travel Survey)	Increasing percentage of trips	Percent of trips made by foot 2006:[19] 18.1% 2014:[20], [21] 24.5%	Yes

[12]Analysis includes Tier 1 or Tier 2 projects located in Tier 1 or Tier 2 High Priority Areas
[13]SDOT Asset Management database
[14]Ibid.
[15]While the measure indicates boardings and alightings, only boardings were used so trips weren't double counted
[16]2010 was the first year with reliable data
[17]King County Metro data
[18]Ibid.
[19]Puget Sound Regional Council 2006 Household Activity Survey
[20]2014 Puget Sound Regional Travel Survey
[21]Higher number walking is partially due to changes in the survey that includes reporting short trips (predominantly walking)

TABLE 1: PMP PERFORMANCE MEASURES EVALUATION (CONTINUED)

Goal	Performance Measure	Baseline Measurement	Desired Trend	Evaluation	On Track?
Vibrancy Develop a pedestrian environment that sustains healthy communities and supports a vibrant economy.	Increase streetscape vibrancy	Number of annual street use permits that include streetscape elements	Increasing number of permits that include streetscape elements	2008:[22] 24 2015:[23] 722	Yes
	Increase pedestrian volumes in selected count locations	Volume of pedestrians in selected count locations throughout the city	Increasing number of pedestrians in selected count locations over time	Downtown:[24] 2009: 36,100 2015: 48,600 Citywide:[25], [26] 2011: 62,865 2015: 92,210	Yes
Health Raise awareness of the important role of walking in promoting health and preventing disease.	Self-reported physical activity	Percent of respondents reporting little or no physical activity	Decreasing percentage	2006:[27] 11% 2012:[28] 11%	No; no significant change
	Children walking or biking to or from school	Number of children walking to school as measured in school travel surveys.	Increasing number of trips by children	2007:[29] 14% (Pre-SRTS) 2011:[30] 18.3% 2013:[31] 22.7%	Yes

[22]SDOT Public Space Management
[23]Ibid.
[24]Downtown Seattle Association downtown counts. Average of summer and holiday counts at locations that have been counted consistently since 2009
[25]Average of spring, autumn, and winter SDOT pedestrian counts
[26]SDOT's citywide pedestrian count program started in 2011
[27]2006 Health of King County Report, page 5-9, 2002-2004 averages based on Behavioral Risk Factor Surveillance System (BRFSS) data http://www.kingcounty.gov/healthservices/health/data/hokc.aspx
[28]King County City Health Profile Seattle, page 6, 2007-2011 averages based on BRFSS data http://www.kingcounty.gov/healthservices/health/data/CityProfiles.aspx
[29]SDOT Safe Routes to School Program
[30]Ibid.
[31]Ibid.

RATE OF CRASHES INVOLVING PEDESTRIANS

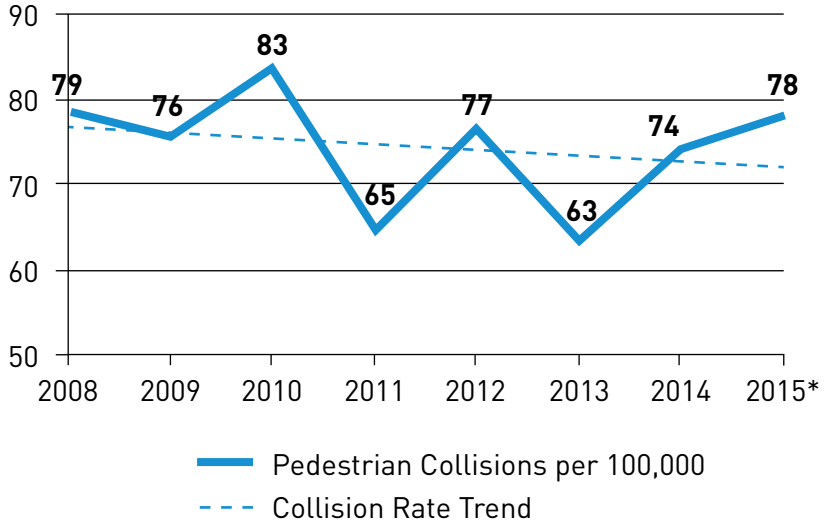
Trends in pedestrian crash rates, stated in terms of overall pedestrian exposure, are derived from analysis of police-reported pedestrian crashes. The exposure number is the total number of pedestrian trips as provided by the Puget Sound Regional Council (PSRC) Household Travel Survey. The PSRC Household Travel Survey is helpful in that it collects information on the type of transportation mode used for all trips, while the annual American Community Survey (administered by the US Census Bureau) only reports on the type of transportation mode used for commute trips. Using the PSRC data may therefore give a more accurate picture of actual pedestrian exposure. However, the PSRC travel survey is not administered annually, and travel data is only available for the year in which the survey is administered (to date, approximately every seven years).

To evaluate trends in pedestrian crash rates, we compare crash rates for 2006 and 2014, two years in which PSRC administered the travel survey and for which data for all trips is available. The pedestrian crash rate, as measured by all reported walking trips, decreased between 2006 and 2014. The pedestrian crash rate in 2006 was 113 pedestrian collisions per 100,000 pedestrian trips, while the rate in 2014 is 74 pedestrian collisions per 100,000 pedestrian trips.

We also report on trends in pedestrian crashes per 100,000 residents. Evaluating the pedestrian crash rate as a function of the total number of residents can help provide an annual snapshot of crash trends without relying on outside data. This is the indicator provided in the SDOT's annual Traffic Report. Table 1 compares the crash rate per 100,000 residents in 2008 (the first year SDOT produced the Annual Traffic Report) and the estimated number for 2015.

In 2008, the pedestrian crash rate was 79 crashes per 100,000 residents, and it slightly decreased to 78 pedestrian crashes per 100,000 residents in 2015. Figure 1 shows all data from 2008 to 2015. Due to the relatively low number of pedestrian collisions in Seattle, the crash rate can fluctuate greatly from year to year. Despite a decline in the overall trend for pedestrian crash rates between 2008 and 2015, we have seen an increase in the rate in recent years.

FIGURE 1: PEDESTRIAN COLLISIONS PER 100,000 RESIDENTS



*2015 estimate

VEHICLE SPEEDS ALONG IDENTIFIED CORRIDORS

Traffic engineers gauge trends in vehicle speed in a number of different ways. The 85th percentile measure is the most commonly used, and represents the speed at or below which 85% of traffic travels. The 2009 PMP suggested monitoring whether 85th percentile vehicle speeds are at or below the speed limit on five corridors: Aurora Ave N, Stone Way N, Fauntleroy Way SW, 24th Ave NW, and Rainier Avenue S.

Starting in 2011, SDOT began collecting speed data at consistent locations each year, in addition to the ad-hoc locations that serve site-specific traffic evaluation needs. Since that time, this data has been included in SDOT's annual Traffic Report. Table 2 shows the 85th percentile speeds for the corridors identified in the 2009 PMP.

Between 2011 and 2015, Stone Way N is the only corridor that has consistently maintained speeds at or below the speed limit. We found that 30% of the identified corridors had 85th percentile speeds at or below the posted speed limit in 2011, while 40% did in 2015. While a 10% increase in the number of corridors with 85th percentile speeds at or below the speed limit is an improvement, the increase is only in one corridor, and has not been consistent over time. Therefore, we have indicated that we have not met this measure since no change has occurred on the majority of corridors.

TABLE 2: POSTED SPEED LIMITS AND 85TH PERCENTILE SPEEDS ON IDENTIFIED CORRIDORS

	Speed Limit	Direction	85th Percentile Speeds					Overall Trend
			2011	2012	2013	2014	2015	
Aurora Ave N, south of N 112th St	35	NB	42.8	44.1	42.7	25.5	42.9	Above
Aurora Ave N, south of N 112th St	35	SB	42.5	41.7	42.2	42.1	43.5	Above
Stone Way N, south of N 45th St	30	NB	25.2	25.1	25.1	23.6	25.2	Below
Stone Way N, south of N 45th St	30	SB	27.1	26.7	27.1	26.7	26.9	Below
24th Ave NW, south of NW 80th St	30	NB	31.6	32.3	31.8	31.8	31.0	Above
24th Ave NW, south of NW 80th St	30	SB	31.5	32.2	31.6	31.6	31.1	Above
Rainier Ave S, northwest of S Holly St	30	NWB	37.5	38.5	39.1	39.9	38.8	Above
Rainier Ave S, northwest of S Holly St	30	SEB	36.3	37.2	37.1	37.5	37.0	Above
Fauntleroy Way SW, south of SW Alaska St	35	NB	35.2	34.0	35.2	35.2	29.1	Below
Fauntleroy Way SW, south of SW Alaska St	35	SB	34.2	33.6	33.1	20.9	28.6	Below
Percentage of corridors with 85th percentile at or below the posted speed limit			30%	40%	30%	40%	40%	

This measure was dropped in the updated PMP. It was determined that individual project evaluation would prove to be a better indicator, as engineering interventions often accompany slower speeds. In addition, the SDOT annual Traffic Report will continue to monitor the speeds on these corridors.

SCHOOL PARTICIPATION IN PEDESTRIAN SAFETY, EDUCATION, AND ENCOURAGEMENT PROGRAMS

The number of public schools that participate in pedestrian safety, education, and encouragement programs helps us gauge our progress toward safety. In the Safe Routes to School (SRTS) program, students learn how to safely walk or bicycle to school. There were 93 schools that participated in a SRTS program between 2008 and 2015 (73 public and 20 private).

Between 2008 and 2015, a total of 193 programs have been delivered, 167 in public schools and 26 in private schools. Table 3 shows the total number of SRTS programs delivered per year and the number of new public schools that participated each year. The number exceeds the total number of schools that have participated in SRTS because some schools have received programs more than once.

TABLE 3: TOTAL NUMBER OF SAFETY, EDUCATION, AND ENCOURAGEMENT PROGRAMS DELIVERED PER YEAR*

Year	Number of programs	Number of new public schools served
2008	5	5
2009	24	20
2010	21	10
2011	21	9
2012	16	5
2013	25	7
2014	35	6
2015	46	11

*Note: some schools have receive programs more than once

DRIVER AND PEDESTRIAN BEHAVIORS AND AWARENESS OF PEDESTRIAN LAWS

A Knowledge, Attitude, and Behavior (KAB) survey helps us gauge public awareness of pedestrian/vehicle regulations, as well as optimal safety behaviors for people driving and people walking. The survey was first administered in 2008, and was re-administered as part of the Plan update in 2014.

While the KAB survey has several questions, the following three provided the basis for the assessment:

1. If you had to rate yourself overall as a driver, would you say that you already do enough to stop for pedestrians, or do you think you could do more to reduce the likelihood of a collision?
2. If you had to rate yourself overall as a pedestrian, would you say that you already do enough to be safe and pay attention to vehicles, or do you think you could do more to reduce the likelihood of a collision?
3. To help with planning, the City is trying to better understand residents' familiarity with vehicle and pedestrian regulations. For each of the following please tell me if you are aware of that regulation or not.
    a. Drivers may not use a cell phone while driving unless it is hands-free
    b. Drivers may not pass a car that is stopped for pedestrians at a crosswalk
    c. Drivers may not proceed if a pedestrian is in their half of the roadway, or within one lane of their half of the roadway
    d. All intersections are legal pedestrian crossings and drivers must stop for pedestrians, even if there is not a marked crosswalk

For most driver behaviors, the percentage engaging in sub-optimal behavior is statistically unchanged between 2008 and 2014. Two behaviors–not stopping for pedestrians at intersections with no light/sign, and not checking left and right on a green light–have increased slightly, and one –using a cell without a headset – has decreased slightly. The most frequent sub-optimal behaviors continue to be pulling into the crosswalk to turn on a red light, turning before pedestrians are at least a full lane away, and texting/looking at their phone when driving.

For most pedestrian behaviors measured, the percentage of residents engaging in sub-optimal behavior is up slightly from 2008. The most frequent sub-optimal behaviors continue to be crossing between intersections and starting to cross when the "don't walk" signal is blinking.

Awareness of pedestrian laws is similar to 2008, although it has dropped somewhat for "drivers may not proceed if a pedestrian is in their half of the roadway, or within one lane of their half of the roadway." In 2014, awareness of hands-free cell phone requirements is the highest (96%), and "all intersections are legal pedestrian crossings and drivers must stop for pedestrians, even if there is not a marked crosswalk" is the lowest (68%).

The full 2014 Knowledge, Attitude, and Behaviors survey report is included in the Appendix 4.

CITY INVESTMENT TOWARD TOP TIER PROJECTS IN HIGH PRIORITY AREAS

This measure tracks the completion of identified "opportunities for improvement" identified in the 2009 Pedestrian Master Plan. The desired trend is an increasing percentage of top tier projects completed in high priority areas. For the purposes of assessing this measure, "top tier locations" include all tier 1 and tier 2 priority locations for "along the roadway" and "crossing the roadway," and "high priority areas" includes all tier 1 and tier 2 priority areas. A full description of the 2009 PMP tiers is found in Appendix 5.

There are several ways to analyze this measure. The first is to evaluate how the PMP has guided public investments since the Plan's adoption. Table 3.1 shows that the majority (approximately 79%) of all pedestrian improvements we provided between 2009 and 2015 were located within PMP high priority areas. Those located outside of PMP high priority areas are typically provided to help leverage funding from other projects.

Another way to evaluate Plan completion is to assess the raw number of top tier projects in high priority areas that have been built. The 2009 PMP identified 5,665 top tier "along the roadway" locations in high priority areas, and 2,158 top tier "crossing the roadway" locations in high priority areas[32].

Between 2009 and 2015, we built improvements in 2% (113) of identified top tier "along the roadway" locations, and 4% (91) of top tier "crossing the roadway" locations in high priority areas[33]. Crossing location projects may contain several project elements (curb ramps, pedestrian signal, refuge islands, etc.)

It is important to note that network completion is largely a function of available funding. The 2009 PMP established an overwhelmingly large number of priorities, and the low completion rate may indicate a need to more closely match Plan priorities to projected funding availability. The updated approach to prioritizing improvements is discussed further in the PMP Chapter 4.

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[32]Top tier projects include Tier 1 and Tier 2 "along the roadway" and "crossing the roadway" locations in Tier 1 or Tier 2 high priority areas.

[33]A single intersection crossing improvement may contain several project elements (ADA curb ramps, pedestrian signal, refuge islands, etc.)

PUBLIC COMMUNICATION ABOUT PEDESTRIAN ISSUES

When the PMP was first published, it was exclusively an online document, an innovation at the time. This performance measure was created to track the number of hits the Seattle Pedestrian Master Plan webpage received as a proxy for public awareness of the Plan. Unfortunately, the Department did not collect data on the number of hits to the website in 2008, but the data from 2013-2015 shows an increase in website hits from nearly 25,000 hits in 2013, to more than 29,000 in 2014, to over 31,000 hits in 2015. However, recent increases could be attributed to interest in the PMP Update, which began in 2014.

The measure may not be an adequate indicator for general awareness of pedestrian issues, as website hits may in fact decrease over time as the plan ages, then increase during subsequent updates of the plan. It has been dropped from the updated PMP.

TRANSIT RIDERSHIP

The number of people riding transit can be an indicator of overall pedestrian activity, as many people walk to and from transit stops. This analysis reports on ridership data for Seattle routes – a subset of the King County Metro fixed route bus network. Ridership is defined as weekday boardings.[34] For the purposes of this analysis, Seattle routes are defined as those with at least 80% of their stops within the city limits. This definition is consistent with that used by the Seattle Transportation Benefit District (STBD) in the service purchase from Metro and the Transit Service Funding Agreement.

The baseline year in Tables 1 and 4 is 2010, the first year with available reliable data. Since 2010, the number of service hours on Seattle routes has decreased, while the number of weekday boardings has increased. In September 2014, King County Metro reduced service due to a funding shortfall. The 2015 weekday ridership and service hours reflect the service reductions that King County Metro made in September 2014. Seattle voters approved Proposition 1 on November 4, 2014, which provides funds for the City to invest in expanded bus service. Most of this expanded bus service was implemented in June and September 2015 (although the 2015 data does not reflect these additional hours or ridership).

The tables show an increase in transit ridership (and utilization of the service hours) since 2010, with approximately 58 weekday boardings per service hour in 2010, and 63 in 2015.

This measure was created before we developed the City's Transit Master Plan (TMP). The TMP includes tranist related performance metrics for the City. The measure was dropped in an effort to provide consistency across department reporting metrics.

TABLE 4: TRANSIT RIDERSHIP, 2010 – 2015

Year[32]	Weekday Ridership (boardings) on Seattle Routes	Service Hours	Weekday ridership (boardings) per service hour
2010	218,677	3,746	58
2012	215,582	3,691	58
2014	224,042	3,674	61
2015	224,056	3,575	63

[35]Spring data is used for the analysis

MODE SHARE

Pedestrian mode share refers to the percentage of trips that are made on foot. This measure reports on the percentage of all trips that were walking trips, based on the Puget Sound Regional Council (PSRC) Household Travel Survey. The PSRC Household Travel Survey is informative in that it collects information on the type of transportation mode used for all trips (not just commute trips). However, the PSRC travel survey is not administered annually, and travel data is only available for the year in which the survey is administered (to date, approximately every seven years). The baseline data used for this evaluation is derived from the 2006 PSRC survey, the closest year that the survey was administered to the PMP's adoption in 2009. The PSRC survey was administered again in 2014.

The 2006 Household Travel Survey showed that 18.1% of all trips in Seattle were made by foot that year, while the 2014 Household Travel Survey reported that 24.5% of all trips were made by foot eight years later. Part of the increase in reported walk trips in 2014 may be due in part to a slight change in survey methodology, as the 2014 survey asked people to include reports on very short trips and exercise/recreational trips, such as walking around the neighborhood or walking the dog. The 2014 survey therefore includes recreational walking trips, while the 2006 survey focused primarily on transportation-related trips.

When looking at all mode share trips, walking trips have increased the most. SDOT is working with PSRC to collect household travel data more regularly, which will improve tracking this metric. It will also help with consistent data collection to better compare mode share over time, as well as between modes.

STREETSCAPE VIBRANCY

This measure compares the total number of street use permits issued for a specified list of pedestrian-related streetscape elements. An increasing trend in the number of permits issued for street activation is intended to serve as an indicator of streetscape vibrancy. The following permit types were used to track this measure:

- Block Party & Play Streets
- Farmers Market
- Festival Streets
- Identification Pole Banners
- Sidewalk Cafés
- Street Vending
- Tables & Chairs

Table 5 shows the number of permits issued for selected activities over time. The number of permits has generally increased over time, especially as SDOT has initiated new programs such as play streets (2013), and passed legislation to promote festival streets and street vending (both in 2011). However, this metric may not be the most suitable to measure vibrancy and has been dropped.

TABLE 5: STREETSCAPE VIBRANCY PERMITS ISSUED, 2008-2015

Year Issued	2008	2009	2010	2011	2012	2013	2014	2015	Total per permit type
Block Party & Play Streets				1		77	307	433	818
Farmers Market				8	10	9	11	11	49
Festival Street				1	4	2	2	1	10
Identification Pole Banners	8	7	3	1	8	2	3	7	39
Sidewalk Café	8	26	26	28	33	35	40	34	230
Street Vending		1		46	135	174	214	230	800
Tables & Chairs	8	7	18	18	14	9	7	11	92
Total per year	24	41	47	103	204	308	584	727	2,033

PEDESTRIAN ACTIVITY

The total number of people walking can be an indicator for pedestrian vibrancy. We have reported on downtown pedestrian counts conducted by the Downtown Seattle Association (DSA) since 2007. Beginning in 2011, we also began collecting quarterly citywide counts using the National Bike and Pedestrian Documentation (NBPD) methodology. Additionally, new, permanent counters at selected locations on multi-use trails also collect pedestrian counts. The following paragraphs summarize the data collected from both DSA and SDOT pedestrian count activities.

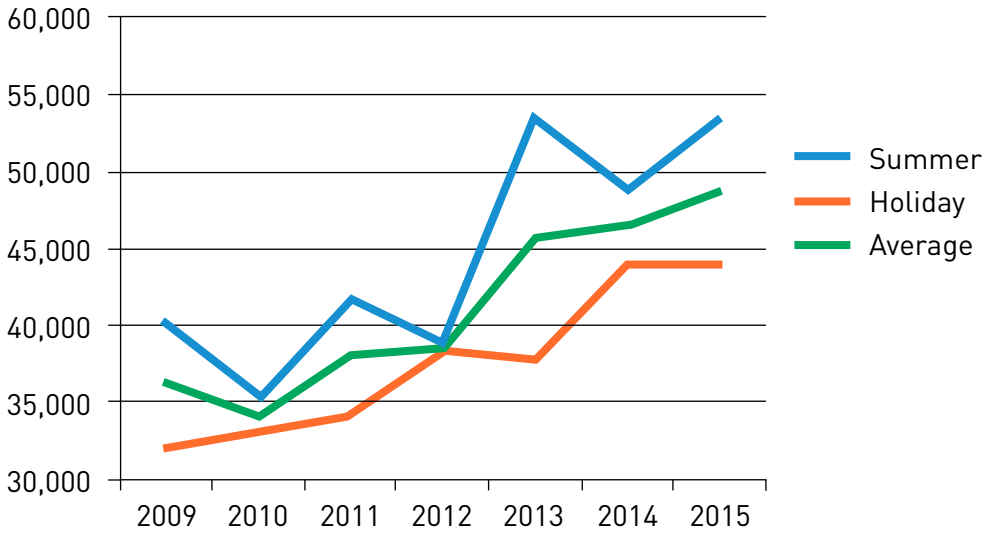
Downtown Seattle Association Counts

The Downtown Seattle Association (DSA) is focused exclusively on making Downtown Seattle a great place to live, work, shop and play through public policy advocacy, economic development and marketing. Since 2007, the DSA has conducted counts are conducted in summer and during the holiday season, and provide a snapshot of overall pedestrian volumes downtown. To ensure that comparisons over time use data collected from consistent locations, only a subset of DSA count locations is reflected in Table 3-4 and Figure 3-6. The following 12 locations have been counted consistently since 2009:

- Denny Triangle (7th & Stewart)
- CBD/ Retail Core (4th & Pine)
- International District (5th & Weller)
- West Edge (2nd & University)
- Pioneer Square (1st & Yesler)
- Denny Triangle (Denny & Westlake)
- CBD/ Retail Core (7th & Pike)
- CBD/ Retail Core (6th & Pine)
- Uptown (1st Ave N and Mercer St)
- First Hill (Madison & Minor)
- Capitol Hill (Broadway and E John)
- South Lake Union (Westlake and Harrison)

The average of summer and holiday counts was 36,100 in 2009 and 48,660 in 2015. Pedestrian counts increased 36% between 2009 and 2015 at these locations during the holiday count, and increased 33% during the summer count. The average trend has been generally been an increase in pedestrian volumes each year since 2010, as shown in Figure 2.

FIGURE 2: DOWNTOWN SEATTLE ASSOCIATION COUNTS 2009-2015



SDOT Pedestrian Counts

In 2011, we started using the National Bicycle and Pedestrian Documentation (NBPD) project methodology for counting bicycles and pedestrians. These spot counts provide consistent, annual pedestrian volumes at 50 locations that are tracked over time. Each count is conducted at an intersection, and records the number of pedestrians crossing each leg of the intersection. The counts are conducted in January, May, and September for PM peak (5-7pm), off peak (10am-noon), and Saturday (noon-2pm) time periods at each location.

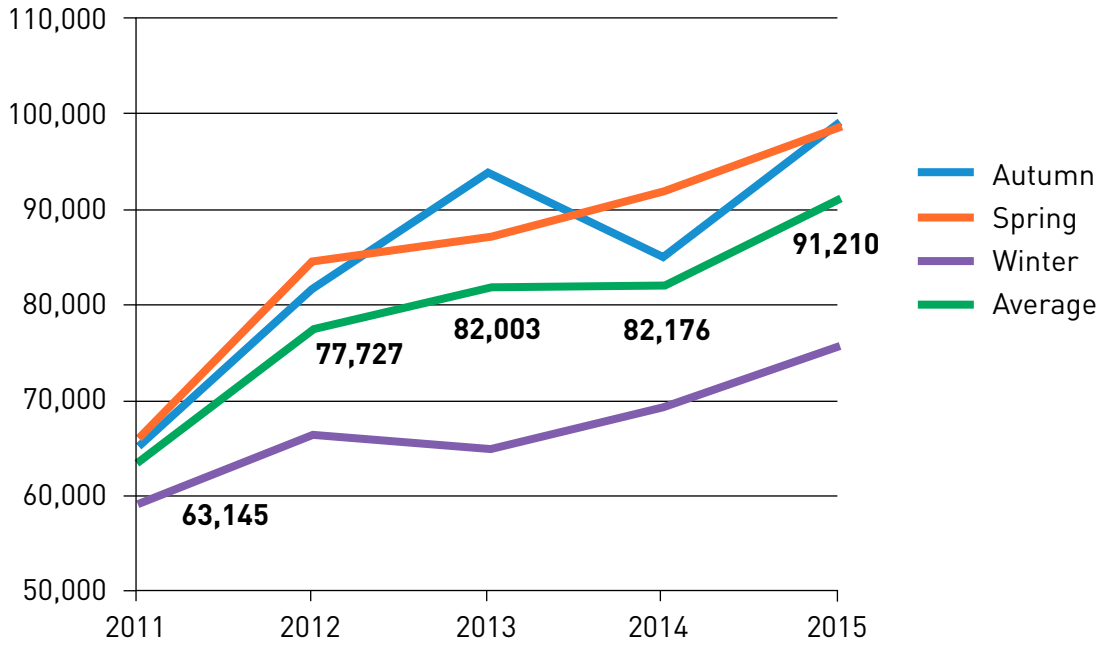
This ongoing program expands SDOT's pedestrian data beyond the Center City; it also provides insight into seasonal and daily pedestrian patterns. Figure 3 shows the trends in this data. In general, volumes have consistently increased for each season year over year. Some fluctuation can occur from year to year due to changes in weather at the time of the count, or specific location challenges (i.e. construction obstructions or closures).

SELF-REPORTED PHYSICAL ACTIVITY

The PMP was the first of Seattle's modal master plans to establish a goal to improve health outcomes for individuals, and to use health data when prioritizing infrastructure. Health data provided by the King County Behavioral Risk Factor Surveillance System (BRFSS) was integrated into the PMP prioritization methodology. The BRFSS is the largest, continuously conducted, health survey in the world, administered with funds through the Center for Disease Control and Prevention (CDC). It collects information from adults on health behaviors and preventative practices.

The Plan includes a performance measure tracking self-reported physical activity, as opportunities to achieve a basic level of physical activity increase as we develop a safe, connected pedestrian network. The Plan established a desired trend of a decreasing percentage of survey respondents reporting little or no physical activity. BRFSS data for King County was used to determine the "percentage of respondents who reported no physical activity during the previous 30 days" in both 2006 and 2014.

FIGURE 3: ANNUAL CITYWIDE PEDESTRIAN COUNTS, 2011-2015



The rate of self-reported physical activity has not significantly changed since 2006, so we did not meet this metric. However, while Seattle saw no change in the percentage of people who reported no physical activity between 2006 and 2014 (both at 11.0%), King County, as a whole, saw an increase from 14.5% to 15.0% in people reporting no physical activity. This may indicate that maintaining the rate may be a suitable trend. However, the measure was dropped due to the inconsistent and infrequent data availability. It will continue to be monitored for future updates.

CHILDREN WALKING OR BIKING TO OR FROM SCHOOL

This measure compares the number of children walking to school over time. For the purposes of this evaluation, school travel surveys completed by schools participating in the Safe Routes to School (SRTS) program were used to track the number of children walking to school. Currently, no method exists to track the total number of children walking to school throughout the city; the number of children walking at schools participating in the SRTS program serves as a proxy measure.

The survey responses match the desired trend of an increasing number of walking trips by children to school. For schools completing the travel surveys, the percent of children walking to school was 14% (pre-SRTS program), 18.3% in 2011, and 22.7% in 2013.

Pedestrian Master Plan

APPENDIX 4: 2009 PRIORITIZATION METHODOLOGY

This appendix describes the method used to prioritize pedestrian facility recommendations as part of the 2009 Seattle Pedestrian Master Plan (PMP).

PURPOSE

Seattle's strategy for prioritizing projects accounts for both the quality of the pedestrian environment and potential pedestrian activity levels. It is meant to focus resources in areas where conditions are difficult and where people need to be able to walk the most. The City is also accounting for socioeconomic and health factors such as lower rates of automobile ownership and higher rates of diabetes and obesity. As a result, project locations are prioritized in areas that can serve community residents with the greatest needs.

The strategy includes a systematic citywide analysis of existing and future opportunities for improvement. The maps and the data are meant to be real-world, practical tools to inform decision making on a day-to-day basis. The strategy will help to prioritize pedestrian project locations in the short-term. If the City can only afford to build or improve a certain number of sidewalks or curb ramps each year, which ones should be built first? It will also help the City make long-term decisions, for example by informing the process of selecting and programming types of projects.

The maps and data can also help the City pursue future funding opportunities, while also enabling it to make focused and effective decisions if funding unexpectedly becomes available and project locations need to be identified quickly. It is equally applicable in times when budgets are constrained, as the City is asked to do more with less. As new data become available, they can be incorporated into the framework identified in this plan.

STEPS IN THE ANALYSIS

The prioritization process includes several different steps. A variety of factors were considered in each step of the analysis. The steps are outlined below.

Step 1: Base Analysis
1a. Potential Pedestrian Demand
1b. Equity – Socioeconomic and Health Priority
1c. Corridor Function – Pedestrian Linkage Priority

Step 2: High Priority Areas
Combine the results of the base analysis (potential pedestrian demand, equity and corridor function) from Step 1 in order to identify High Priority Areas

Step 3: Assessing Opportunities for Improvements Along and Across the Roadway
Assess opportunities for improvement through an analysis of existing pedestrian amenities, facilities, and conditions "Along the Roadway" and "Crossing the Roadway"

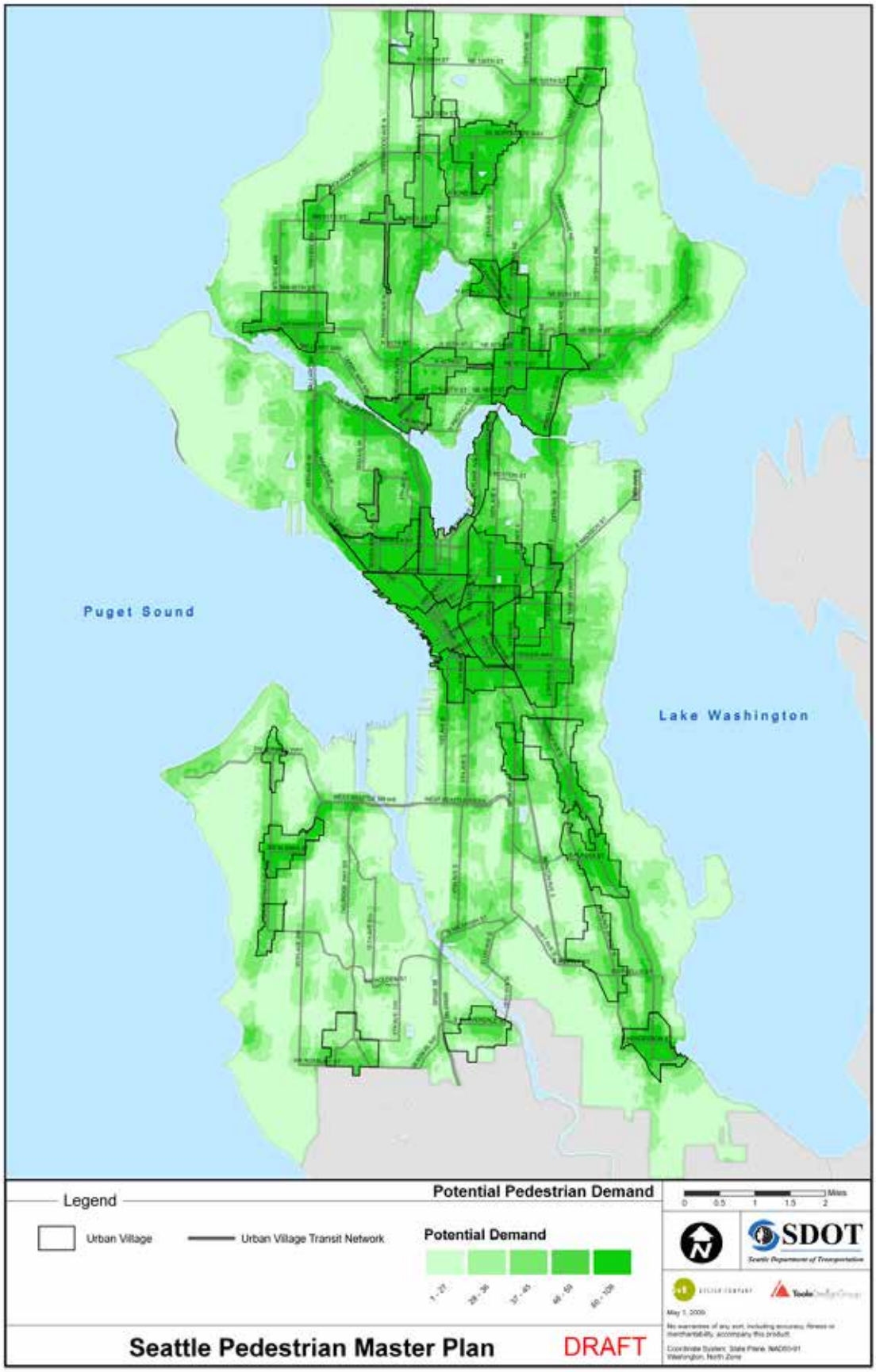
Step 4: Development of Project Lists
Combine the High Priority Areas and the opportunities for improvements to identify locations where conditions are difficult and where people need to be able to walk the most

Step 1: Base analysis

Step 1a: Potential Pedestrian Demand Analysis

The Potential Pedestrian Demand map identifies existing destinations in Seattle such as transit stations, parks, schools, grocery stores, and libraries that are likely to generate pedestrian traffic. The map highlights where people need and want to walk, not only today but in the future. It indicates the vibrancy of areas by identifying "hot spots" where pedestrian generators are located close to each other. These hot spots are shown as the darker green areas in Figure 1. The map also incorporates estimates of where people will be living and working in the future.

FIGURE 1: POTENTIAL PEDESTRIAN DEMAND MAP



The demand analysis accounts for different types of pedestrian generators and it acknowledges that they will not all generate the same levels of pedestrian activity. For example, a regional transit station is likely to generate more pedestrian traffic than a local bus stop. Multifamily residential buildings and regional destinations such as the Pike Place Market are likely to generate more pedestrian activity than low density office and retail uses.

The analysis also accounts for the distance people are willing to walk to and from different types of destinations. It recognizes that these distances are not the same for all pedestrian generators. For example, people may be more likely to walk farther to a transit station than to a coffee shop.

The Potential Pedestrian Demand map reflects the different amounts of pedestrian activity that are anticipated in different parts of the city. Evaluating potential pedestrian demand allows the City to focus investments in locations that will have the biggest impact on pedestrian convenience and safety. This information can inform the selection and prioritization of a range of pedestrian improvements such as sidewalks, curb ramps, signals, and crosswalks.

Tables 1, 2, and 3 on the following pages outline the numeric factors that are incorporated into the potential pedestrian demand assessment and the data used in the analysis. These factors indicate the relative pedestrian demand for that area. Higher factors represent higher pedestrian demand.

TABLE 1: PEDESTRIAN GENERATORS/DEMAND

Category	Sub-Category	Examples/Notes	Weight 1/8 Mile	Weight 1/4 Mile	Weight 1/2 Mile
High Generator Highest Possible Value: 70	University or College		15	10	5
	Major Generator	Pike Place, convention center, Greenlake and Myrtle Edwards Park, etc.	15	10	5
	Light Rail	-	10	5	3
	Multi-family, condominiums, and apartments		10	5	3
	Major Bus Stop	5 or more routes	10	3	1
	UVTN Route (definite rapid service)	-	10	3	1

TABLE 1: PEDESTRIAN GENERATORS/DEMAND (CONTINUED)

Category	Sub-Category	Examples/Notes	Weight 1/8 Mile	Weight 1/4 Mile	Weight 1/2 Mile
Medium Highest Possible Value: 35	School	Daycare, primary, public, private, etc.	5	3	1
	Major Retail	Grocery store, regional retail, etc.)	5	3	1
	UVTN Route (definite local service)	-	5	3	1
	Hospital	-	5	1	0
	Trails	-	5	3	1
	Community Services	Community centers, libraries, post offices, social services, etc.	5	3	1
	Park	Park, greenbelt, open space, etc.	5	3	1
Low Generator Highest Possible Value: 13	Minor Retail	General retail, office, etc.	3	1	0
	Minor Bus Stop	-	3	1	0
	Park and Ride Location	-	3	1	0
	Bridges	-	3	1	0
	Stairs	-	1	0	0

TABLE 2: POPULATION AND EMPLOYMENT FORECASTS

Category	2025 Population Forecast (per sq. mile)	Weight	2025 Employment Forecast (per sq. mile)	Weight
1	0-2,527	0	0-1,040	0
2	2,528–7,929	2	1041-2,888	2
3	7,930–13,071	4	2,889-8,007	4
4	13,072–22,626	8	8,008-41,258	8
5	22,627–134,959	10	41,259-464,493	10

TABLE 3: DATA USED IN THE POTENTIAL PEDESTRIAN DEMAND ANALYSIS

Data used in analysis	Components of the total demand score	Total demand score
• Seattle Parcel Layer • Seattle Parcel Layer • Selection (Colleges and • Universities Called out By Query) • Major Generators – • Selected Parcels from • Parcel Layer • Bus Stops Point Layer • Bus Routes Polyline Layer • Link Station Polygons • Bridges and Stairs polyline layer • Trail Layer • 2025 Population and • Employment Density Data • Urban Village Transit • Network (UVTN) Polyline	• ColUn_Scr – University or College • MajGen_scr – Major Generator • LnkS_Scr – Light Rail • MajBs_Scr – Major Bus Stop • UVTN_R_scr – UVTN Route (definite rapid) • Sch_Score – School • MajR_Score – Major Retail • UVTN_L_scr – UVTN (definite local service) • Hosp_Score – Hospital • Trails_scr – Trails • ComC_scr – Community Services • Park_scr – Park • MinRet_Scr – Minor Retail • MinBS_scr – Minor Bus Stop • PnR_scr – Park and Ride Location • Tot_Pd_SCR – Population Density • Tot_Em_SCr – employment density • Bridge_Scr – Bridges • Stairs_Scr – Stairs • MFHous_Scr – Multi Family Housing	TotalScore – TOTAL SCORE PedDem_NSC – Pedestrian Demand Scores were normalized (0 – 40) using GIS. The sum of all the factors were calculated giving points for each area of the City The darker the green on the map the higher the total score.

Step 1b: Equity – Socioeconomic and Health Priority Analysis

Seattle is accounting for socioeconomic and health factors such as lower rates of automobile ownership and higher rates of diabetes and obesity as part of its prioritization process. In doing so, the City can assess pedestrian improvements in areas that can serve community residents with the greatest needs.

Factors that were accounted for in the analysis include:

- Automobile ownership
- Low income population
- Disability population
- Diabetes rates
- Physical activity rates (self reported)
- Obesity rates

Each of the six socioeconomic and health categories were broken into five quantiles (five groups with relatively equal records in each group). The top quantile for each category received five points. There were thirty possible points for any given area and the highest point value received was thirty. The darker purple areas on the map in Figure 2 represent the areas that received the highest points.

FIGURE 2: EQUITY MAP

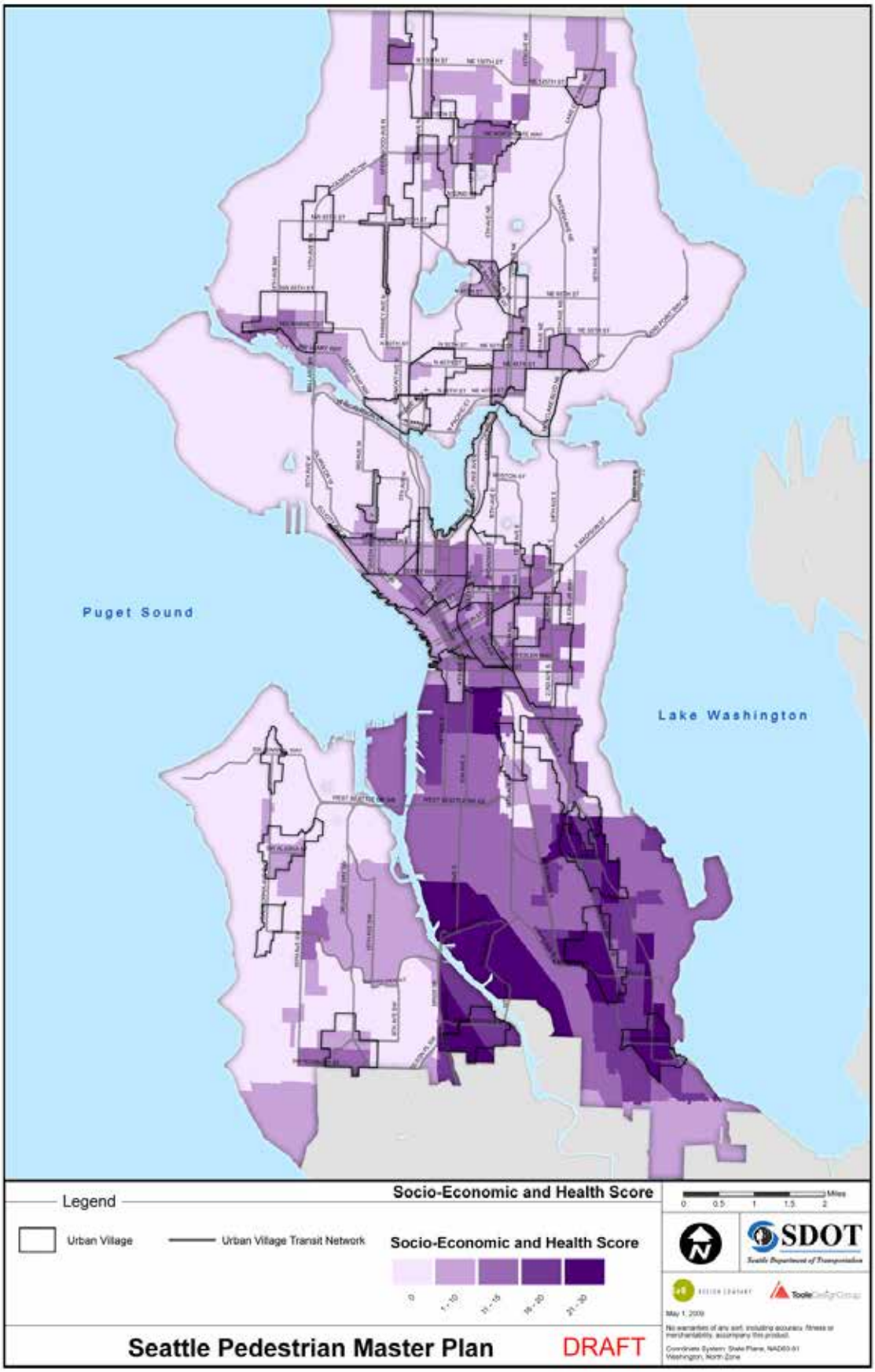


TABLE 4: DATA USED IN THE ANALYSIS

Data used in analysis	Key fields generated in the analysis
2000 Census Block Group Data with Associated Fields: Disability, % Automobile Ownership, Median Income Health Priority Areas (HPA) health data for Diabetes, Obesity, and Self reported health measures from the Health of King County Report 2006	DIABET_SCR – Diabetes Score OBESE_SCR – Obesity Score DissabSCOR – Disability Score LINC_SCR – Low income score PCAR_SCR – Car Ownership Score FinalScore – Combined Score SoE_NSCR – Final Score Normalized 0 – 35

Step 1c: Corridor Function – Pedestrian Linkage Analysis

Street types were also factored into the prioritization analysis. Street types build on street classifications (based on the American Association of State Highway and Transportation Officials standards that identify major functional classifications for all urbanized areas that have over 50,000 people), which define how a street should function to support the movement of people, goods and services. Street types provide a more specific definition of the design elements that support the street's function and its adjacent land use. Street types are included in the analysis because they are how the city designs, organizes, and plans for its street network. All street type categories were given a weighted value, based on the character of the street and its contribution to the pedestrian network, as outlined below.

Total Scores

25 Points
Regional connectors
Commercial connectors
Local connectors

15 Points
Main streets
Mixed streets
Green streets

10 Points
Residential
Residential green
Industrial access
Industrial arterial

FIGURE 3: CORRIDOR FUNCTION

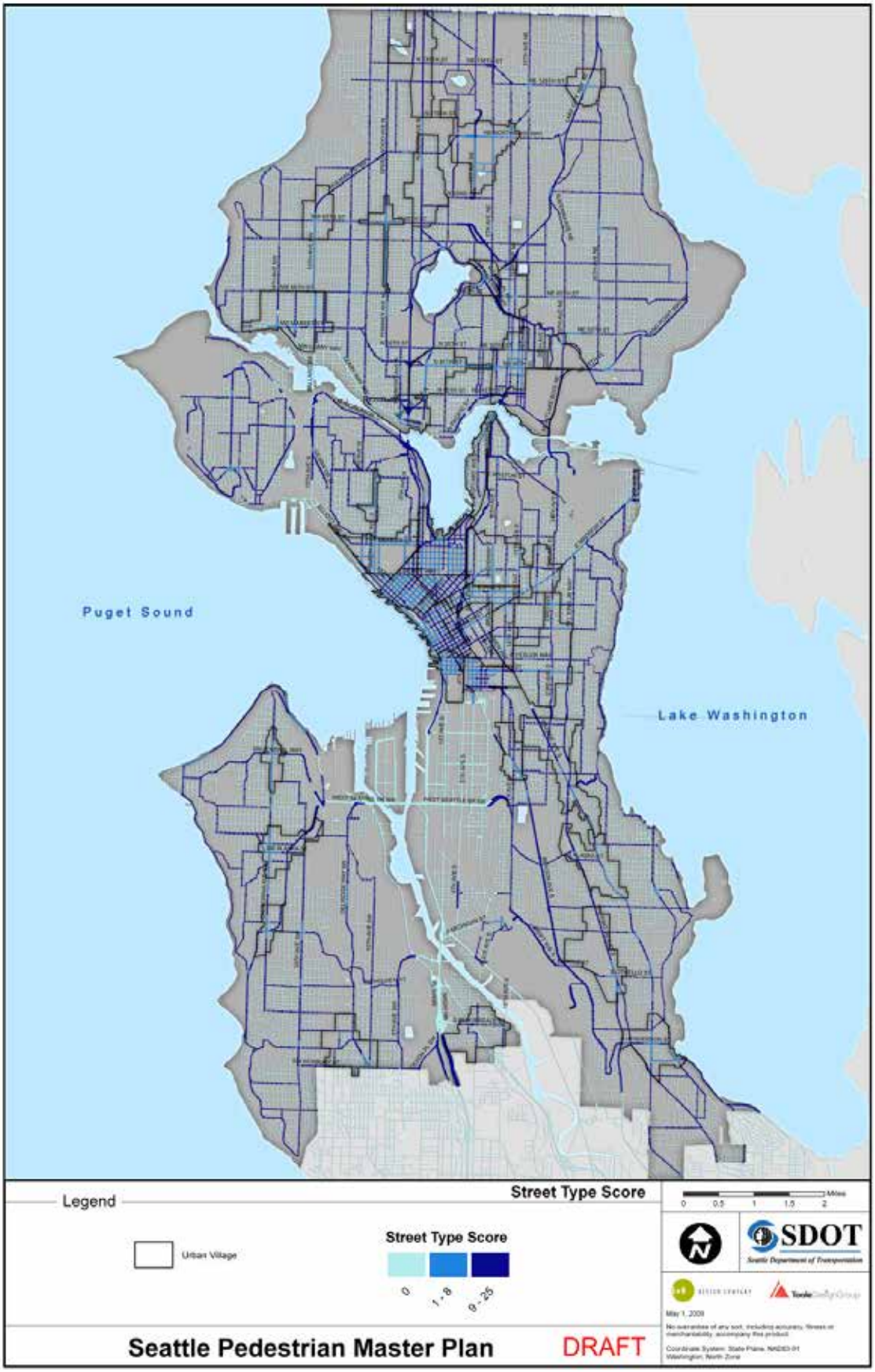


TABLE 5: DATA USED IN THE ANALYSIS

Data used in analysis	Key fields generated in the analysis	Street type score
Seattle Street Type Polyline, modified by TDG and SVR	TDG_StType – street type score StTyp_NSCR – Street type score normalized 0 - 25	ScoreonStreetRightofWay.shp

Step 2: High Priority Areas

The results of the potential pedestrian demand, equity, and corridor function analyses were combined together in order to identify High Priority Areas throughout the city. The combined scores were added together, using the ratio outlined below.

- The potential pedestrian demand analysis was used as a measure for potential pedestrian demand. It contributed to 40% of the total score.
- The socioeconomic and health analysis was used as a measure of equity. It contributed to 35% of the total score.
- The corridor function analysis was used as a measure of land-use and transportation. It contributed to 25% of the total score.

Figure 4 shows the results of combining the potential pedestrian demand, equity and corridor function analyses into one weighted score. Darker orange areas represent the highest score.

FIGURE 4: HIGH PRIORITY AREAS

Step 3: Assessing Opportunities for Improvements Along and Across the Roadway

The improvement opportunity assessment is a systematic effort to identify and compare locations for pedestrian improvements throughout the city. The opportunities for improvements are approximated using variables that contribute to the pedestrian environment, including motor vehicle speed limit, the width of the road and the presence of features such as traffic signals, curb ramps, and crosswalks. Point values were assigned to all roads and intersections to capture a combination of these variables. The analysis provides a measure of the quality of the existing physical environment.

The improvement opportunity assessment is not based on a field evaluation of existing conditions. It is derived from roadway characteristics obtained from available data.

Along the Roadway

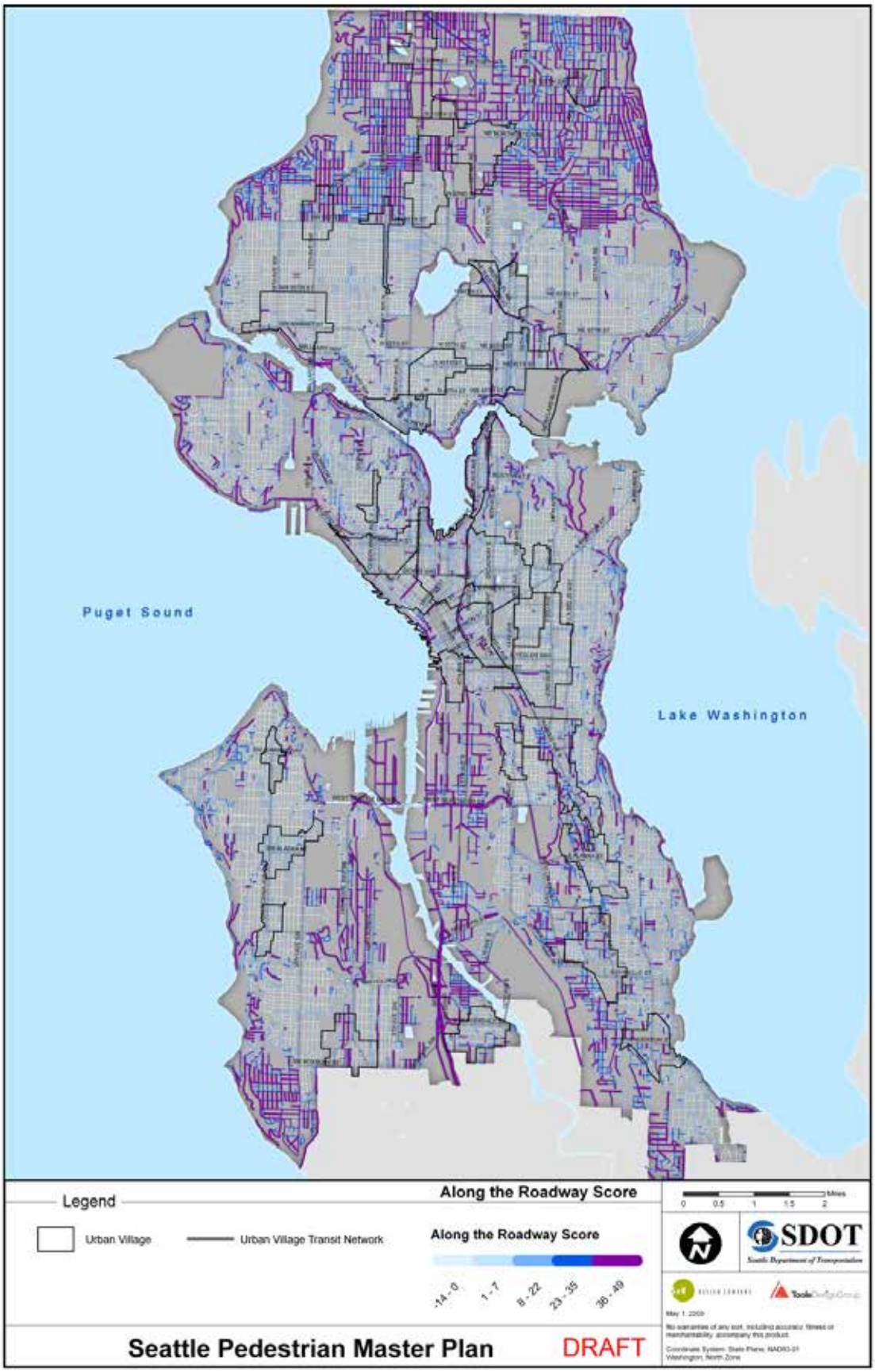
The presence of sidewalks and the amount of traffic impact a person's experience walking along a road. Whether there is a physical buffer such as a tree or parked cars also contributes to their experience. The Along the Roadway map shown as Figure 5 groups these types of pedestrian zone and roadway characteristics together in order to compare throughout the city. Sidewalk data was used as the base for the along the roadway analysis. Each line on the map represents a sidewalk, path, or shoulder on either side of the road.

This assessment provides an indication of how comfortable different segments of roads are to walk along. Point values were assigned to each characteristics that negatively impact walking. A segment with a higher number of total points indicates that it is more uncomfortable to walk along than a segment with a lower number of total points. The purple lines on the map indicated segments that are the most difficult to walk along.

The analysis accounts for whether there is a sidewalk in the segment and whether there is a physical buffer such as a parked car or a tree. It also accounts for the volume and speed of traffic on the adjacent road. It is meant to reflect the quality of the physical pedestrian environment along different roads in Seattle. In addition, this analysis indicated if existing sidewalks were less than six feet wide and if there was an existing curb.

Understanding how these segments compare to each other helps to prioritize potential pedestrian project locations. For example, an arterial road with no sidewalk received a high score indicating an opportunity for improving that segment. This location scored slightly higher than a segment on a quiet, narrow road with sidewalks.

FIGURE 5: ALONG THE ROADWAY MAP



Tables 6 and 7 outline the factors that contribute to the Along the Roadway score and the data used in the analysis.

TABLE 6: ALONG THE ROADWAY SCORES

Factor/Criteria	Sub-Factor/CriteriaUse	Characteristic	Points Allocated
Street classifications (used to indicate traffic volumes)	Art-Class Designation	0 (Residential andNon-Arterial Commercial/ Industrial Streets)	1
		3 (Collector Arterial)	3
		2 (Minor Arterial)	4
		1 (Principal Arterial)	5
Arterial Speed limit		30+	1
		35+	3
		40+	4
		45+	5
Buffer	Buffer Width	None	10
		Narrow (1-3feet)	2
		Standard (4-6feet)	0
		Wide (>6 feet)	-5
Sidewalk Status	SidewalkWidth and Presence	Missing	20
		Narrow (>4 feet)	10
		Standard (4-6feet)	0
		Wide (>6 feet)	-10
Slope	Sidewalk Slope Analysis	Low (0 - 8%)	0
		Moderate (9 - 12%)	2
		High (13+%)	3
Parking	Calculated using regulatory signs as a proxymeasure	On-street parking	0
		No on-street parking	5
Curb		Yes	0
		No	2
Length ofBlock		Less than 600feet	0
		Morethan 600 feet	3

TABLE 7: DATA USED IN THE ANALYSIS

Data used in analysis	Components of the Along the Roadway score	Total Along the Roadway score
• Traffic Signal Point File • Street Centerline File • (SNDSEG) • Sign Point File • Speed Limit Polyline File • Street Width Polyline • Sidewalk Polyline File • Contour (Topo line for slope analysis)	• SpeedScr – Speed Limit Score • ARTScore – Arterial Classification Score • SWcond_scr – Sidewalk Status Score • Buffer_scr – Buffer Score • SlopeScr – Slope Score • Park_Scr – Parking Score • Curb_Scr – Curb Score • BlkLn_Scr – Distance Between Signals Score • Sector – Sector • Project – Project Area • CreekSub – Creek Sub Basin	TotalScore – TOTAL SCORE

Across the Roadway

Safe street crossings are an important part of an accessible pedestrian system. The presence of curb ramps and crosswalks make it more comfortable to cross a road on foot. Traffic signals and stop signs make it is easier to cross the road. A wide road is more difficult to cross than a narrow road. Likewise, a road with a lot of traffic is more difficult to cross than one with less traffic.

The Across the Roadway map groups these types of roadway characteristics together in order to compare intersections throughout the city. Points were assigned to characteristics that negatively impact crossing conditions. An intersection with a higher number of total points indicates that it is more difficult to cross than an intersection with a lower number of total points.

The Across the Roadway map reflects how comfortable it is to cross different roads in Seattle. Understanding how intersections compare to each other helps to prioritize potential projects. For example, an intersection with a traffic signal, curb ramps, and crosswalks needs less attention than one without any of these features. The largest green dots on the map indicate the highest scoring intersections.

Tables 8, 9, and 10 outline the factors that are incorporated into the Across the Roadway score and the data used in the analysis.

FIGURE 6: ACROSS THE ROADWAY MAP

TABLE 8: ACROSS THE ROADWAY, SEGMENT VALUE CALCULATION

Factor/Criteria	Sub-Factor/Criteria Use	Notes	Points Allocated
Street classifications (used to indicate traffic volumes)	Art-Class Designation	0 (Residential and Non-Arterial Commercial/ Industrial) 3 (Collector Arterial) 2 (Minor Arterial) 1 (Principal Arterial)	1 3 4 5
Arterial Speed limit		1mph-30mph 35+ 40+ 45+	1 3 4 5
Road Width		0-24 24-36 36-48 48-60 61+	0 2 4 6 10
Note: Residential areas and Interstate Highways are not counted			
Distance between traffic signals and stop signs		0-500 feet 500-1000 feet 1000-2000 feet 2000+ feet	0 2 4 5
Note: Residential areas and Interstate Highways are not counted			

TABLE 9: INTERSECTION VALUE/BALANCE CALCULATION

Factor/Criteria	Sub-Factor/ Criteria Use	Notes	Points Allocated
Average Segment Value Calculation at Intersection		Raw score	Average score
Crosswalk	Counted within 50 feet of the intersection	3/4 crosswalks per intersection 1/2 crosswalks per intersection 0 crosswalks per intersection	0 1 2
Curb Ramps		None (per missing ramp) Directional (per ramp) Diagonal (per ramp)	1 0 0.5
Signal Control		Signal Pedestrian signal None	-3 -1 3
Stop Sign Control	Counted within 100 feet of the		(-.25/stop sign)
Number of collisions at Intersection (3 years)		0 1 2-3 4+	0 5 10 20
Note: Please note that "Crossing the Roadway" scores are for intersections only.			

TABLE 10: DATA USED IN THE ANALYSIS

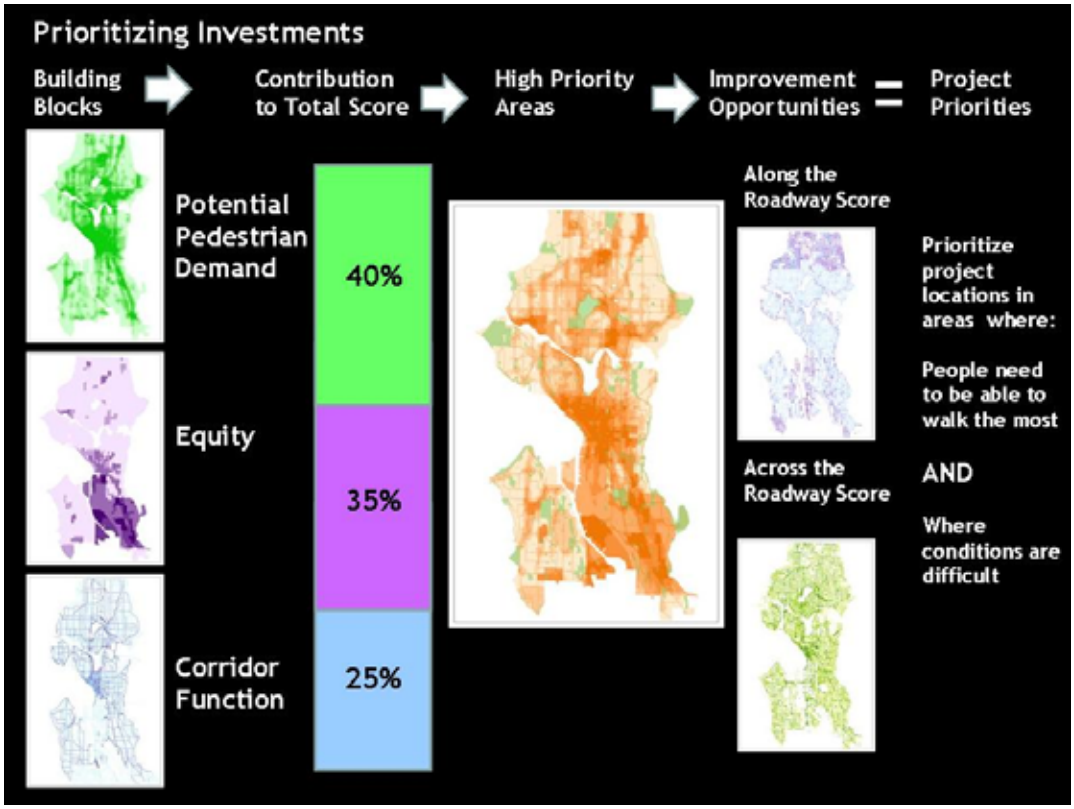
Data used in the analysis (Received from SDOT and/or SVR)	Components of the Crossing the Roadway score	Total Crossing the Roadway score
• Curb Ramp Line File • Traffic Signal Point File • 3 Year Crash Intersection • Point File • Street Centerline File • Sign Point File • Speed Limit Polyline File • Street Width Polyline File	• CW_SCR – Crosswalk Score • TrafC_Score – Traffic Signal Score • Tot_CR_Scr – Total Curb Ramp Score • Crash_Scr – Pedestrian Crash Score • AvSeg_SCR – Average Segment Score • Stop_Scr – Stop Sign Score • Sector – Sector • Project – Project Area • CreekSub – Creek Sub Basin	TotalScore – Total Score

Step 4: Development of Project Lists

The City is combining its high priority areas and improvement opportunities to focus resources in areas where conditions are difficult and where people need to be able to walk the most. The composite ranking accounts for both the quality of the pedestrian environment (supply) and anticipated pedestrian activity levels (demand). The City is also accounting for socioeconomic, health, and other factors in the analysis.

Project locations were generated using the information developed as part of the steps outlined above. The primary project location maps, which represents the City's 2030 Plan, includes roads and intersections in the highest tier of the Along the Roadway and Crossing the Roadway analysis that occurred within the highest tier of the High Priority Area analysis.

FIGURE 7: PRIORITIZING PROJECTS



The data developed as part of this plan are meant to be flexible and dynamic. As new data becomes available it can be incorporated into the framework outlined above. In addition, issue specific analyses and project lists can be developed as needed.

Some of the types of project location lists that can be developed are highlighted below.

- All locations with Along the Roadway and/or high Crossing the Roadway scores
- High priority project areas and high priority corridors can be identified, using the steps outlined above, as well as through a review of additional factors such as pedestrian crash locations and Urban Village Transit Network (UVTN) lines
- All recommendations within the high priority areas and corridors discussed above
- All missing sidewalks within high priority areas
- Locations with high Along the Roadway and/or high Crossing the Roadway scores that occur within urban villages
- All recommendations sorted by sector and/or neighborhood

Data Considerations

Preliminary recommendations for streets and intersections are included within the GIS data developed as part of the planning process. Tables 11 and 12 outline factors that led to specific recommendations contained within the data. These recommendations are based entirely on what can be surmised from the data. Additional analysis and field work will be required to determine the type of improvements that are needed.

TABLE 11: ALONG THE ROADWAY SCORE IMPROVEMENT RECOMMENDATIONS

IF	THEN
Sidewalk is Missing	Construct Sidewalk
Sidewalk is Narrow (<4')	Widen Sidewalk
Sidewalk has no Buffer	Consider Opportunity to Add Buffer
Sidewalk has no Curb	Consider Opportunity to Add Curb
High Priority Along the Roadway	Undertake a planning analysis to evaluate the range of improvements needed such as new or improved sidewalks, buffer, and on-street parking

TABLE 12: ACROSS THE ROADWAY SCORE IMPROVEMENT RECOMMENDATIONS

IF	THEN
X missing curb ramps (not on missing sidewalk segments)	Construct X Missing Curb Ramps
0-2 Crosswalks at Intersection	Evaluate Intersection for possible addition of crosswalks
2 or more collisions in 3 years	Assess intersection for possible crossing and other design improvements
High Priority Crossing the Roadway	Undertake an engineering analysis to evaluate the range of improvements needed such as signalization, pedestrian crossing islands, curb ramps, and crosswalks

Pedestrian Master Plan

APPENDIX 5: KNOWLEDGE, ATTITUDES, AND BEHAVIORS SURVEY RESPONSES

EMC RESEARCH MARKET & OPINION RESEARCH SERVICES

METHODOLOGY

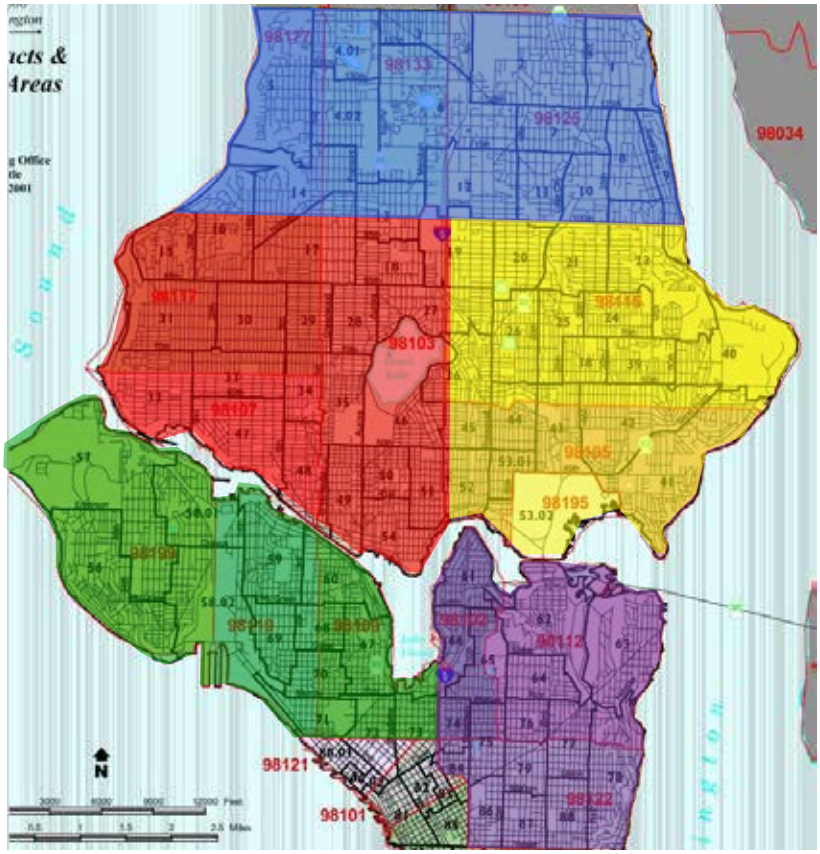
- Combined telephone and web survey of residents of the City of Seattle
  - Random Digit Dial (RDD) landline and cell phone survey of adult residents in the City of Seattle
  - Online web panel of adult residents of the City of Seattle
- Interviewing conducted December 2-16, 2014
- 700 total interviews
  - 450 Telephone
  - 250 Web Panel
- Overall margin of error: ±3.7% points at the 95% confidence interval
- Interviewing conducted by trained, professional interviewers

Please note that due to rounding, some percentages may not add up to exactly 100%.

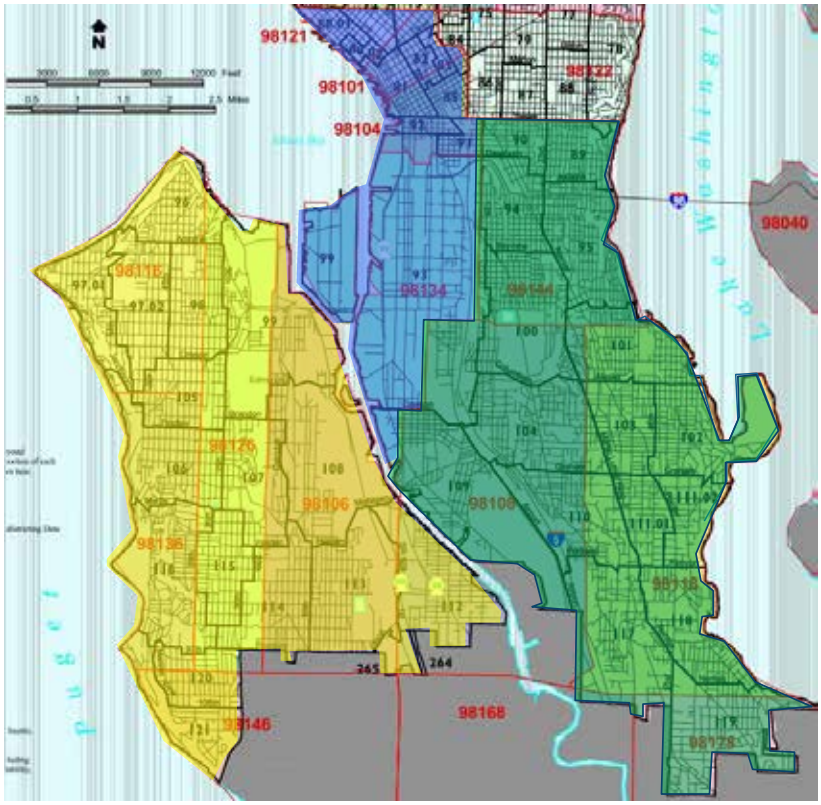
BREAKDOWN OF INTERVIEWS BY AREA

Area	# of Interviews	% of Total
Downtown	44	6%
East	95	14%
North	75	11%
Northeast	85	12%
Northwest	118	17%
Southeast	99	14%
Southwest	110	16%
West	75	11%
TOTAL	**700**	**100**

GEOGRAPHIC AREAS



- North
- Northwest
- Northeast
- West
- East



- Downtown
- Southeast
- Southwest

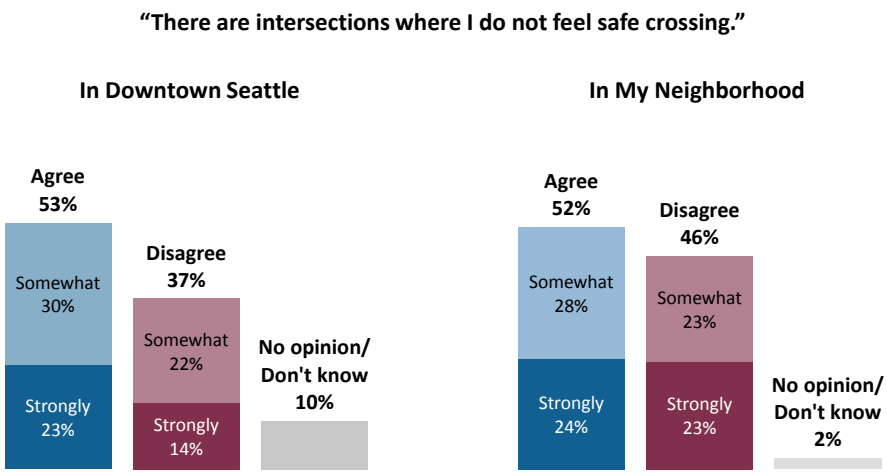
CONCERN ABOUT PEDESTRIAN SAFETY

KEY FINDINGS

- A majority of Seattle residents are concerned about safety at pedestrian intersections downtown (53%) and in their neighborhood (52%).
    - There has been a significant increase in concern about pedestrian safety at downtown intersections (2008: 41% / 2014: 53%) with a majority now agreeing that there are downtown intersections where they do not feel safe crossing.
    - Among those residents who have concerns about the safety of downtown intersections, the top suggestion for improving safety is "more/better stop lights/signs" followed by mentions about intersection marking and visibility.
    - Residents in Downtown Seattle are most concerned about neighborhood intersection safety (65%) and a majority in 6 of 8 areas express concern about their neighborhood intersections.
    - Residents in East and North Seattle are less concerned about their neighborhood intersections.
    - Overall concern about neighborhood intersection safety has not changed much since 2008.
- Six-in-ten residents (59%) think overall pedestrian safety is a problem in Seattle.
    - Overall concern about pedestrian safety is significantly higher than in 2008 (2008: 47% / 2014: 59%) .
    - The greatest level of concern about overall pedestrian safety is in NW Seattle. Strong majorities in 6 of 8 areas are concerned. Downtown residents are divided.
    - A majority in all key subgroups are concerned about pedestrian safety. However, men, both younger and older, are less concerned about pedestrian safety than women, and those who have had a close call either as a pedestrian or a driver are more concerned than those who have not had a close call.

INTERSECTION SAFETY

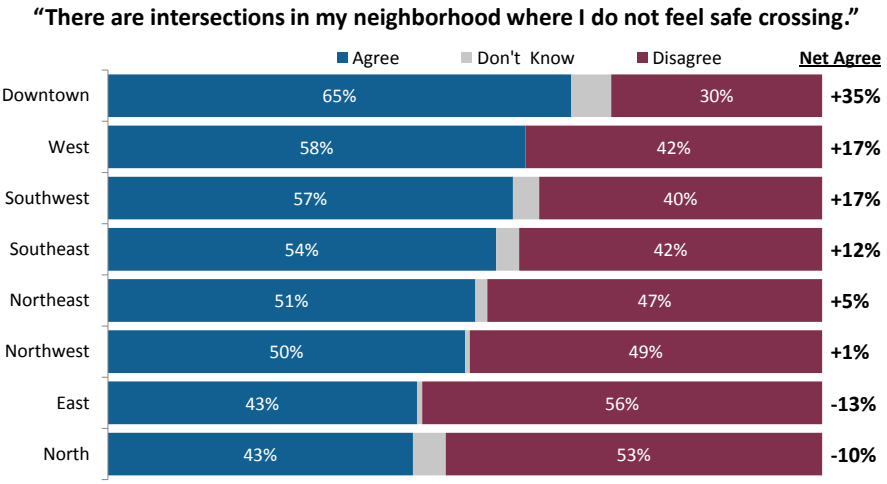
A majority of Seattle residents are concerned about safety at pedestrian intersections downtown and in their neighborhood.



Q10. As a pedestrian, there are intersections in downtown Seattle where I do not feel safe crossing
Q11. There are intersections in my neighborhood where I do not feel safe crossing

NEIGHBORHOOD INTERSECTION SAFETY –BY AREA

Residents in Downtown Seattle are most concerned about the safety of their neighborhood intersections and a majority in 6 of 8 areas express concern about their neighborhood intersections. Residents in East and North Seattle are less concerned about their neighborhood intersections.

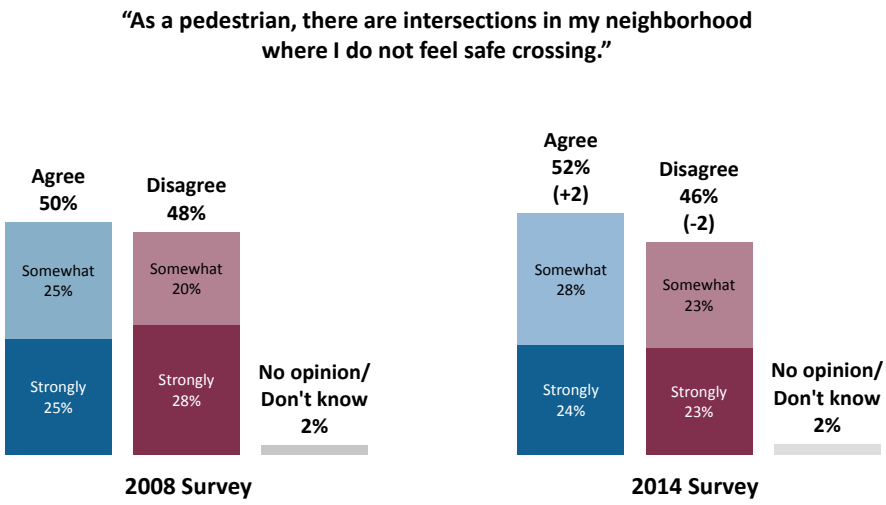


Q11. There are intersections in my neighborhood where I do not feel safe crossing

NEIGHBORHOOD INTERSECTION SAFETY –TREND

Overall concern about the safety of neighborhood intersections has not changed much since 2008.

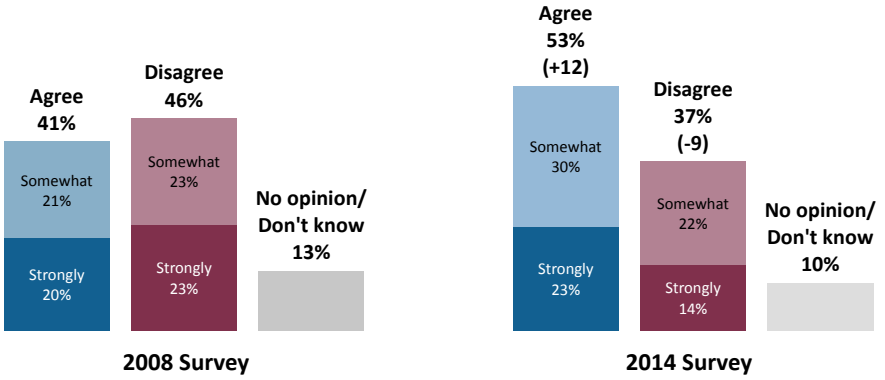
Q11. There are intersections in my neighborhood where I do not feel safe crossing



DOWNTOWN INTERSECTION SAFETY –TREND

There has been a significant increase in concern about pedestrian safety at downtown intersections with a majority now agreeing that there are downtown intersections where they do not feel safe crossing.

Q10. As a pedestrian, there are intersections in downtown Seattle where I do not feel safe crossing



POTENTIAL INTERSECTION SAFETY IMPROVEMENTS

Among those residents who have concerns about the safety of downtown intersections, the top suggestion for improving safety is "more/better stop lights/signs" followed by mentions about intersection marking and visibility.

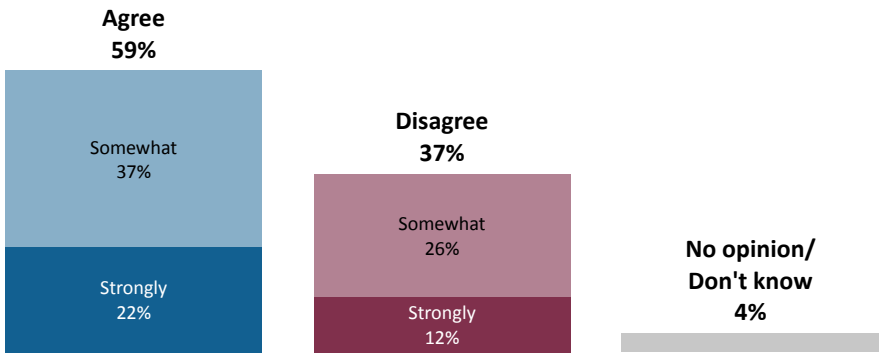
What would make you feel safer?	*%*
More/better stop lights/signs	30%
Better marked/more clearly marked crosswalks/signs	19%
Better/more lighting	15%
More crosswalks	12%
More law enforcement/Police presence	12%
Flashing lights	8%
Slower speed limits/Speed bumps	8%
Longer crossing lights	7%
Drivers/Pedestrians be more alert/aware	5%
Increase visibility	5%
Bright colored flags for crossing	4%
More sidewalks	3%
No 'right on red' at crosswalks	2%
Education for drivers/pedestrians	2%
Pedestrian crossing button	2%
None	6%
Other (less than 2%)	19%

Q12. What are some things that could be done to make you feel safer when crossing at these intersections?

OVERALL CONCERN ABOUT PEDESTRIAN SAFETY IN SEATTLE

Six-in-ten residents think pedestrian safety is a problem in Seattle. (NOTE: This question was asked in the negative –"Pedestrian safety is NOT THAT big of a problem here in Seattle" –but is reported in the reverse –"Pedestrian safety is a big of a problem here in Seattle" to simplify analysis.)

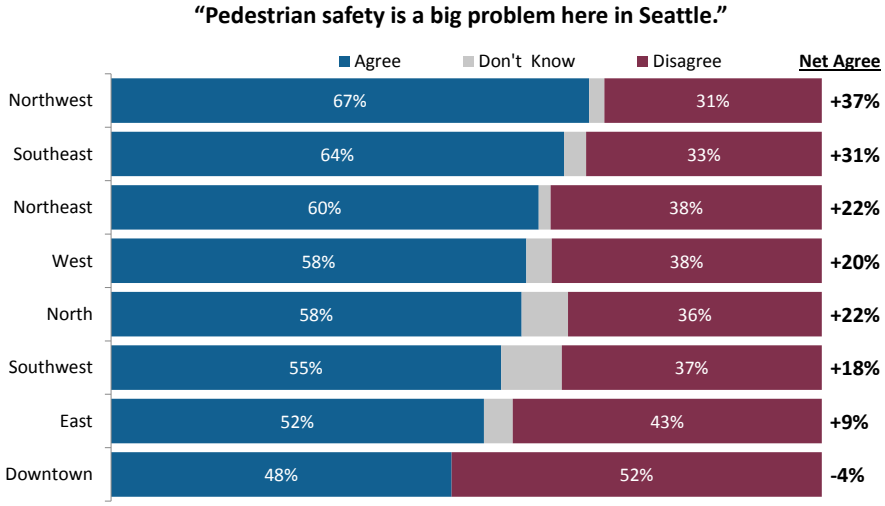
"Pedestrian safety is a big problem here in Seattle."



Q13. Pedestrian safety is [not that]* big of a problem here in Seattle (*data and question reversed)

CONCERN ABOUT PEDESTRIAN SAFETY – BY AREA

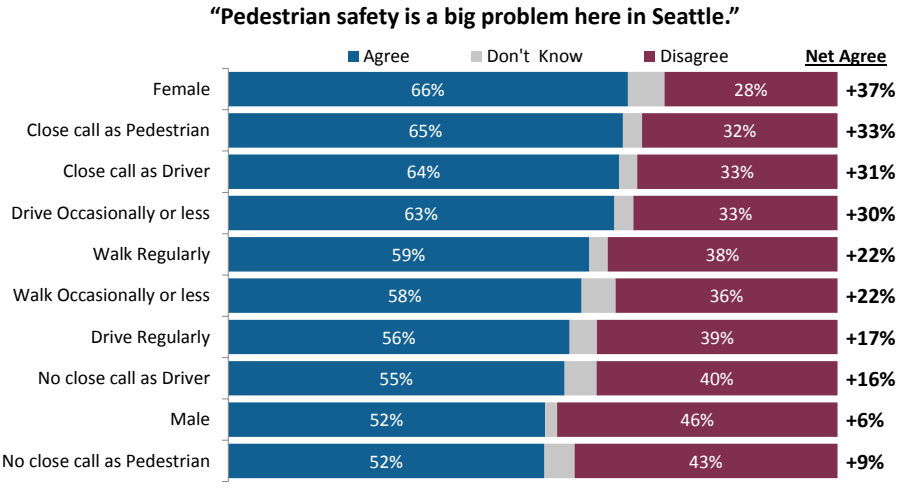
The greatest level of concern about pedestrian safety is in Northwest Seattle. Strong majorities in 6 of 8 areas are concerned. Downtown residents are divided over whether or not pedestrian safety is a problem in Seattle.



Q13. Pedestrian safety is [not that]* big of a problem here in Seattle (*data and question reversed)

CONCERN ABOUT PEDESTRIAN SAFETY – BY SUBGROUP

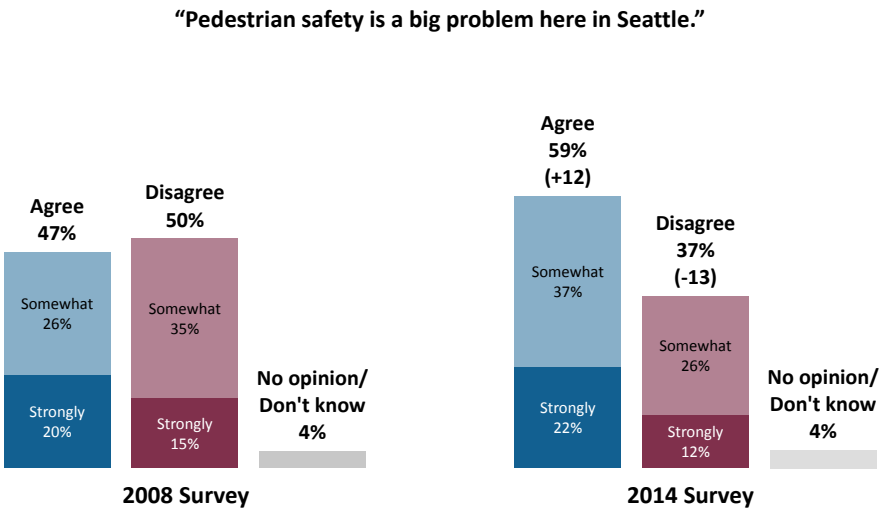
A majority in all key subgroups are concerned about pedestrian safety. However, men, both younger and older, are less concerned about pedestrian safety than women, and those who have had a close call either as a pedestrian or a driver are more concerned than those who have not had a close call.



Q13. Pedestrian safety is [not that]* big of a problem here in Seattle (*data and question reversed)

CONCERN ABOUT PEDESTRIAN SAFETY –TREND

Overall concern about pedestrian safety in Seattle in significantly higher than in 2008.



Q13. Pedestrian safety is [not that]* big of a problem here in Seattle (*data and question reversed)

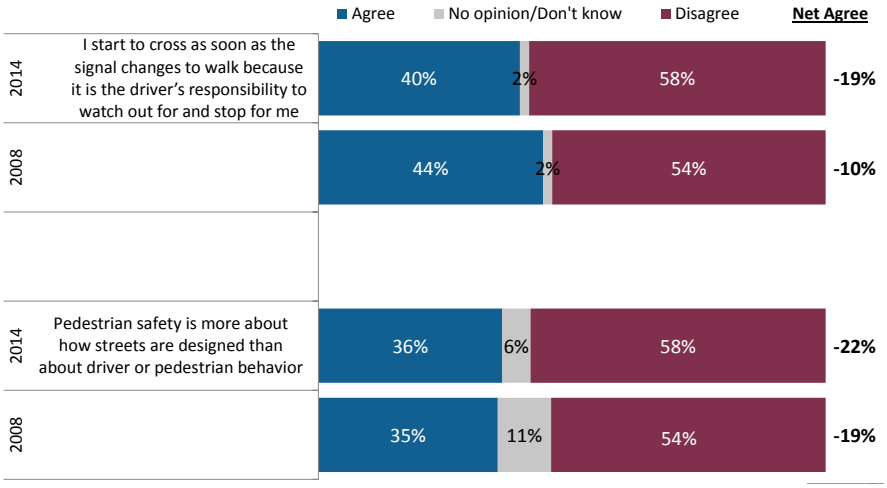
ATTITUDES ABOUT WALKING & DRIVING

KEY FINDINGS

- A majority of residents (58%) do notfeel it is solely the driver's responsibility to watch out and stop for them when crossing. However, four-in-ten (40%) do feel it is the driver's responsibility.
    - The less a resident drives the more likely they are to agree that it is "the driver's responsibility to watch out for and stop for me," although non-drivers are the only subgroup where a majority agree it is the driver's responsibility. Age is also a significant factor in attitudes, with younger residents more likely to believe it is the driver's responsibility –even though younger and older resident have similar driving profiles.
- A majority (58%) disagree that pedestrian safety is more about design than driver/pedestrian behavior.
- Strong majorities continue to agree that they see both drivers (82%) and pedestrians (84%) who do not pay enough attention.
- A strong majority (63%) feel that drivers go too fast in their neighborhood, although agreement is down from 2008 (70%). Residents are not as concerned about drivers going too fast in downtown, but still close to half (47%) express concern.
- Two thirds (68%) of residents continue to support stronger enforcement on unsafe drivers and a majority (55%) now agree that the risk for getting caught speeding in Seattle is small.
- Most drivers (73%) agree that they worry about hitting a pedestrian and concern has increased somewhat since 2008 (68%).
- Most pedestrians (74%) continue to feel that crossing signals give them enough time to cross safely.
- A majority of residents (59%) say people riding bikes on sidewalks make them uncomfortable when walking.
- Most residents (70%) say they feel safe walking to and from their transit stop.

ATTITUDES ABOUT RESPONSIBILITY –TREND

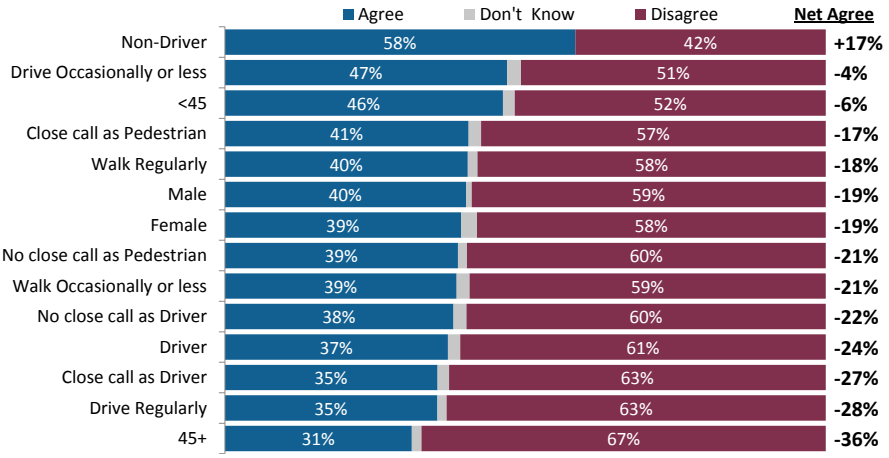
A majority of residents do notfeel that it is solely the driver's responsibility to watch out and stop for them when crossing. However, four-in-ten pedestrians do feel it is the driver's responsibility. A majority also disagree that pedestrian safety is more about design than driver/pedestrian behavior.



Q20. I start to cross as soon as the signal changes to walk because it is the driver's responsibility to watch out for and stop for me
Q19. Pedestrian safety is more about how streets are designed than about driver or pedestrian behavior

DRIVER'S RESPONSIBILITY TO WATCH OUT FOR ME –BY SUBGROUP

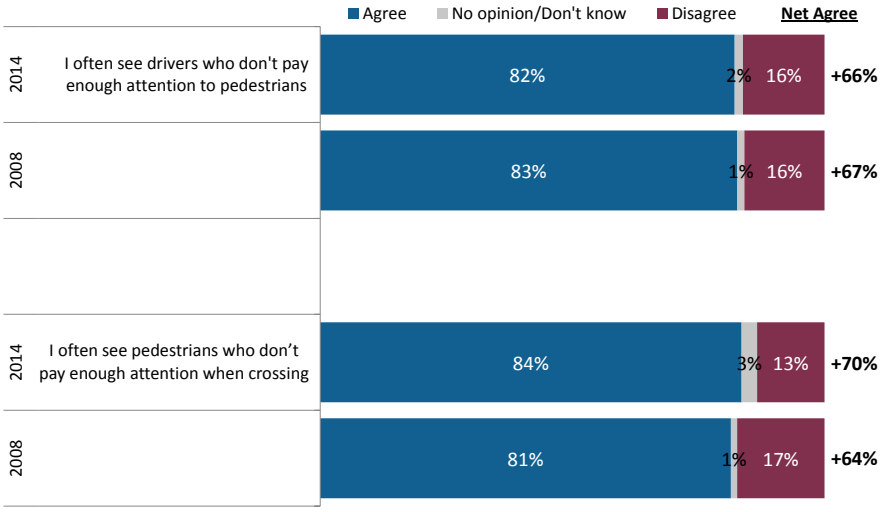
The less a resident drives the more likely they are to agree that it is "the driver's responsibility to watch out for and stop for me," although non-drivers are the only subgroup where a majority agree it is the driver's responsibility. Age is also a significant factor in attitudes, with younger residents more likely to believe it is the driver's responsibility –even though younger and older resident have similar driving profiles.



Q20. I start to cross as soon as the signal changes to walk because it is the driver's responsibility to watch out for and stop for me

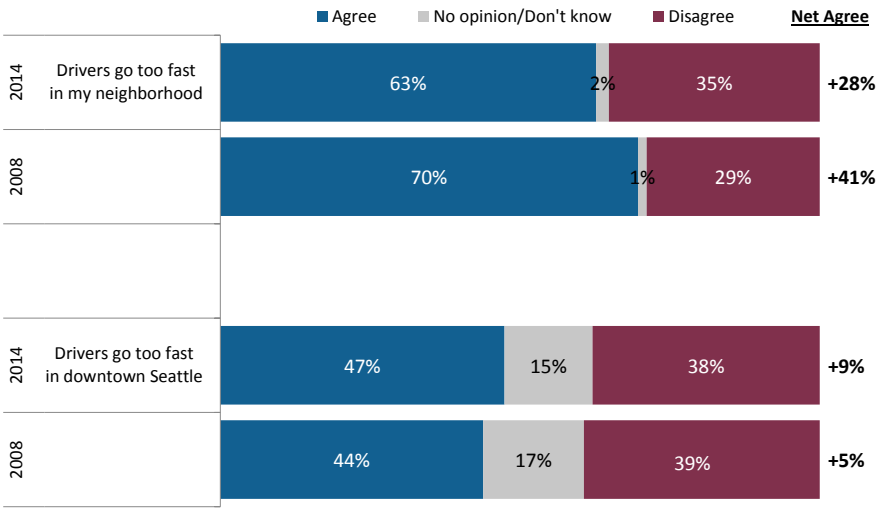
NOT PAYING ATTENTION –TREND

Strong majorities continue to agree that they see both drivers and pedestrians who do not pay enough attention.



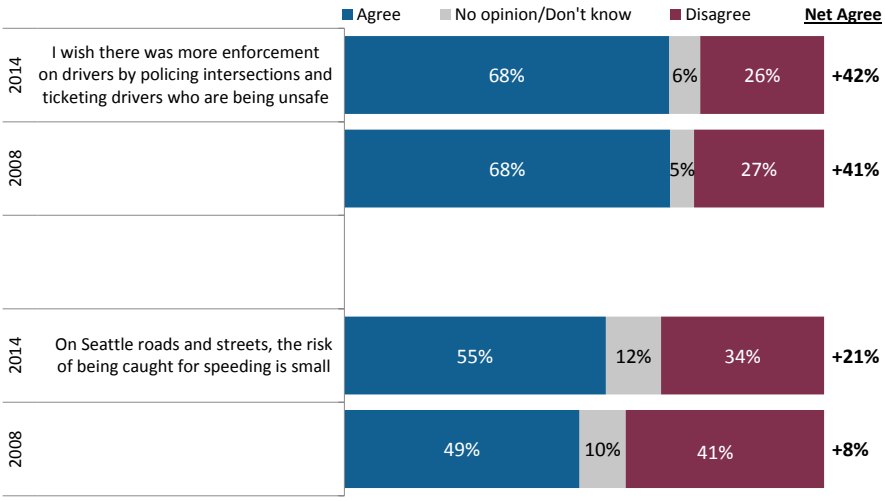
DRIVERS GO TOO FAST –TREND

A strong majority feel that drivers go too fast in their neighborhood, although agreement is down from 2008. Residents are not as concerned about drivers going too fast in downtown, but still close to half express concern.



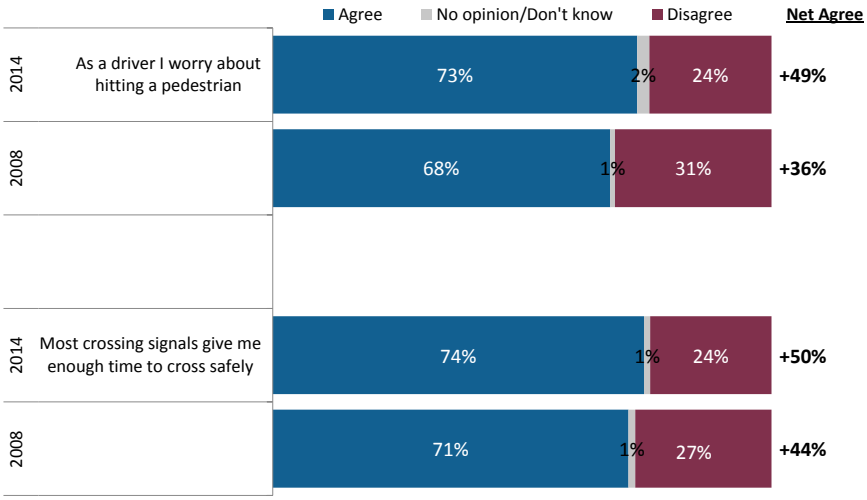
ENFORCEMENT –TREND

Two thirds of residents continue to support stronger enforcement on unsafe drivers and a majority now agree that the risk for getting caught speeding in Seattle is small.



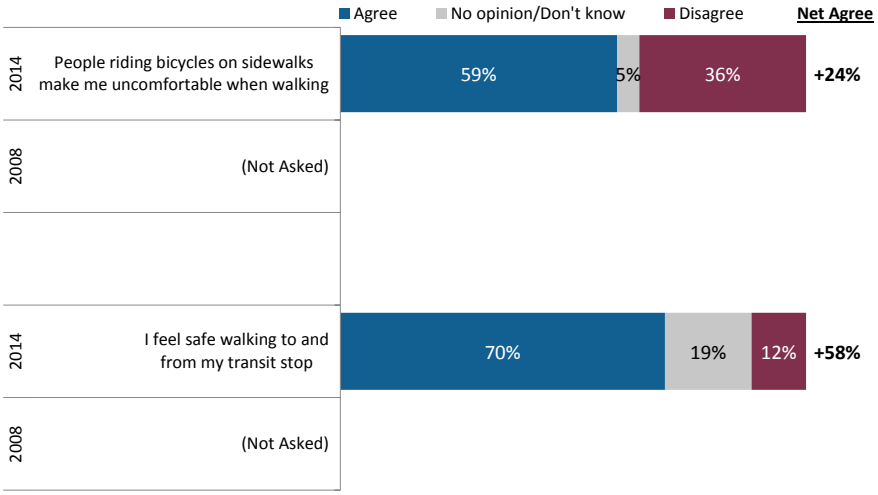
OTHER ATTITUDES –TREND

Most drivers agree that they worry about hitting a pedestrian and concern has increased somewhat since 2008. Most pedestrians continue to feel that crossing signals give them enough time to cross safely.



OTHER QUESTIONS

A majority of residents say people riding bikes on sidewalks make them uncomfortable when walking. Most residents say they feel safe walking to and from their transit stop.



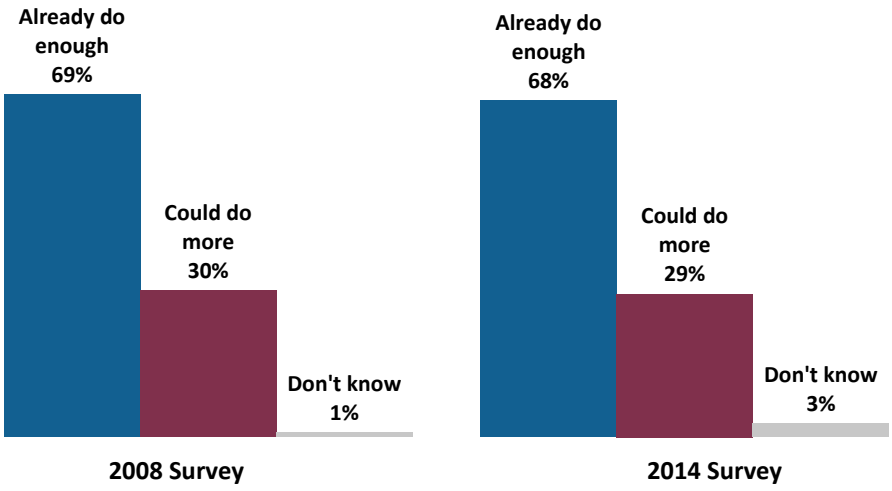
DRIVING BEHAVIOR

KEY FINDINGS

- Most drivers (68%) continue to say that they already do enough to stop for pedestrians. Just under a third (29%) say they could do more to reduce the likelihood of a collision.
  - Among those residents who feel they could do more as a driver, the top suggestions are about being more aware and watchful.
- For most driver behaviors, the percentage engaging in sub-optimal behavior is statistically unchanged from 2008. Two behaviors –not stopping for pedestrians at intersections with no light/sign and not checking left and right on a green light –have increased slightly, and one –using a cell without a headset –has decreased slightly.
  - The most frequent sub-optimal behaviors continue to be pulling into the crosswalk to turn on a red light, turning before pedestrians are at least a full lane away, and texting/looking at their phone when driving.

SELF-ASSESSMENT AS A DRIVER

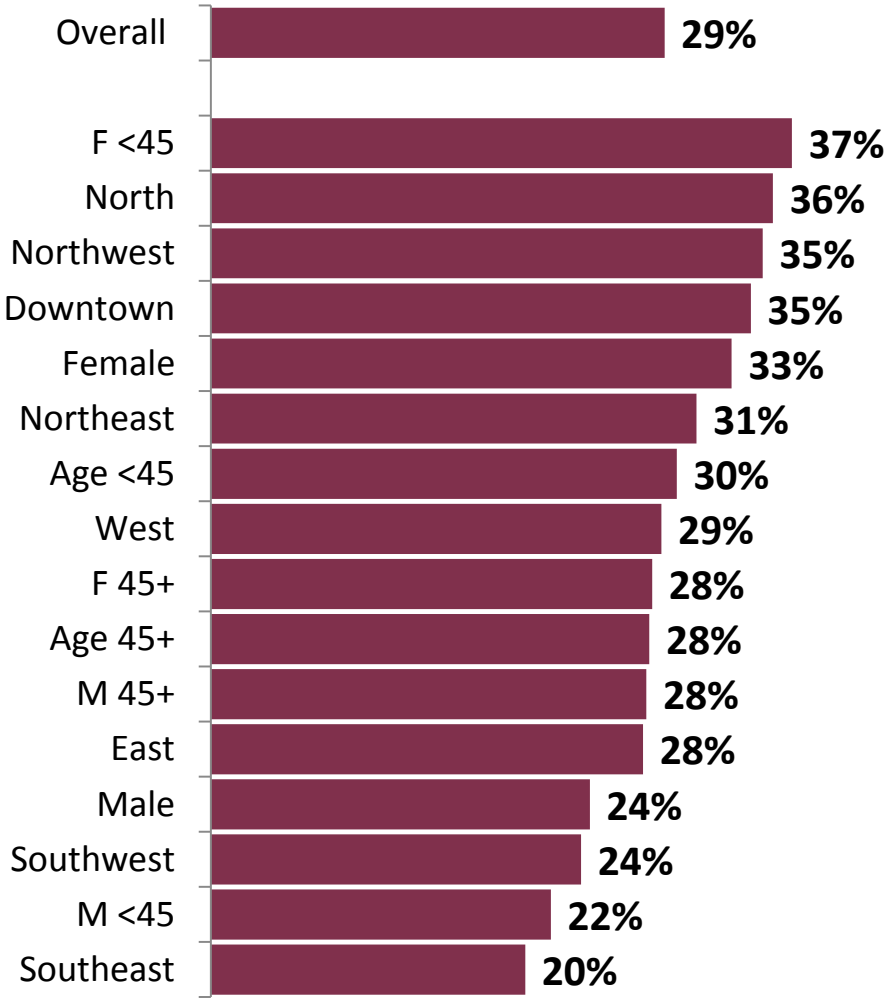
Most drivers continue to say that they already do enough to stop for pedestrians. Just under a third say they could do more to reduce the likelihood of a collision.



Q26. If you had to rate yourself overall as a driver, would you say that you already do enough to stop for pedestrians, or do you think you could do more to reduce the likelihood of a collision?

COULD DO MORE A DRIVER –BY SUBGROUP

Younger women and residents in North Seattle are the most likely to say they could do moreas a driver to reduce the likelihood of a collision with a pedestrian.



Q26. If you had to rate yourself overall as a driver, would you say that you already do enough to stop for pedestrians, or do you think you could do more to reduce the likelihood of a collision?

WHAT ELSE COULD YOU BE DOING?

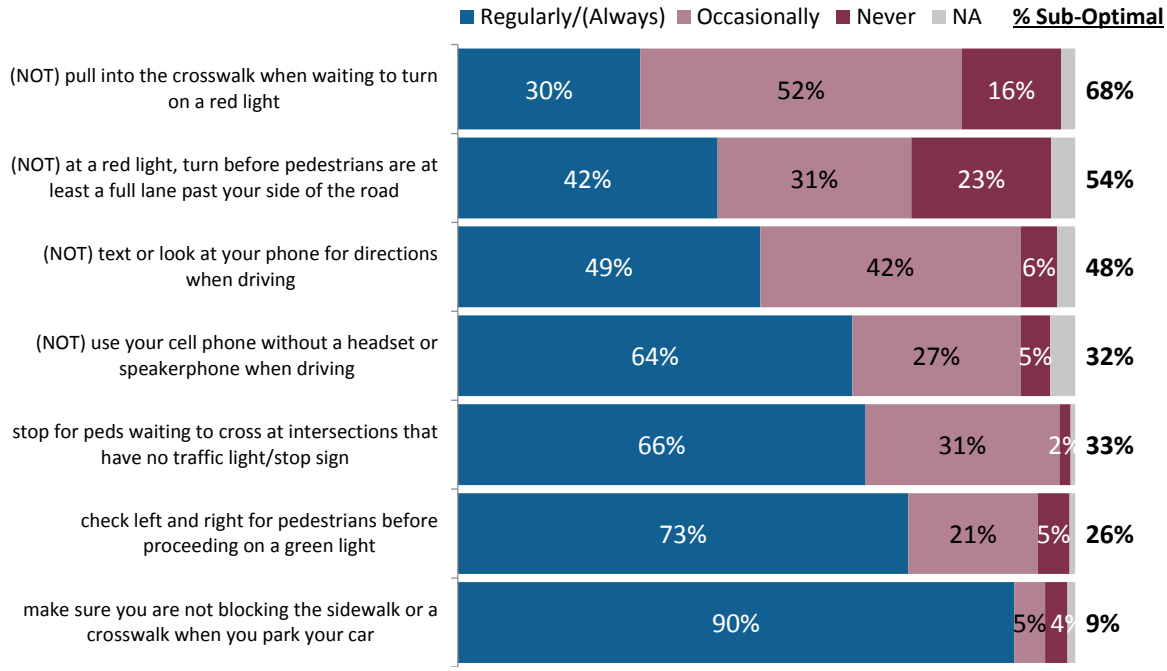
Among those residents who feel they could do more as a driver, the top suggestions are about being more aware and watchful.

What else do you think you could be doing? (n=179)	%
Be aware/alert	38
Watch for pedestrians/crosswalks	26
Drive slower	12
Avoid cellphones/distractions	5
Obey the laws	3
None	2
Other	11
Refused/Don't Know	3

Q27. What else do you think you could be doing?

ENGAGING IN OPTIMAL DRIVER BEHAVIOR

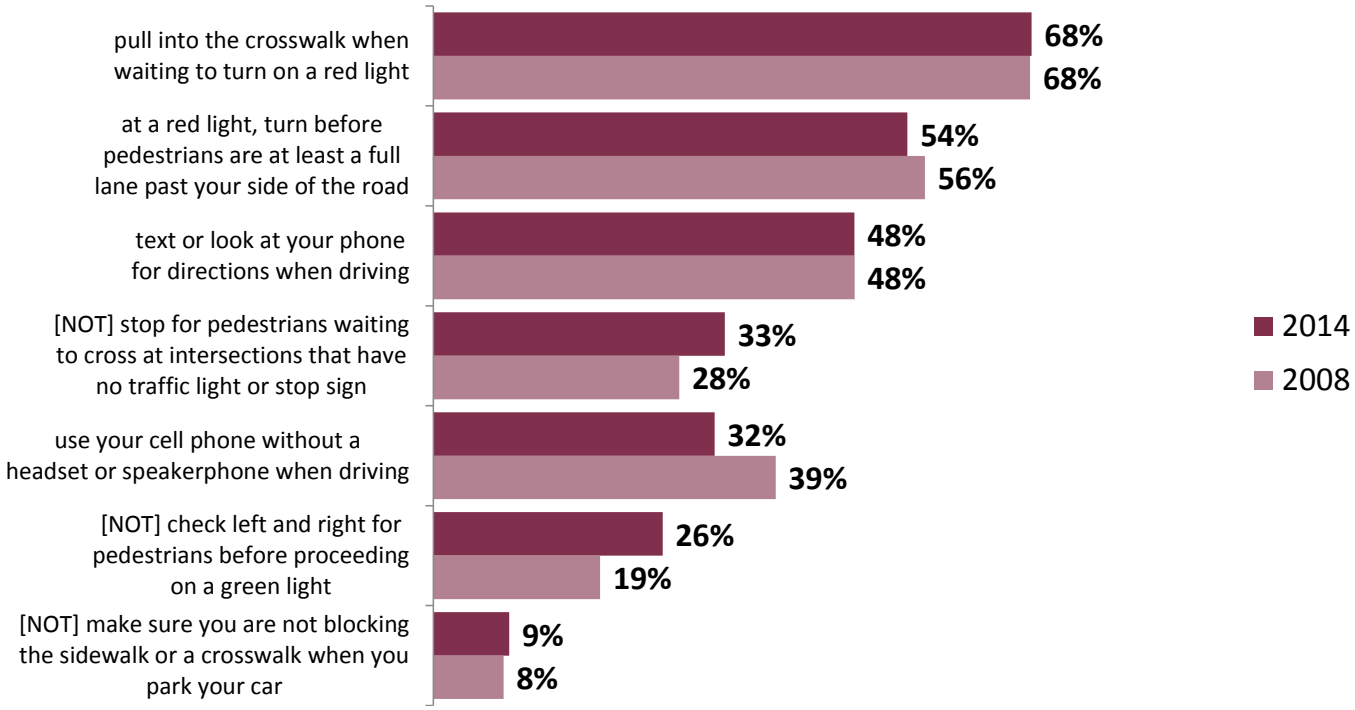
The most frequent sub-optimal behaviors are pulling into the crosswalk to turn on a red light, turning before pedestrians are at least a full lane away, and texting/looking at their phone when driving.



Q28-34. How often do you...? Would you say regularly, occasionally, or never?

SUB-OPTIMAL DRIVER BEHAVIOR –TREND

For most driver behaviors, the percentage engaging in sub-optimal behavior is statistically unchanged from 2008. Two behaviors –not stopping for pedestrians at intersections with no light/sign and not checking left and right on a green light –have increased slightly, and one –using a cell without a headset –has decreased slightly. The most frequent sub-optimal behaviors continue to be pulling into the crosswalk to turn on a red light, turning before pedestrians are at least a full lane away, and texting/looking at their phone when driving.



Q28-34. How often do you…? Would you say regularly, occasionally, or never?

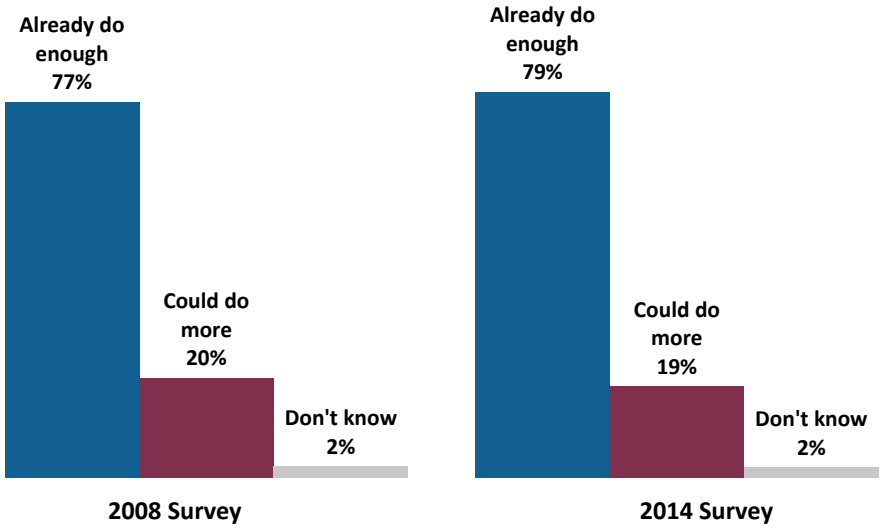
PEDESTRIAN BEHAVIOR

KEY FINDINGS

- Most pedestrians (79%) continue to say that they already do enough to be safe and pay attention to vehicles. One-in-five (19%) say they could do more to reduce the likelihood of a collision.
- The most frequent sub-optimal behaviors for pedestrians are crossing between intersections and starting to cross when the "don't walk" signal is blinking. Most pedestrians say they stay alert for cars when crossing.
    - For most pedestrian behaviors measured, the percentage of residents engaging in sub-optimal behavior is up slightly from 2008.
    - The most frequent sub-optimal behaviors continue to be crossing between intersections and starting to cross when the "don't walk" signal is blinking.

SELF-ASSESSMENT AS A PEDESTRIAN –TREND

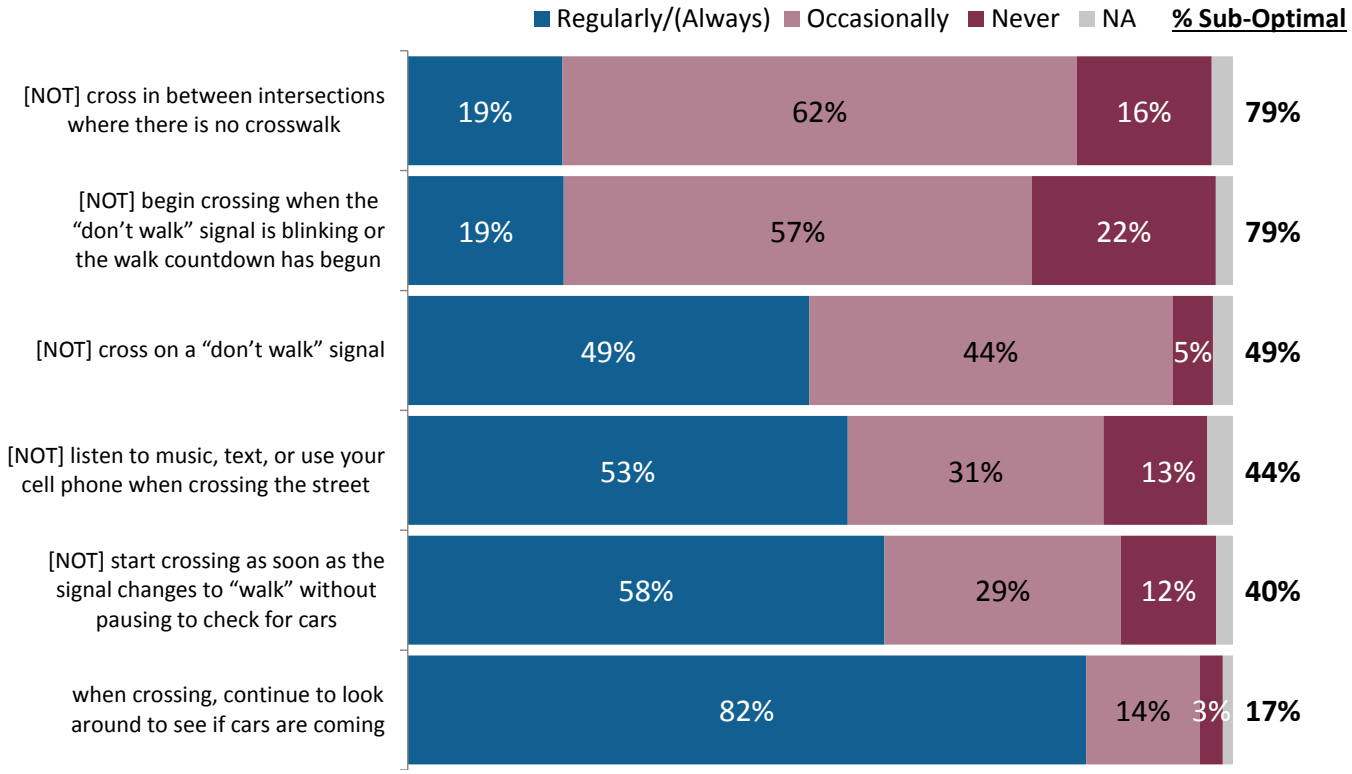
Most pedestrians continue to say that they already do enough to be safe and pay attention to vehicles. One-in-five say they could do more to reduce the likelihood of a collision.



Q35. If you had to rate yourself overall as a pedestrian, would you say that you already do enough to be safe and pay attention to vehicles, or do you think you could do more to reduce the likelihood of a collision?

ENGAGING IN OPTIMAL PEDESTRIAN BEHAVIOR

The most frequent sub-optimal behaviors for pedestrians are crossing between intersections and starting to cross when the "don't walk" signal is blinking. Most pedestrians say they stay alert for cars when crossing.



Q28-34. How often do you...? Would you say regularly, occasionally, or never?

SUB-OPTIMAL PEDESTRIAN BEHAVIOR –TREND

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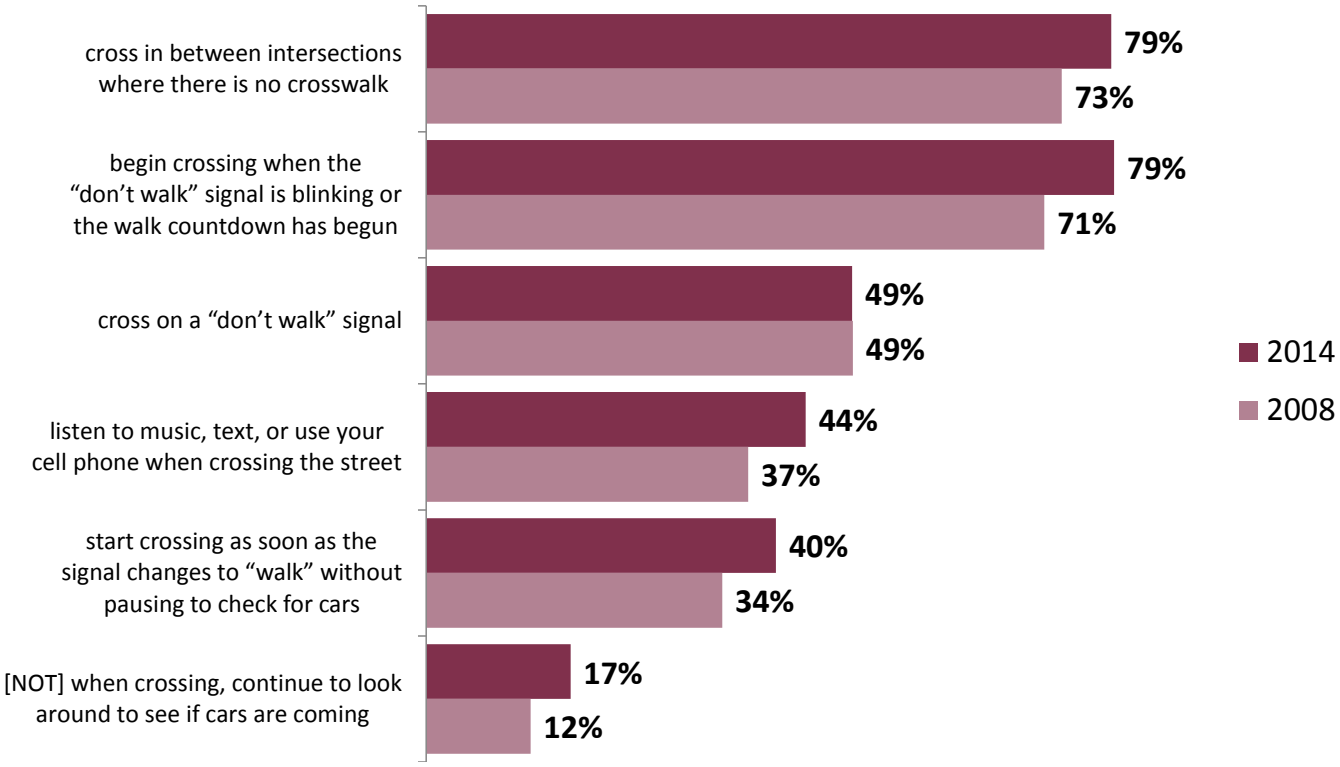


Q28-34. How often do you…? Would you say regularly, occasionally, or never?

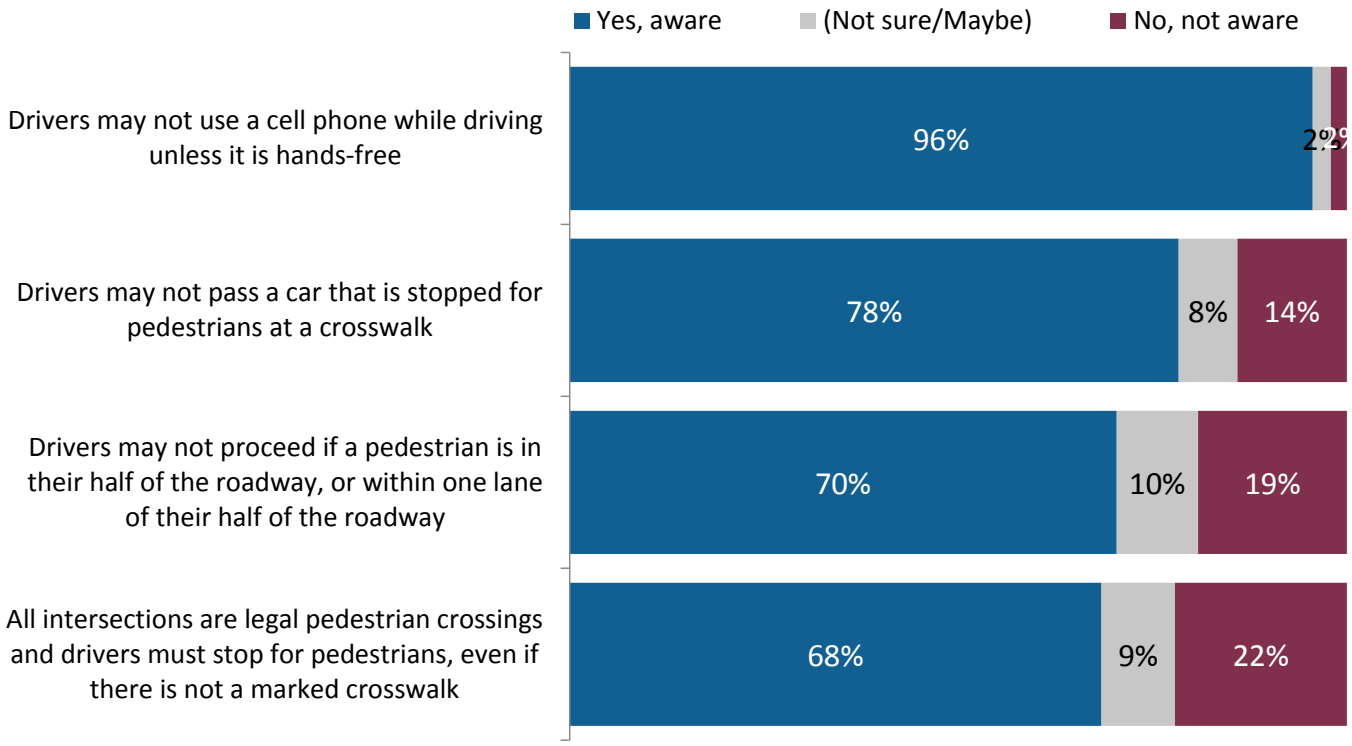
AWARENESS OF VEHICLE/PEDESTRIAN REGULATIONS

KEY FINDINGS

- Two-thirds or more of residents (68%+) say they are aware of each of the four vehicle/pedestrian regulations asked about in the survey. Awareness of hands-free cell phone requirements is the highest (96%).
    - Awareness is similar to 2008, although it has dropped somewhat for "drivers may not proceed if a pedestrian is in their half of the roadway, or within one lane of their half of the roadway."
    - Drivers who are aware that all intersections are legal pedestrian crossings are much more likely to regularly or always stop for pedestrians waiting to cross at intersections that have no traffic light or stop sign (73% vs. 49%).
    - Drivers who are aware that they may not proceed if a pedestrian is in their half of the roadway, or within one lane of their half of the roadway are much less likely to turn before pedestrians are at least a full lane past your side of the road (48% vs. 27%).
    - When asked the most effective way to reduce vehicle-pedestrian collisions, top mentions were for drivers and pedestrians to be more alert/aware and to have more law enforcement/police presence.

AWARENESS OF VEHICLE/PEDESTRIAN REGULATIONS

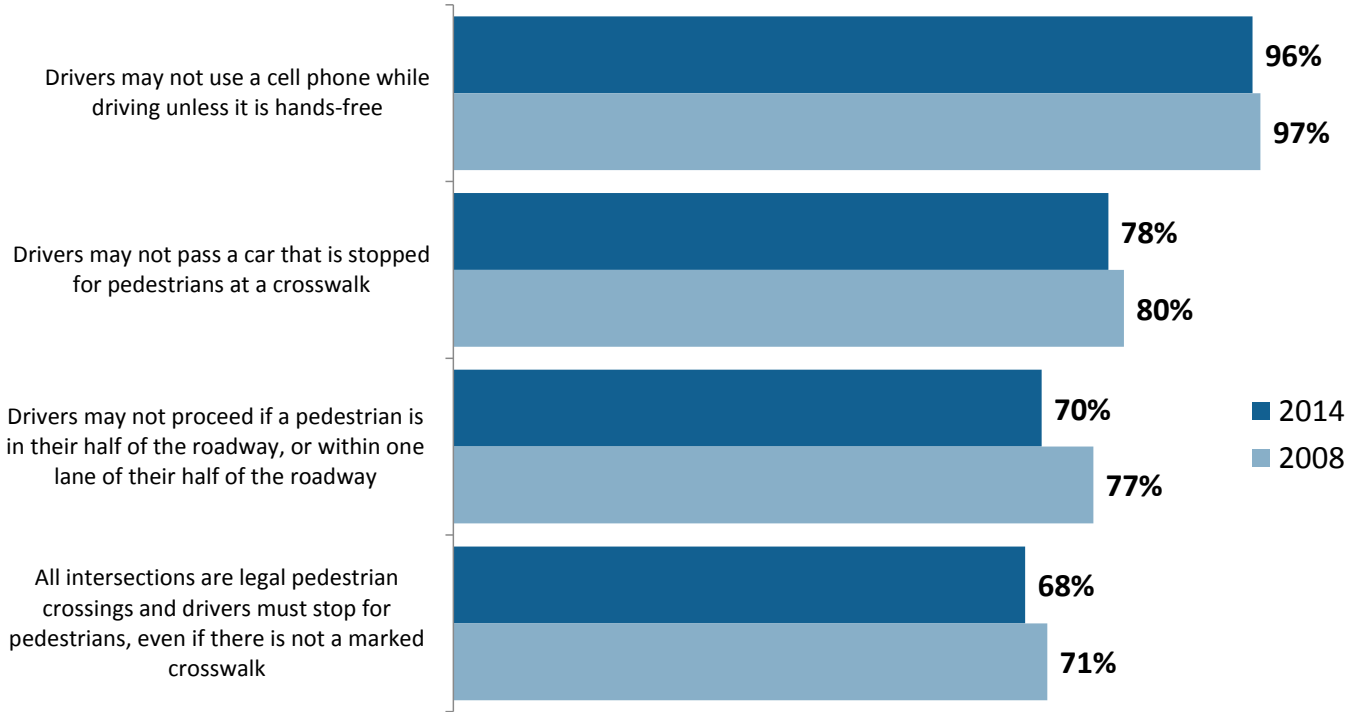
Two-thirds or more of residents say they are aware of each of the four vehicle/pedestrian regulations asked about in the survey. Awareness of hands free cell phone requirements is the highest.



Q42-45. To help with planning, the City is trying to better understand residents' familiarity with vehicle and pedestrian regulations. For each of the following please tell me if you are aware of that regulation or not. Again we are trying to understand how to improve communications efforts, not test for right or wrong answers, so if you are not aware of a particular regulation, please just say so. Were you aware of this regulation or not?

AWARENESS OF VEHICLE/PEDREGULATIONS –TREND

Awareness is similar to 2008, although it has dropped somewhat for "drivers may not proceed if a pedestrian is in their half of the roadway, or within one lane of their half of the roadway."



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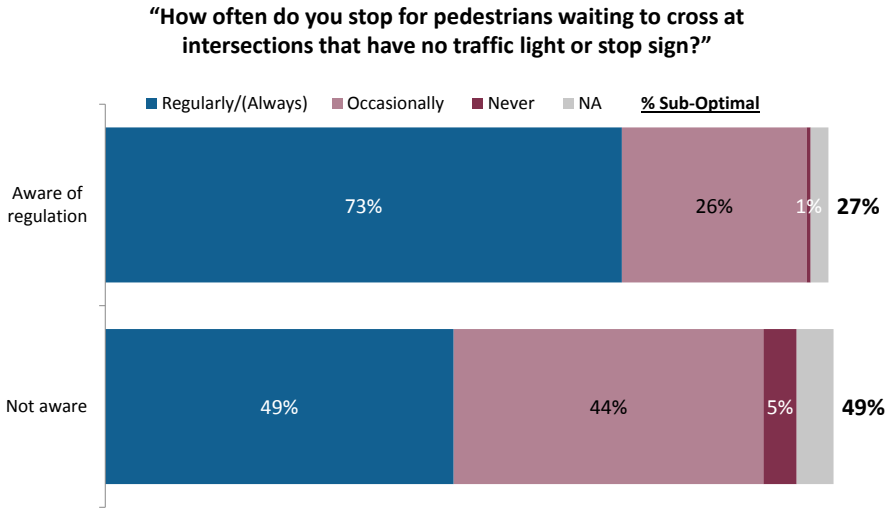
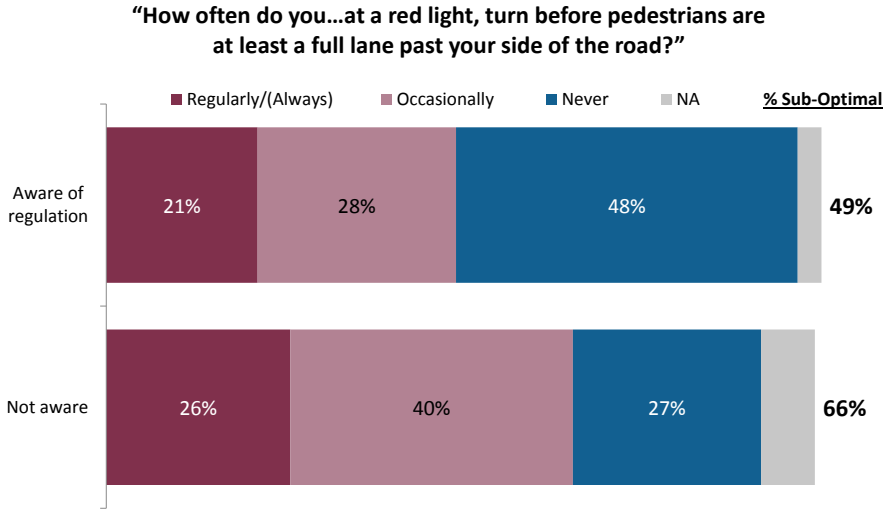
AWARENESS VS. BEHAVIOR

Drivers who are aware that all intersections are legal pedestrian crossings are much more likely to regularly or always stop for pedestrians waiting to cross at intersections that have no traffic light or stop sign.



Q31. How often do you stop for pedestrians waiting to cross at intersections that have no traffic light or stop sign?
Q45. Were you aware of this regulation or not -All intersections are legal pedestrian crossings and drivers must stop for pedestrians, even if there is not a marked crosswalk?

Drivers who are aware that they may not proceed if a pedestrian is in their half of the roadway, or within one lane of their half of the roadway are much less likely to turn before pedestrians are at least a full lane past your side of the road.



Q30. How often do you, at a red light, turn before pedestrians are at least a full lane past your side of the road?
Q44. Were you aware of this regulation or not -Drivers may not proceed if a pedestrian is in their half of the roadway, or within one lane of their half of the roadway?

REDUCING VEHICLE-PEDESTRIAN COLLISIONS

When asked the most effective way to reduce vehicle-pedestrian collisions, top mentions were for drivers and pedestrians to be more alert/aware and to have more law enforcement/police presence.

Q46. Given everything you have heard in this survey, what do you think is the most effective way to reduce vehicle-pedestrian collisions?

	What do you think is the most effective way to reduce vehicle-pedestrian collisions?	*2008 %*	*2014 %*
	Drivers/Pedestrians be more alert/aware	19	39
	More law enforcement/Police presence	10	16
	Education for drivers/pedestrians	14	15
	Avoid cell phones/distractions	6	11
	Better marked/more clearly marked crosswalks/signs	7	9
	Better/more lighting	-	8
	Slower speed limits/Speed bumps	4	6
	More/better stop lights/signs	-	5
	More crosswalks	3	4
	Increase visibility	-	3
	Longer crossing lights	-	3
	Flashing lights	2	3
	None	2	2
	Other	23	17
	Refused/Don't Know	4	4

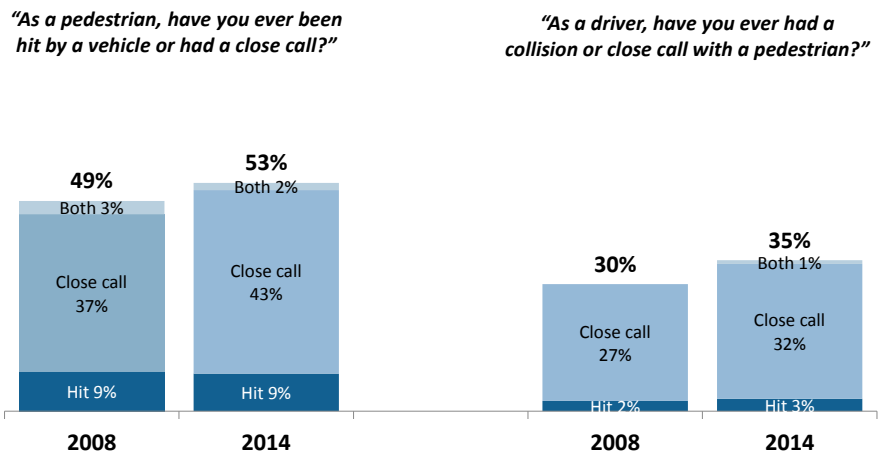
TRAVEL PROFILE

KEY FINDINGS

- Just over half of residents (53%) say they have had a close call or collision as a pedestrian, which is a slight increase compared to 2008 (49%).
- About a third of drivers (35%) say they have had a close call with a pedestrian. This is a slight increase compared to 2008 (30%).
- Most residents (80%) drive at least occasionally.
    - Residents who live downtown are the least likely to drive regularly or occasionally (49%).
- Most residents (63%) consider themselves at least "occasional walkers."
    - Downtown residents are the most likely to be regular walkers.
- There has been a marginal decrease in the average number of days residents travel outside the home for work, school, or volunteer activities (4.87 vs. 4.92).
- Travel modes are very similar to 2008 with a slight increase in the percentage of residents who drive alone and a slight decrease in carpooling/vanpooling. Walking is also up slightly.
- A majority of residents in 5 of 8 areas drive alone for their usual commute.
    - Downtown has the lowest percentage of residents who drive alone and the highest transit and walking percentages. Northwest Seattle has the highest percentage of bike commuters.
- The citywide average is 1.6 working vehicles per household.
    - Residents in south Seattle average close to two working vehicles while Downtown residents average less then one vehicle per household.

CLOSE CALL OR COLLISION –TREND

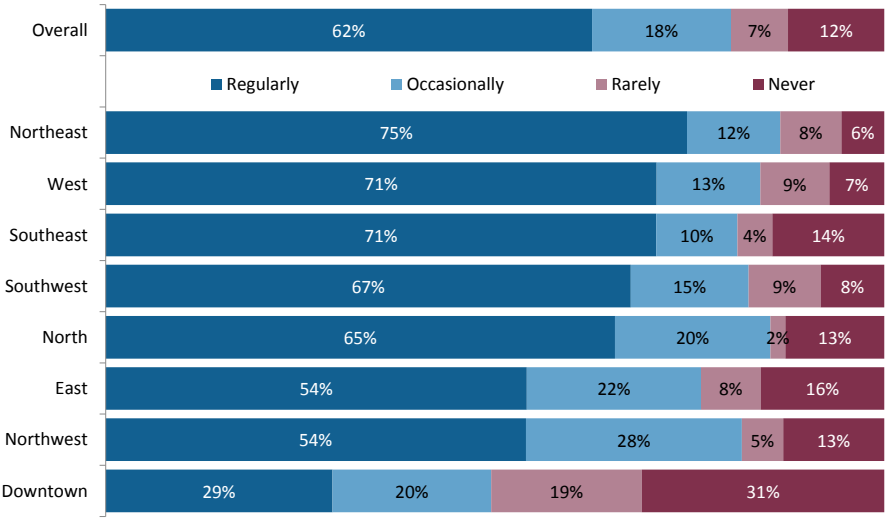
Just over half of residents say they have had a close call or collision as a pedestrian, which is a slight increase compared to 2008. About a third of drivers say they have had a close call with a pedestrian. This is also a slight increase compared to 2008.



Q47. As a pedestrian, have you ever been hit by a vehicle or had a close call?
Q48. [IF DRIVER=True]As a driver, have you ever had a collision or a close call with a pedestrian?

DRIVING FREQUENCY –BY AREA

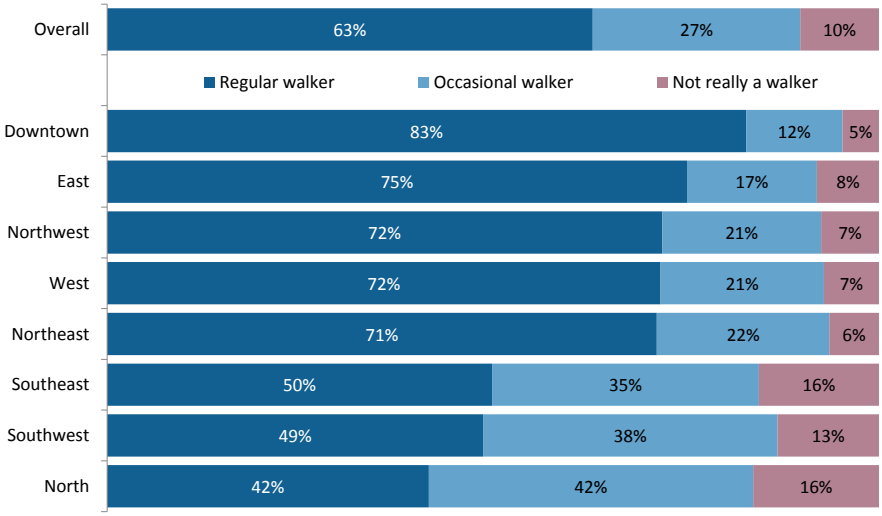
Most residents drive at least occasionally. Residents who live downtown are the least likely to drive regularly.



Q7. How frequently do you drive? Would you say you drive regularly, occasionally, rarely, or never?

WALKING FREQUENCY –BY AREA

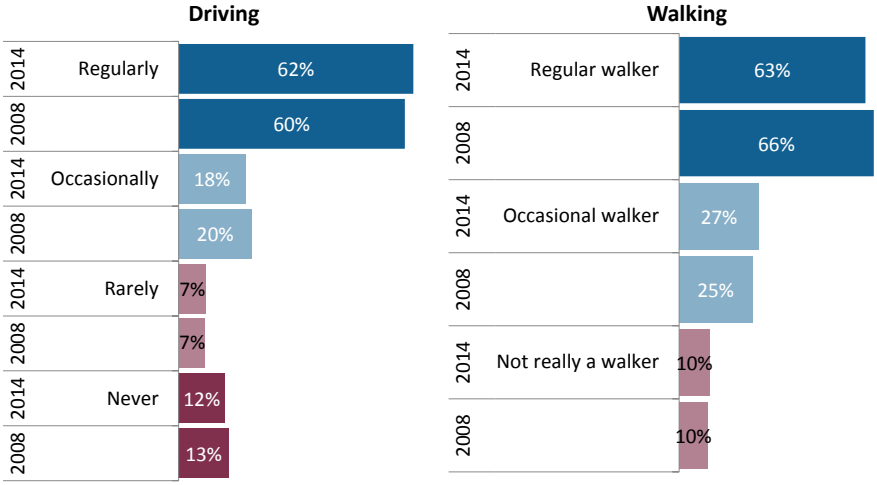
Most residents consider themselves at least "occasional walkers." Downtown residents are the most likely to be regular walkers. Fewer than half of residents in North Seattle are regular walkers.



Q9. And how frequently do you walk in your neighborhood or where you work for things like exercise, going to the store, going to lunch and other activities? Knowing that people walk more when the weather's nice, would you say that overall you are a regular walker, occasional walker, or not really a walker?

DRIVING AND WALKING FREQUENCY –TREND

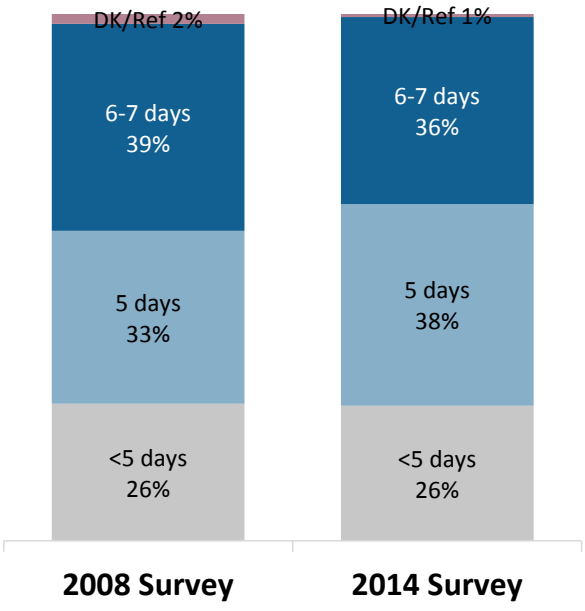
There is little change in driving or walking frequency compared to 2008.



Q7. How frequently do you drive? Would you say you drive regularly, occasionally, rarely, or never?
Q9. And how frequently do you walk in your neighborhood or where you work for things like exercise, going to the store, going to lunch and other activities? Knowing that people walk more when the weather's nice, would you say that overall you are a regular walker, occasional walker, or not really a walker?

TRAVEL OUTSIDE THE HOME –TREND

There has been a marginal decrease in the average number of days residents travel outside the home for work, school, or volunteer activities.

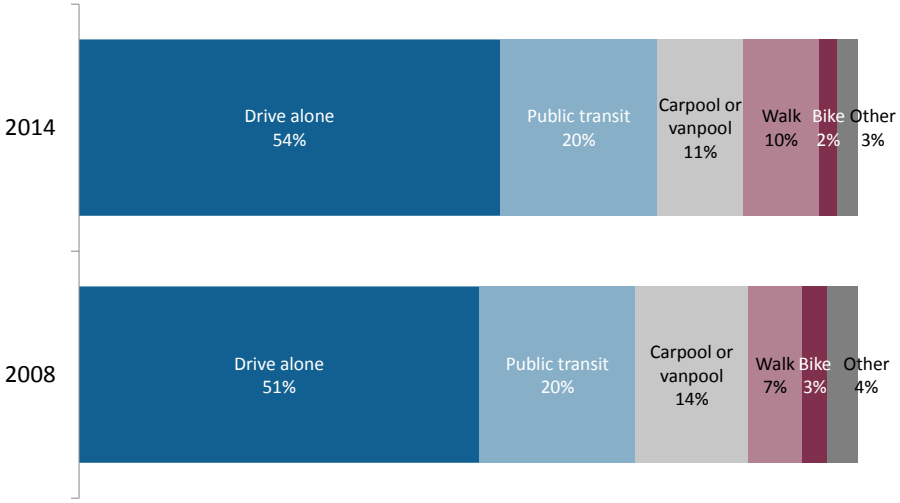


Q51. How many days a week do you travel outside the home just for work, school, or volunteer work?

By Area	Mean # of Days 2008	Mean # of Days 2014
TOTAL	**4.92**	**4.87**
East	5.36	5.10
Southeast	4.80	5.05
West	4.70	5.05
Northeast	5.19	5.02
Downtown	5.31	4.94
North	4.44	4.87
Northwest	4.96	4.59
Southwest	4.80	4.54

TRAVEL MODE –TREND

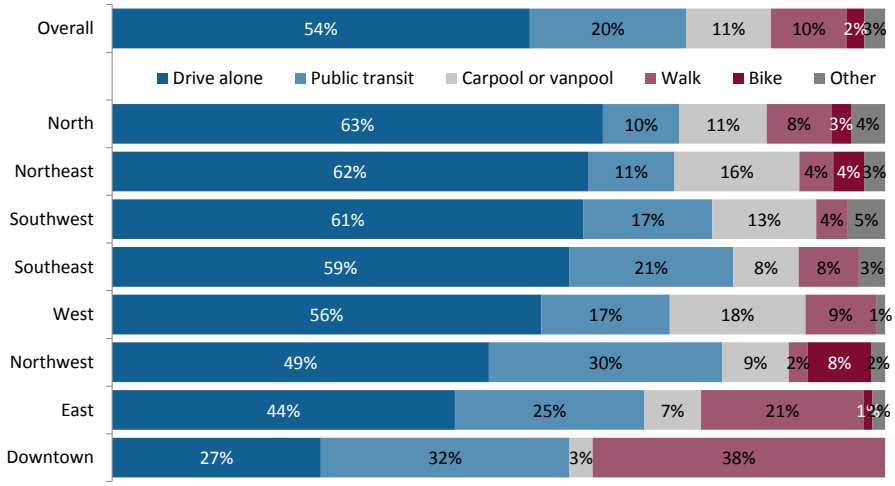
Travel modes are very similar to 2008 with a slight increase in the percentage of drive alone residents and a slight decrease in carpool/vanpool. Walking is also up slightly.



Q52. Do you usuallydrive alone, carpool or vanpool, take public transit, walk, bike, or travel some other way?

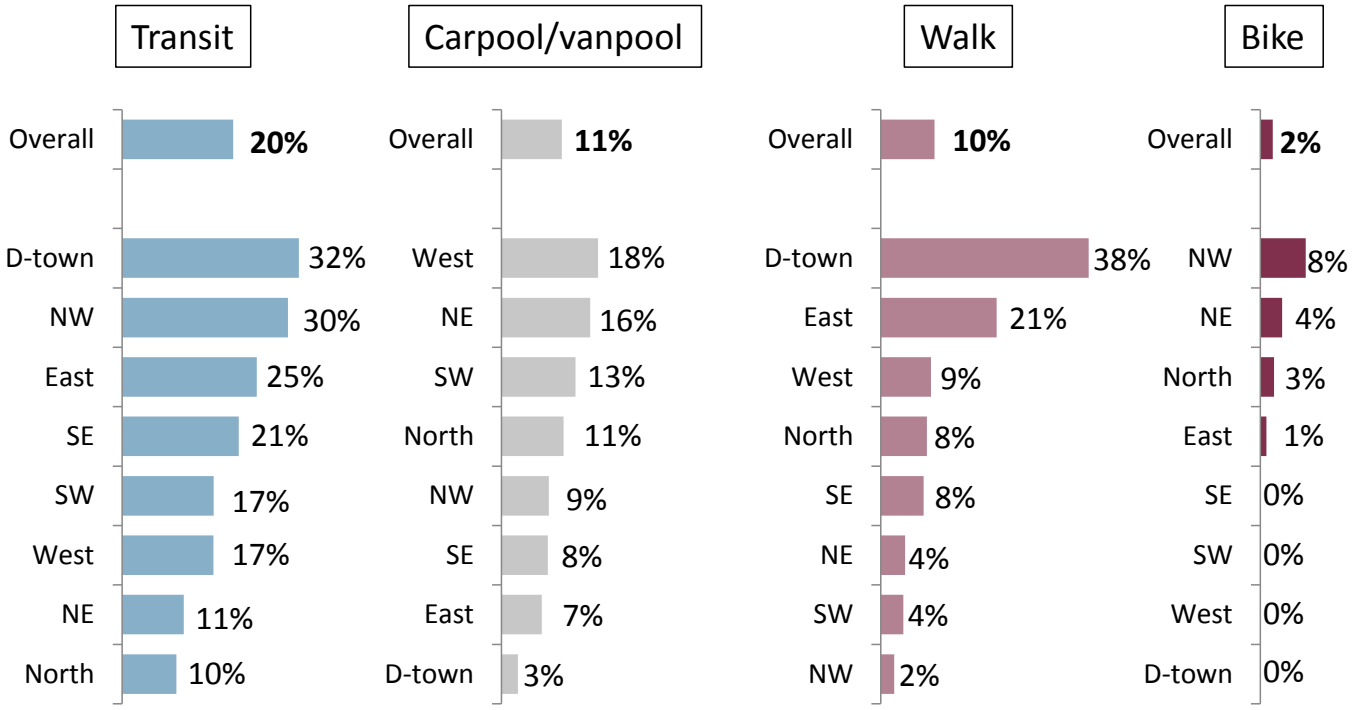
TRAVEL MODE –BY AREA

A majority of residents in 5 of 8 areas drive alone for their usual commute. Downtown has the lowest percentage of residents who drive alone and the highest transit and walking percentages. Northwest Seattle has the highest percentage of bike commuters.



Q52. Do you usuallydrive alone, carpool or vanpool, take public transit, walk, bike, or travel some other way?

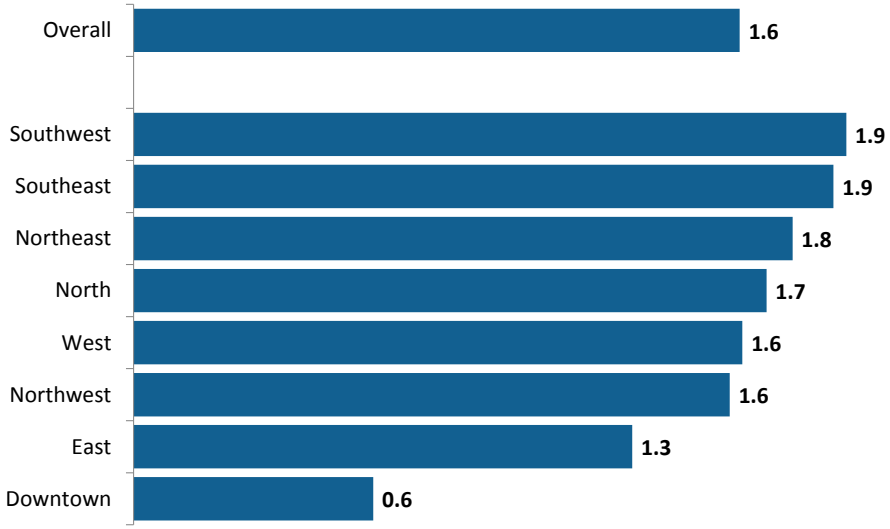
OTHER TRAVEL MODES –BY AREA



Q52. Do you usuallydrive alone, carpool or vanpool, take public transit, walk, bike, or travel some other way?

MEAN NUMBER OF WORKING VEHICLES –BY AREA

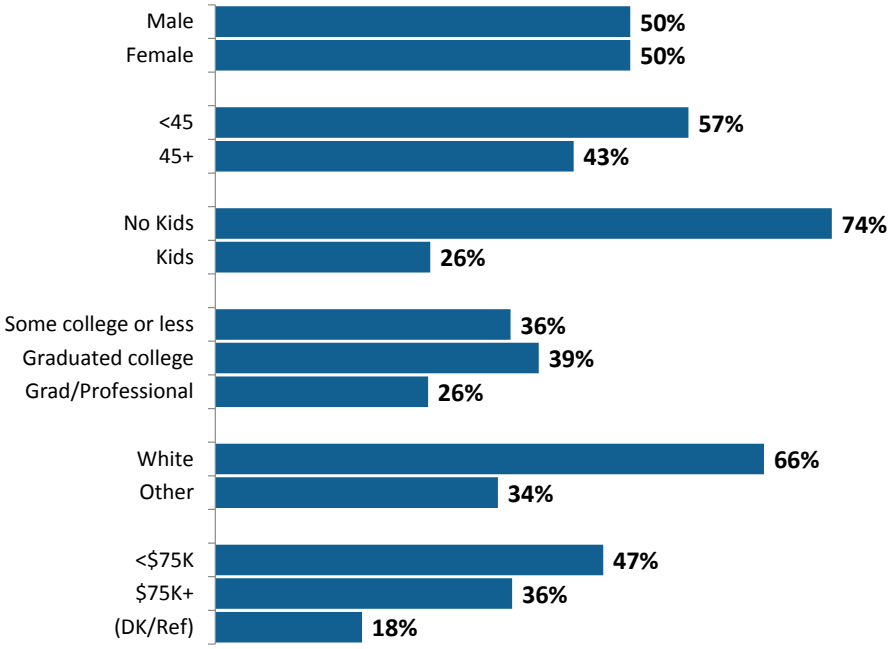
The citywide average is 1.6 working vehicles per household. Residents in south Seattle average close to two working vehicles while Downtown residents average less then one vehicle per household.



Q53. How many working vehicles does your household own?

DEMOGRAPHICS

DEMOGRAPHIC SUBGROUPS



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Dominick Martin
dominick@emcresearch.com
(206) 204-8033

Pedestrian Master Plan

APPENDIX 6: PRIORITIZATION BEST PRACTICES

MEMORANDUM 1

DATE: June 17, 2015

TO: Michelle Marx, SDOT
Ian Macek, SDOT

FROM: Amalia Leighton, PE, AICP
Brice Maryman, ASLA, PLA, LEED AP
Peg Staeheli, FASLA, LEED AP

RE: **Prioritization Best Practices and Evaluation**
Seattle Pedestrian Master Plan Update
SvR Project No. 15004

PURPOSE

This memorandum identifies current national and international best practices for pedestrian project prioritization used by various cities often noted as "walkable cities" by various walking advocacy groups and/or media outlets. These best practices will inform how the current criteria for project and program prioritization in the Seattle Pedestrian Master Plan (PMP) could be updated as part of the overall PMP update. SvR Design reviewed Pedestrian Master Plans (or similar documents) that have been developed in other cities since 2009 (when the PMP was adopted).

BACKGROUND

The intent of the 2009 PMP prioritization methodology was to create a data driven approach to identify high priority areas where investments should be made to improve conditions for pedestrians along corridors and at intersections. The 2009 strategy for prioritizing projects uses three components—vibrancy (or demand), equity, and corridor function—to recommend areas of the City for implementation. By looking at the opportunities for improvement in these areas of highest priority, project lists were developed for use by City staff, private developers, and community and neighborhood organizations. The intent of the project list was to provide information for SDOT to better coordinate investments internally and with other departments, use data to support investment decisions and to identify various pedestrian needs city-wide. Appendix 5 describes the methodology and analysis used for project prioritization in the 2009 PMP.

In 2009, Seattle was one of the few cities that used demographic data to consider health and equity in pedestrian project prioritization. These datasets were used in support of the PMP goals of safety, equity and health as identified by the Pedestrian Master Plan Advisory Group (PMPAG). Safety, equity and health data used in the 2009 prioritization was informed by members of the PMPAG that brought specific expertise in those areas.

REVIEW OF NATIONAL AND INTERNATIONAL BEST PRACTICES

The attached table summarizes the SvR review of a variety of Pedestrian Master Plans (or similar documents) developed for cities across the United States and some international cities to identify if and how prioritization methodologies are used to identify projects. SvR reviewed Plans from the following cities:

- New York City
- San Francisco
- Boston
- Philadelphia
- Chicago
- Sydney, Australia
- Vancouver, British Columbia

These cities were selected based on the following information:

- Often noted as a "walkable city" by various walking advocacy groups and/or media outlets including:
    - Walk Friendly Communities http://www.walkfriendly.org/communities/index.cfm
    - Governing Magazine http://www.governing.com/gov-data/transportation-infrastructure/walk-to-work-cities-map.html
    - Smart Growth America http://www.smartgrowthamerica.org/documents/foot-traffic-ahead.pdf
    - Walkscore https://www.walkscore.com/cities-and-neighborhoods/
- Current Pedestrian Plans (or similar documents) have been created or revised since 2009 when the existing Seattle Pedestrian Master Plan was adopted.

In addition to reviewing the cities listed above, SvR reviewed current best practices regarding incorporating safety, health and equity into transportation policies and practices as identified by advocacy groups including:

- Advocacy Advance, a partnership of Alliance for Biking & Walking and The League of American Bicyclists: Active Transportation Equity – A scan of Existing Master Plans 2015 http://www.advocacyadvance.org/docs/ActiveTransportationEquityScan.pdf
- Policy Link and Prevention Institute: Health, Equitable Transportation Policy: Recommendations and Research 2010 - http://www.kintera.org/site/c.fhLOK6PELmF/b.5327643/k.BF0B/Transportation_RX.htm
- Victoria Transport Policy Institute: Evaluating Transportation Equity Guidance For Incorporating Distributional Impacts in Transportation Planning 2015 - http://www.vtpi.org/equity.pdf
- Smart Growth America and National Complete Streets Coalition: Dangerous by Design 2014 - http://www.smartgrowthamerica.org/documents/dangerous-by-design-2014/dangerous-by-design-2014.pdf

FINDINGS

Criteria Directly Relates to Plan Goals and Policies

New York, Philadelphia, Chicago and San Francisco develop project lists that directly relate to the goals and policies of their respective plans. It was clear what information was used to create project lists and maps of prioritized projects and how the implementation would support the performance of the pedestrian plans over time. For example, all of the cities listed above had goals and policies around pedestrian safety and each of the project lists specifically identified projects that would support measuring safety over time.

Additionally, the cities used lack of pedestrian infrastructure along corridors and across intersections and pedestrian crash information to identify potential project locations. Frequency and/or severity of pedestrian crashes were used to rank the potential projects. The 2009 PMP prioritization methodology does not as clearly align with the plan goals and policies.

Chicago developed a map of high priority (top 25th percentile) pedestrian areas that would be used to prioritize a variety of future projects such as streetscapes, pedestrian education campaigns, or Safe Routes to Schools. San Francisco uses a three step strategy to get to a project list that focuses on high pedestrian activity, poor pedestrian environment, neighborhood commercial and tourist corridors.

Seattle's Equity Analysis is Cited as a Best Practice

Several of the plans and papers reviewed reference Seattle for the use of the health and equity criteria and health datasets. Chicago uses a similar set of equity data compared to Seattle in the prioritization outlined in the Chicago Pedestrian Plan. Based on our review of the other cities, Seattle continues to be a leader using the best practice of incorporating health and equity into project prioritization.

The papers prepared by advocacy organizations recommend that pedestrian infrastructure investments should be equitable. This means that there should be geographic equity as well as social or demographic equity. These papers summarize findings identifying that communities that have historically not been involved in planning processes are the communities where investments are most often needed to create safer, healthier communities thought improving the built environment. Many communities find that there is a correlation between low income populations with poor health and lack of safe and comfortable pedestrian facilities. Cities that want to improve lives within all communities recognize that investments in pedestrian infrastructure can produce positive health outcomes for people living in these areas that have been historically underserved.

Data Driven Prioritizations Support Funding Requests

Some cities only outlined action items to create a methodology and criteria for project prioritization once datasets were available. Some cities including San Francisco and New York used their pedestrian master plans to get support for data collection of existing pedestrian facilities before completing the prioritization. Chicago had data sets which allowed them to develop a methodology to identify prioritized projects that could be mapped and listed. For these cities, the project lists were identified and presented to elected officials to support funding requests for programs and implementation. San Francisco identifies (with maps and lists) projects within each supervisorial district. This is something that Seattle may consider as a result of newly formed council districts.

Conditions of Existing Facilities

Philadelphia and Chicago use data sets that include information on the conditions of existing pedestrian facilities. Condition information can be used to identify facilities that may not be comfortable, safe or accessible and should be listed as potential projects. Seattle has a sidewalk inventory, conducted in 2009, but it does not identify sidewalk condition. It identifies the presence, type and width of the sidewalk, and whether there is a landscape buffer or not (as well as buffer width).

NEXT STEPS

SDOT will review the findings of this memorandum to evaluate the current prioritization methodology based on the identified best practices. Additionally, SDOT will ensure that the prioritization methodology is consistent with the current goals and objectives established in Move Seattle, Vision Zero, Seattle 2035 Comprehensive Plan Update, internal SDOT objectives, and the need for the methodology to be transparent and understandable by the public and staff within SDOT and other city departments. This information also informed a workshop with the Pedestrian Advisory Board on the PMP prioritization framework.

REVIEW OF PEDESTRIAN MASTER PLAN (OR SIMILAR DOCUMENT) PROJECT PRIORITIZATION

CITY / NAME OF PLAN	DATE OF PLAN	PRIORITZATION CRITERIA INCLUDED	LINK TO DOCUMENT(S)
US CITIES			
NEW YORK CITY The New York City Pedestrian Safety Study & Action Plan	August 2010	**RECOMMENDS A DATA DRIVEN PRIORITIZATION** This plan outlines that NYC should create a ranking of potential project to prioritize investments. The criteria will focus on improving pedestrian safety by identifying crash locations and populations identified by age, health, race/ethnicity, education level and foreign born populations. Projects are identified by corridor and intersections based on criteria rankings and high numbers of crashes involving pedestrians.	**PDF of the Plan** http://www.nyc.gov/html/dot/downloads/pdf/nyc_ped_safety_study_action_plan.pdf
SAN FRANCISCO Walk First 2010	August 2010	**USES A DATA DRIVEN PRIORITIZATION** Prioritization strategies as identified in Walk First Phase 3: • Invest where people walk • Tap into Economic Potential • Target Physical Deficiencies These three investments strategies were evaluated and compared based on the following four categories: • Target Population • Stewardship • Safety • Efficiency Corridor and intersection projects are identified based greatest need as identified from the data above. San Francisco considered funding and supervisorial district boundaries when developing the project lists.	**Walk First** http://www.sf-planning.org/index.aspx?page=2568 **Walk First Streetscape Prioritization** http://www.sf-planning.org/ftp/files/Citywide/WalkFirst/phase3/Final_Document_v5AA.pdf **GOOD INFOGRAPHICS TO SUMMARIZE EVALUATION METRICS**

CITY / NAME OF PLAN	DATE OF PLAN	PRIORITZATION CRITERIA INCLUDED	LINK TO DOCUMENT(S)
US CITIES			
BOSTON Complete Streets Plan	2014	**DOES NOT INCLUDE A DATA DRIVEN PRIORITIZATION** It is not clear how the current projects were considering the goals and policies of the Complete Streets Plan. Policy language suggests that the plan embraces innovation to address climate change and healthy living as part implementing street projects.	**Complete Streets Website** http://bostoncompletestreets.org/about/
PHILADELPHIA Pedestrian and Bicycle Master Plan	2012	**DOES NOT INCLUDE A DATA DRIVEN PRIORITIZATION** Prioritized corridors and intersections for pedestrian improvement projects that aim to reduce barriers by increasing pedestrian safety, convenience, and overall comfort as described in Chapter 6. Using the 2010 Sidewalk inventory, Philadelphia used the presence of sidewalks as well as the condition of sidewalks to inform the recommendations shown in Appendix D of the plan.	**PDF of the Plan** http://phila2035.org/wp-content/uploads/2012/06/bikePedfinal2.pdf **Philadelphia Plan Website** http://www.phila.gov/cityplanning/plans/pages/PedestrianandBicyclePlan.aspx
CHICAGO Pedestrian Plan	2011	**USES A DATA DRIVEN PRIORITIZATION** As part of the Pedestrian Plan development, Chicago created a data driven analysis (described in the Implementation section) to identify high priority areas. Citywide datasets were organized into five categories based on the goals of the Plan: • Safety • Connectivity • Livability • Health • Equity High priority areas fell within the top 25th percentile of the citywide results.	**PDF of the Plan** http://www.pedbikeinfo.org/pdf/PlanDesign_SamplePlans_Local_ChicagoPed2011.pdf **Chicago Pedestrian Plan Website** http://chicagopedestrianplan.org/

CITY / NAME OF PLAN	DATE OF PLAN	PRIORITZATION CRITERIA INCLUDED	LINK TO DOCUMENT(S)
INTERNATIONAL CITIES			
SYDNEY, AUSTRALIA Walking Strategy and Action Plan	April 2015	**DOES NOT INCLUDE A DATA DRIVEN PRIORITIZATION** The plan does not include a prioritized project list but does identify policies and targets from improving the pedestrian environment related to ten minute walksheds, the livable green network (a primary walking network) and key walking routes to the city center.	**PDF of Plan** http://www.cityofsydney.nsw.gov.au/__data/assets/pdf_file/0013/233320/Walking-Strategy_FINAL-for-web.pdf **Walking Website** http://www.cityofsydney.nsw.gov.au/vision/towards-2030/transport-and-access/walking-strategy#page-element-dload
VANCOUVER, BRITISH COLUMBIA Transportation 2040	October 2012	**DOES NOT INCLUDE A DATA DRIVEN PRIORITIZATION** Since the Transportation 2040 Plan is a multi-modal planning documents, projects were prioritized that would improve conditions for all modes not just walking. Projects were identified based on the multiple benefits. It appears that maps of the various projects based on modes were overlaid on each other to identify corridors and intersections for improvements.	**PDF of Plan** http://vancouver.ca/streets-transportation/transportation-2040.aspx **Walking Website** http://vancouver.ca/streets-transportation/walking.aspx

Pedestrian Master Plan

APPENDIX 7: PMP PRIORITIZATION METHODOLOGY

The purpose of this appendix is to describe the prioritization framework used to prioritize pedestrian improvements in the update to the Pedestrian Master Plan (PMP). The PMP prioritization methodology is intended to direct capital and programmatic improvements to improve walkability and accessibility based on a citywide analysis of data related to the Plan goals of safety, equity, vibrancy, and health.

Since the PMP was adopted in 2009, this data-driven approach to prioritizing pedestrian improvements has become a broadly-emulated model. The Plan's data-based framework for evaluating priorities and directing pedestrian investments and programs in the City is a key product of the 2009 Plan, and this process remains a component of the Plan moving forward.

UPDATING THE PMP PRIORITIZATION FRAMEWORK

The 2009 PMP provided a data-driven methodology for identifying priority locations for new sidewalks, curb ramps, crossings, signs, and other pedestrian improvements (see Appendix 5 for full technical methodology of the 2009 PMP).

A PMP update presents an opportunity to "re-ground" the prioritization methodology in the Plan's goals, and to ensure that the PMP prioritization continues to reflect City and SDOT policy objectives, national and international best practices, and community priorities moving forward.

The PMP maintains the structure of the 2009 prioritization framework, and analyzes data related to pedestrian vibrancy, safety, equity and health to help identify opportunities for pedestrian investments. However, the datasets used in these analyses, as well as the framework for layering each of these factors have been updated.

With new data available to more accurately measure pedestrian demand, pedestrian safety, and equity and health conditions in the city, the PMP is in a position to more accurately identify locations most in need of improvement to achieve the Plan goals

Additionally, several important SDOT programs and policy initiatives have evolved or been introduced since the adoption of the 2009 PMP. Of most significance is Vision Zero, the City's goal of ending traffic deaths and serious injuries by 2030. The PMP update presents an opportunity to better reflect Vision Zero objectives and data to help prioritize pedestrian improvements moving forward.

Updating the Plan's prioritization methodology also presents an opportunity to refine the PMP's investment priorities to better match available resources. While the Plan has been successful in directing public investments to PMP high priority locations, the overwhelming number of priorities that arose from the 2009 Plan has not matched funding availability, resulting in an overall low rate of network completion. The updated prioritization process seeks to refine Plan priorities to better match funding availability and public priorities.

PMP PRIORITIZATION

The following section outlines the process for prioritizing pedestrian improvements, and identifies the locations throughout the city where SDOT will direct capital projects and program funds to improve pedestrian conditions. The prioritization directly relates to the Plan goals as well as public input received throughout the planning process.

The key elements of the updated PMP prioritization framework include:

- A focus on public schools and the frequent transit network as key pedestrian destinations, directing resources to the most critical components of the pedestrian network
- A clear, connected network of streets linking pedestrians to key destinationsinvestments will be directed to this Priority Investment Network (PIN)
- Updated data to measure safety, vibrancy, equity, and health to more accurately identify locations most in need of pedestrian improvements. This includes using new Vision Zero traffic safety data to ensure the PMP contributes toward the City's vision of eliminating fatal and serious injuries on Seattle streets by 2030
- Added clarity about the location, number, and type of "along-theroadway" and "crossing-theroadway" improvement opportunities within the PIN

PRIORITIZATION FRAMEWORK

The prioritization framework for the 2016 PMP includes three steps:

- **Step 1:** Develop a city-wide PIN using access to public schools and the frequent transit network; these streets will be prioritized for pedestrian improvements.
- **Step 2:** Identify specific opportunities for improvement within the PIN to improve conditions along and across these streets, including locations with missing sidewalks and curb ramps and those with wide crossing distances or widely-spaced controlled crossing locations.
- **Step 3:** Conduct quantitative safety and equity/health analyses to score opportunity areas for sidewalk and crossing improvements within the PIN.implemented, applying the safety and equity/health analyses to further prioritize which opportunity areas within the network to evaluate first for pedestrian improvements
- **Step 4:** Create 3- to 5-year implementation plan by applying qualitative criteria and input from the Seattle Pedestrian Advisory Board.

STEP 1: DEVELOP THE PRIORITY INVESTMENT NETWORK

The "Vibrancy" analysis in the 2009 PMP identified existing and future land uses and destinations likely to generate the most pedestrian traffic, and proposed that pedestrian investments be directed to these areas where the most people are likely to walk. The evaluation included a long list of land-use based pedestrian generators, including retail destinations, high-density housing, employment centers, and tourist destinations.

While logically sound, this approach had the unintended impact of prioritizing locations for investment that already had relatively high-quality pedestrian infrastructure, namely, central neighborhoods within the City's urban centers and urban villages. Less focus was directed to more peripheral areas of the city with lower intensity retail, housing, and employment land uses, areas where pedestrian infrastructure is often lacking.

The PMP public input echoed these concerns. When asked "where should the City prioritize walking improvements first?" residents ranked "streets connecting families and children to schools," and "streets connecting people to transit stops" among the highest priorities, while "streets where the most people walk" received less support.

In response to these considerations, the updated PMP prioritization framework proposes a more narrow focus when evaluating pedestrian demand generators. In direct response to public feedback, the updated "vibrancy" (or demand) analysis identifies the network of streets that serve as key pedestrian routes to public schools and frequent transit stops, two generators dispersed throughout all areas of the city. The result is a more geographically distributed set of investment priorities, and a focus on the most critical components of the pedestrian network.

Schools and transit stops are arguably the most important walking destinations. As such, the foremost priority of the updated PMP is ensuring that streets connecting pedestrians to these key destinations provide a safe and comfortable walking environment. This network of streets includes both arterial and non-arterials, and taken together, they create a clearly identified, interconnected pedestrian network that connects people to important pedestrian destinations. Funding to improve walking conditions both along-the-roadway and crossing-the-roadway will be directed to the streets within this "Priority Investment Network" (PIN).

The following sections outline the analysis used to identify streets for inclusion in the Priority Investment Network, including access to transit, access to schools, and further detail of the PIN.

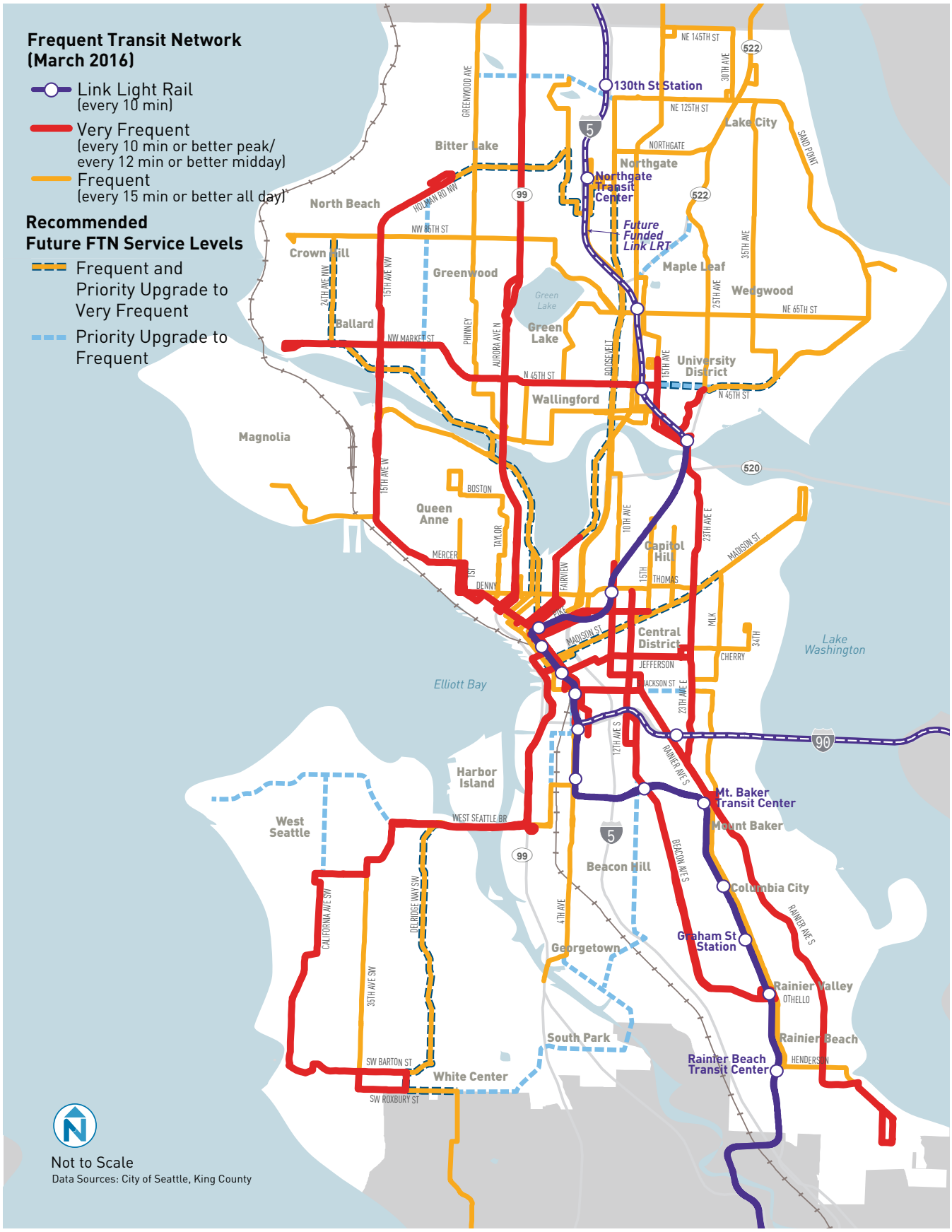
Access to Transit

While quality pedestrian connections to all transit stops within the city are important, the PMP prioritizes connections to stops within the Frequent Transit Network (FTN), as identified in the 2016 Transit Master Plan (TMP). This approach helps to align investments between the PMP and the TMP, maximizing impacts to both modes.

The TMP defines the Frequent Transit Network as "a network of top-quality services provided by bus and rail modes, connecting residents and workers to the regional transit system via transportation centers that are well integrated with urban village life." Frequent Transit is defined as service occurring a minimum of every 15 minutes or better, and includes light rail, streetcar, RapidRide and bus rapid transit, and frequent bus service. The Frequent Transit Corridors, per the TMP, are shown in Figure 1.

The streets included within the PIN that provide access to frequent transit were determined in two ways. First, all frequent transit corridors themselves were included in the PIN. This helps to ensure that there is good pedestrian

FIGURE 1: FREQUENT TRANSIT NETWORK



infrastructure both along and across all frequent transit routes, including between frequent transit stops. Because frequent transit corridors traverse some of the city's key arterial corridors, focusing resources to improve conditions both along and across these FTN corridors also reflects the public's desire to prioritize sidewalk and crossing conditions along busy arterial streets.

Second, to identify streets that connect pedestrians to frequent transit stops, we identified streets within the "walkshed" of each planned and existing frequent transit stop in the FTN, per the City's TMP. Streets within these identified walksheds are those that provide pedestrian routes to frequent transit stops. The size of the walkshed we used varies according to the type of transit mode served by the stop, and is based on transit planning and transit oriented development best practices.[1]

The TMP provides detailed information on both routes and stops for existing and future Link Light Rail, Seattle Streetcar, and RapidRide / Bus Rapid Transit (BRT) service, and the PMP uses this data to determine walkshed locations. The TMP also identifies "priority bus corridors" where existing transit ridership is high and planned growth will continue to drive transit ridership demand. The TMP calls for transit speed and reliability improvements along these priority bus routes in order to upgrade these high ridership routes to frequent service levels.

The PIN assumes that as these existing bus routes are upgraded, existing bus stops will be consolidated to approximately 1/4 mile spacing. This stop spacing assumption is consistent with the planning assumptions underlying Metro's long range transit plan. While it is not entirely possible to know which existing stops will be consolidated in the future and which will remain, the PIN assumes that high ridership stops located at arterial intersections would likely remain. As priority bus routes are upgraded to frequent service in the future, updated stop locations will be integrated into future updates of the PMP, along with any other changes to frequent transit stop locations.

Because the PMP seeks to direct pedestrian improvements to streets connecting people to both existing and future frequent transit stops, the PIN also includes streets within walksheds to all sited Link Light Rail stations (both existing and planned).

Table 1 outlines the transit data used for the PIN analysis, including walkshed distances for each transit type. Figure 2 maps the walksheds.

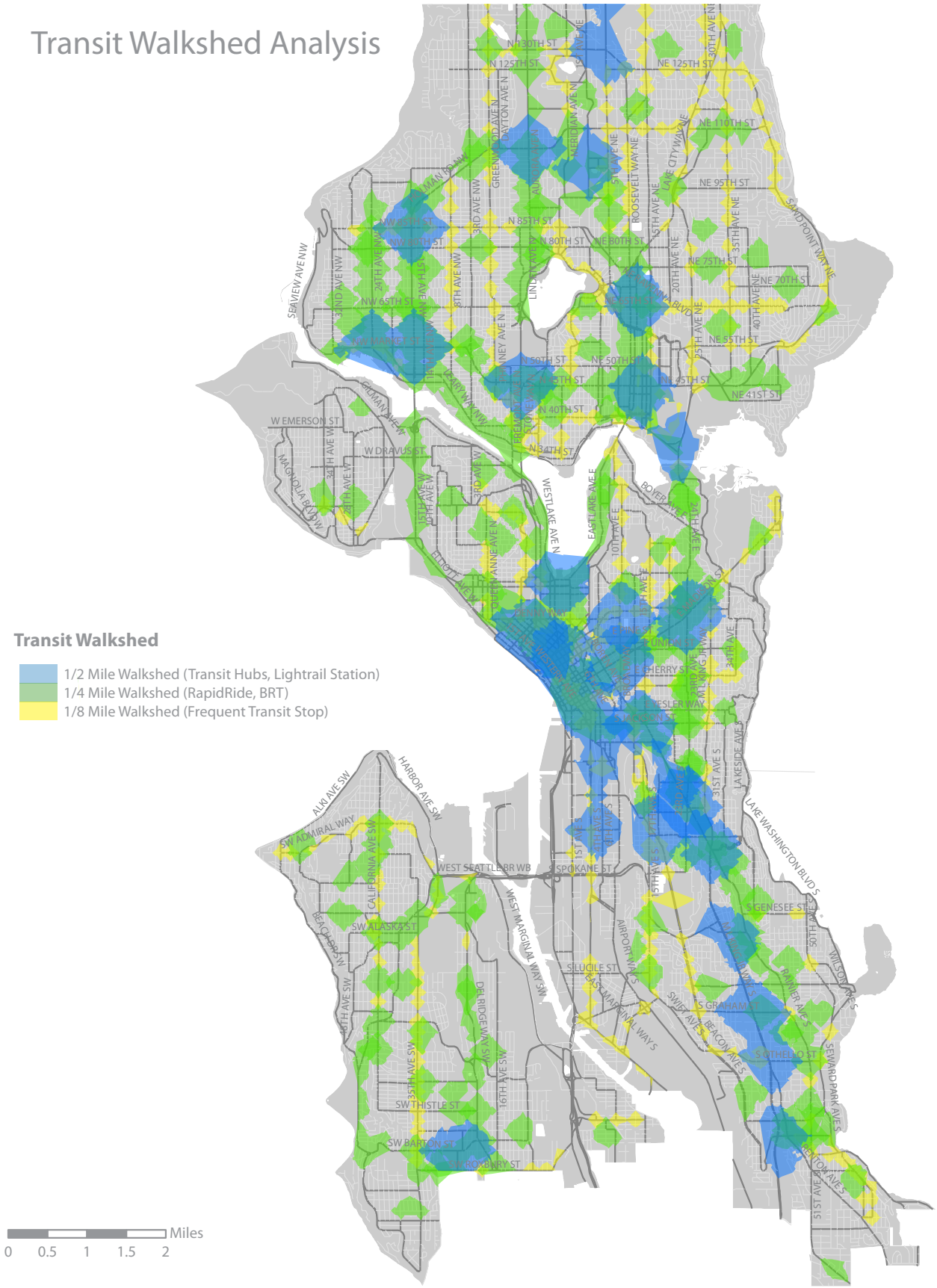
TABLE 1: TRANSIT DATA USED IN THE PIN ANALYSIS

Factor	Source	Scoring
Frequent Transit Network arterials	TMP	Scoring is binary: either a segment is included or it is not.
Walksheds to Frequent Transit Network stops ⅛ mi to frequent bus stops ¼ mi to all Bus Rapid Transit (BRT) and Streetcar stops ½ mi around all Light Rail Transit (LRT) stops ½ mi around all existing or planned transit hubs*	TMP	Scoring is binary: either a segment is included or it is not. There is not a higher weighting for segments that fall within multiple walksheds. A street segment is included within the PIN if any portion of that segement is within the prescribed walkshed distance to a FTN stop.

* Transit hubs are where an exisitng or planned LRT, BRT or streetcar route, as identified in the TMP, intersects with at least one other of these routes.

[1]American Public Transportation Association (APTA) Recommended Practice for Defining Transit Areas of Influence www.apta.com/resources/standards)

FIGURE 2: WALKSHEDS TO FTN ARTERIALS AND TRANSIT STOPS



Access to Schools

The Plan's public outreach efforts confirmed that providing safe and comfortable pedestrian access to schools is also a priority for Seattle residents. To reflect this, the PIN also includes street segments within a ¼ mile walkshed of all K-12 Seattle public schools. While Seattle Public Schools uses a one mile walkshed to determine school walk boundaries and eligibility for school district transportation services, the PMP uses a smaller walkshed in order to adequately prioritize improvements. Because public schools are so broadly dispersed throughout the city, a larger walkshed would have resulted in a Priority Investment Network as broad as the city itself. Because the intent of the PMP prioritization process is to focus resources to areas where they are needed most, we determined that streets closest to schools were a greater priority than more distant streets.

Table 2 shows the data used to determine school walksheds. The walksheds to K-8 public schools are mapped in Figure 3.

Why only public schools?

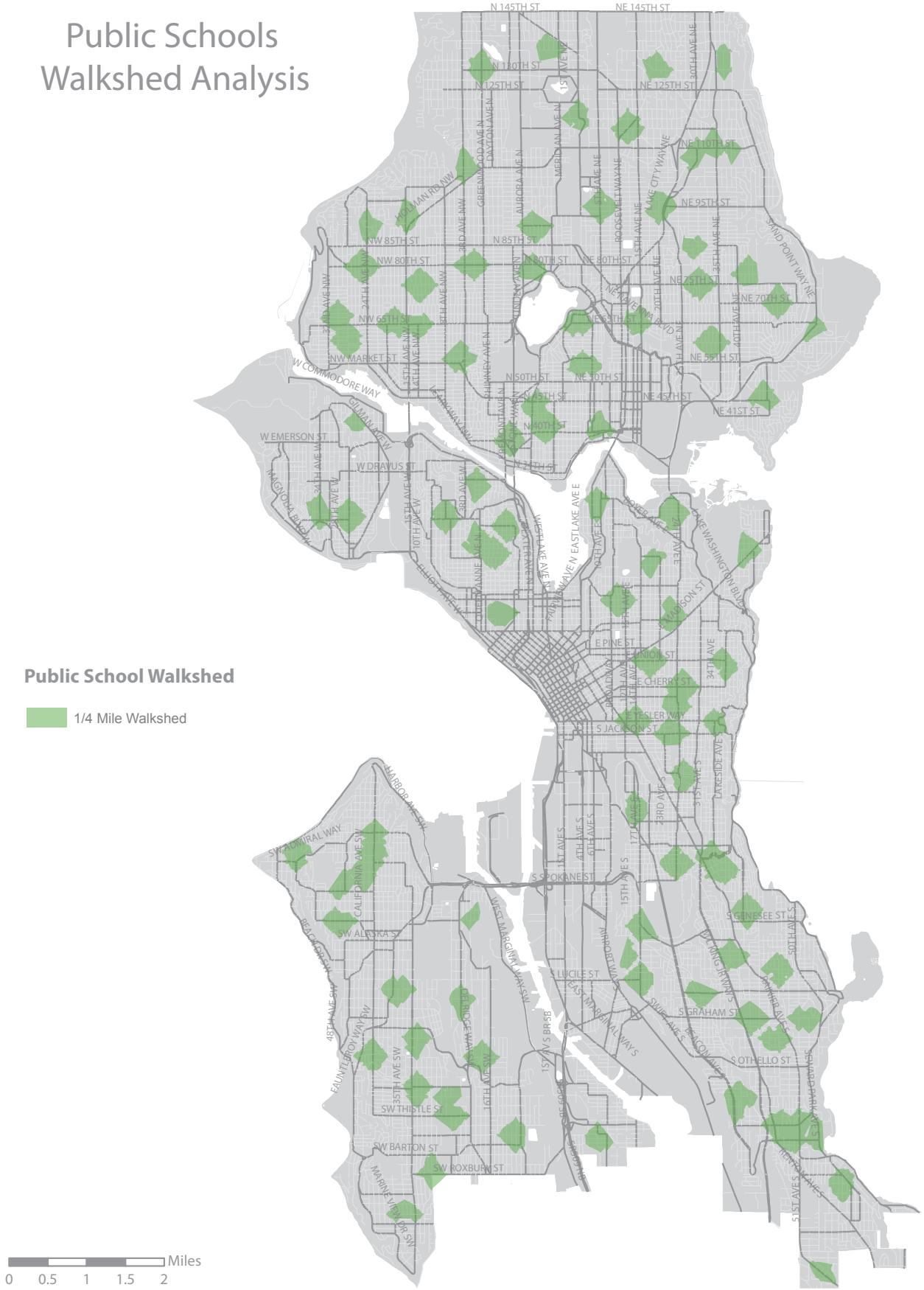
For this analysis, we chose to focus on Seattle's K-12 public schools for a few reasons. First, based on Seattle Public Schools' school assignment policies, public schools are more likely to draw directly from their surrounding neighborhoods, creating a higher-likelihood of more children and their families walking and biking to and from those schools. While some private schools draw from a similar local catchment, this pattern is inconsistent.

While not drivers of the PIN, streets within private school walksheds are still eligible for public improvements. SDOT's Safe Routes to School program will continue to work with all schools in the City, including private schools, to invest in pedestrian improvements to enhance safety. For more information about the City's Safe Routes to School program, visit: http://www.seattle.gov/transportation/saferoutes.htm.

TABLE 2: SCHOOL DATA USED IN THE PIN ANALYSIS

Factor	Source	Scoring
¼ mile walkshed to all Seattle Public Schools	SDOT GIS	Scoring is binary: either a segment is included or it is not. There is not a higher weighting for segments that fall within multiple walksheds. A street segment is included within the PIN if any portion of that segement lies within the prescribed walkshed distance to a K-12 Seattle Public School.

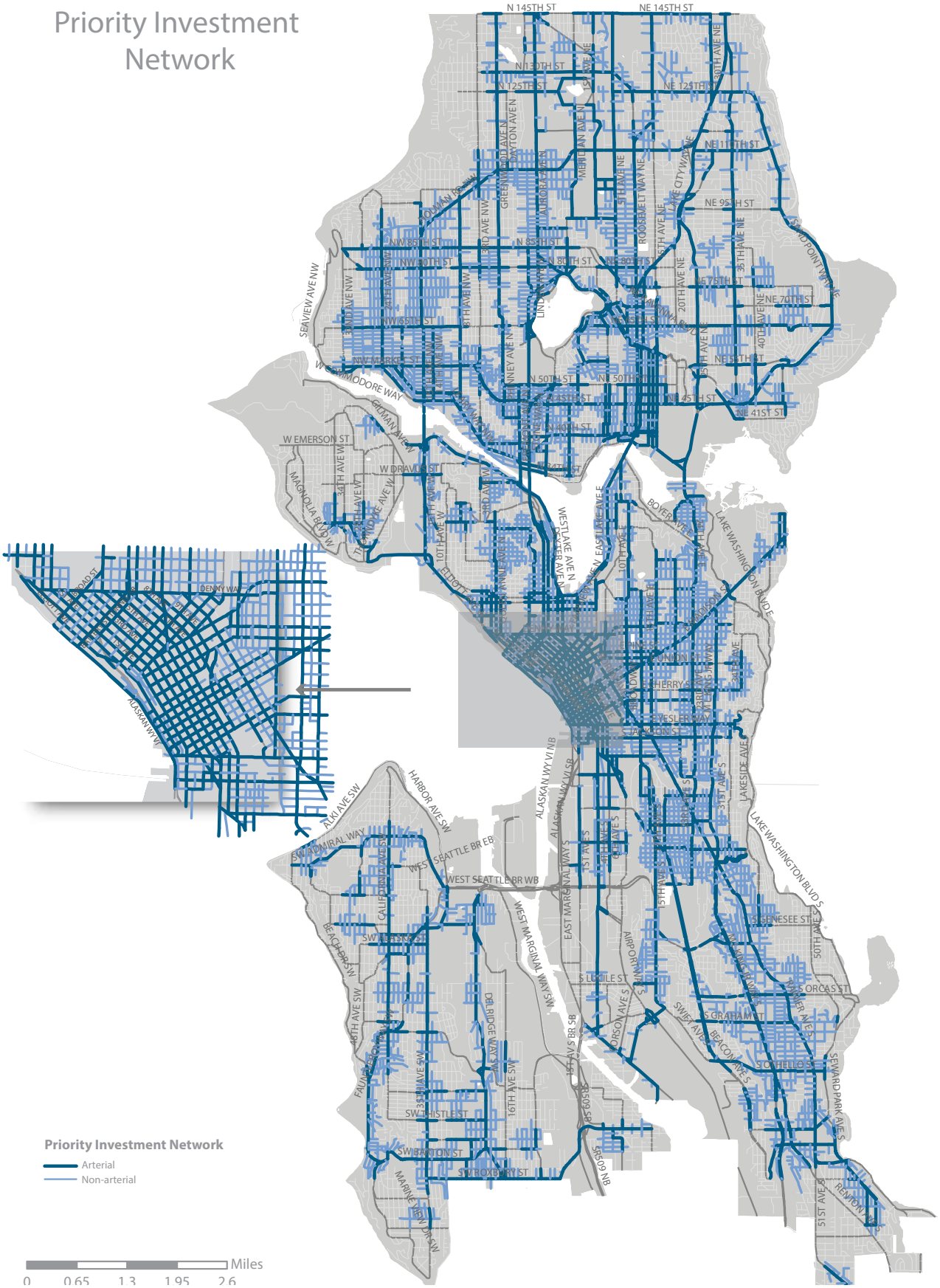
FIGURE 3: WALKSHEDS TO PUBLIC SCHOOLS



Priority Investment Network

Taken together, the streets within walksheds to schools and walksheds to the frequent transit network create the PMP Priority Investment Network (PIN). Given the important function these streets play in connecting people to these key pedestrian destinations, these streets will be prioritized for pedestrian investments. Figure 4 illustrates the arterial and non-arterial streets within the PIN.

FIGURE 4: CITYWIDE PRIORITY INVESTMENT NETWORK



STEP 2: OPPORTUNITIES FOR PEDESTRIAN IMPROVEMENTS WITHIN THE PIN

With a PIN defined in Step 1, our next step is to evaluate the needs and opportunities to improve conditions along and crossing the roadway within that network. The improvements may take the form of providing new sidewalks or paths where they are missing and improving existing or providing new infrastructure at crossings to make it make it safer and more comfortable to cross busy arterials.

The opportunity analysis helps identify the infrastructure needs within the PIN that the PMP will address over the next 20 years.

Along-the-roadway opportunities

The along-the-roadway evaluation identifies locations within the PIN where there may be opportunities to improve conditions for pedestrians moving along the roadway. It identifies locations where pedestrian walkways are missing along arterial and non-arterial streets, based on SDOT asset management data. Figure 5 identifies streets within the PIN where sidewalks or walkways are missing.

Because the prioritization criteria, funding sources, and design solutions for arterial and non-arterial streets differ, the sidewalk needs for each are assessed differently (see Table 3). Opportunities along arterial streets include all arterial blockfaces or partial blockfaces within the PIN where there is not currently a curb-separated sidewalk. Opportunities along non-arterial streets include all blockfaces or partial blockfaces within the PIN where there is not a separated pedestrian path. Pedestrian paths may be separated horizontally by physical elements such as landscaping or wheel stops, or vertically by curbs. A "blockface" is the average length of one side of a city block. In Seattle that measures out to be 300 ft., or the length of a football field without end zones.

The along-the-roadway assessment only evaluates whether a facility does or does not exist. The assessment does not include sidewalk condition data, or whether facilities are built to current standards (including minimum widths and requirements for landscape/street tree buffers, as guided by the Right-of-Way Improvements Manual). This is primarily due to the large number of missing sidewalk locations throughout the city.

It is important to note that locations with missing sidewalks shown in Figure 5 are based on SDOT asset management data. Not all locations where the data indicates a sidewalk is missing are necessarily feasible or desirable locations for new sidewalks. As SDOT develops the PMP Implementation Plan, we will evaluate these individual opportunities to determine if new sidewalks are technically and financially feasible in the locations identified.

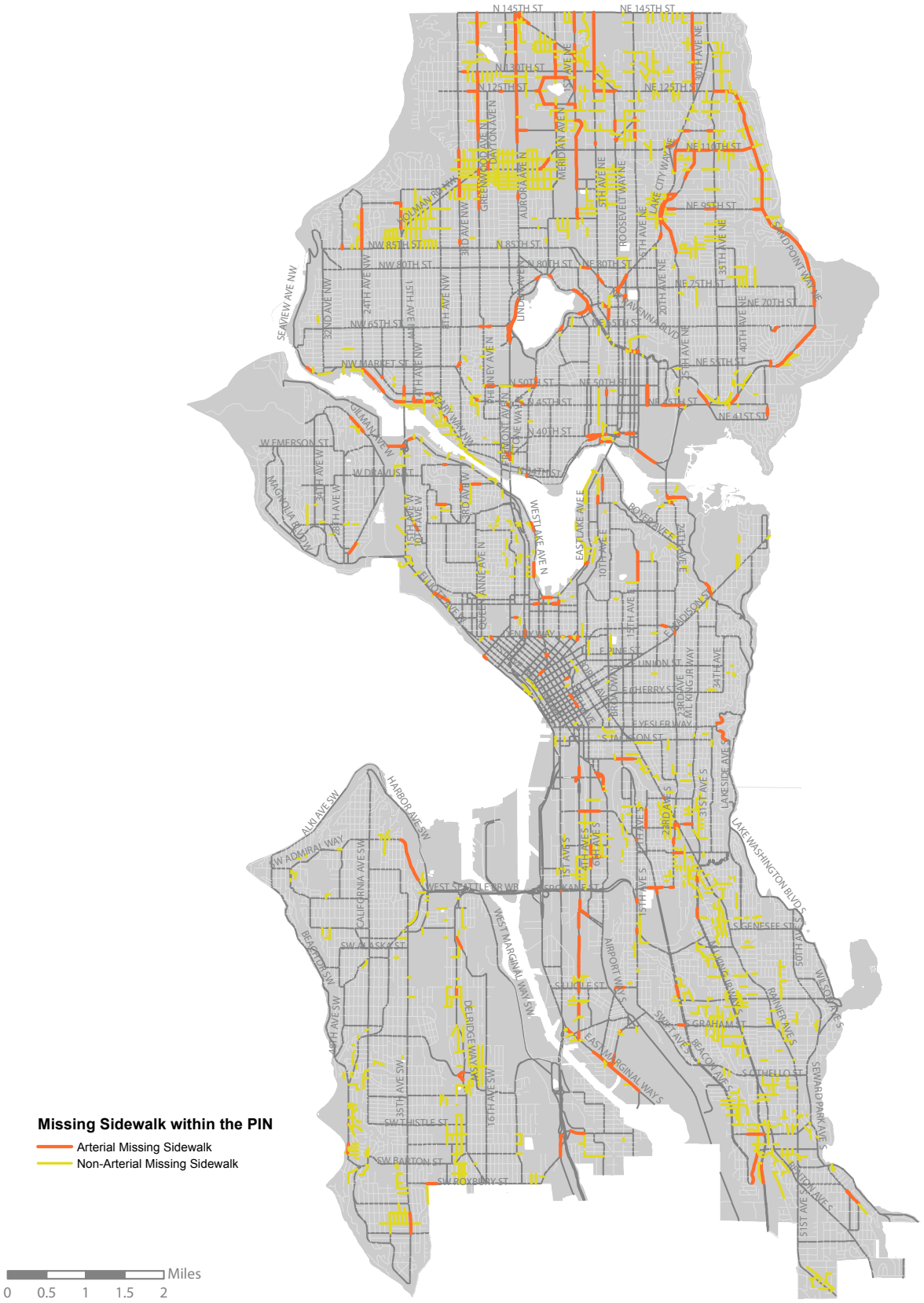
While the prioritization framework is focused on new capital investments, maintaining the existing sidewalk network is also an

TABLE 3: ALONG-THE-ROADWAY EVALUATION DATA

Location	Factor	Source	Scoring
Arterial streets within the PIN	Presence of a curb-separated, concrete sidewalk	SDOT Asset Management Data	Scoring is binary: either a segment has a sidewalk or not.
Non-arterial streets within the PIN	Presence of a separated pedestrian path*	SDOT Asset Management Data	Scoring is binary: either a segment has a separated pedestrian path or not.

*Pedestrian paths may be separated horizontally by physical elements such as landscaping or wheel stops, or vertically by curbs.

FIGURE 5: MISSING BLOCKFACES/PARTIAL BLOCKFACES OF SIDEWALK WITHIN THE PIN



important consideration for along-the-roadway improvement opportunities. Although the City strives to keep sidewalks in reasonably safe condition, adjacent property owners are typically responsible for sidewalk maintenance and repair. PMP Chapter 5 includes strategies and actions to improve sidewalk inspection and reporting procedures, educate residents about and increase enforcement of private sidewalk repair obligations, and make it easier and more predictable for private property owners to complete required sidewalk repairs.

Crossing-the-Roadway Evaluation

The crossing-the-roadway evaluation identifies arterial intersections within the PIN where there may be opportunities to provide infrastructure improvements to make crossing the roadway safer and more comfortable for pedestrians. The analysis evaluates crossing conditions at arterial intersections only (including locations where arterial streets intersect with other arterial streets, and locations where non-arterial streets intersect with arterial streets). This is because arterial streets tend to be higher-volume, higher-speed streets with wider crossing distances, making them a higher priority than low-speed, low-volume residential streets where there are typically fewer pedestrians crossing. This focus on providing safe crossings across busy arterials echoes the feedback received in the PMP Public Survey.

The analysis is not intended to prescribe particular design solutions for individual locations, but rather, to identify locations where improvements should be evaluated. For example, not all intersections identified in the maps below may necessarily be appropriate locations for new curb bulbs or new traffic signals. The PMP Implementation Plan will evaluate these priority locations and determine the types of crossing improvements that may be suitable.

It is also important to note that while the PMP crossing-the-roadway evaluation helps to identify potential opportunities for new infrastructure to make arterial crossings more comfortable, there are other types of pedestrian safety improvements that can be provided at intersections, including modifications to signal phasing, providing new crosswalks or mid-block crossings, and improving lighting conditions. While outside of the PMP analysis, other SDOT programs (including the Vision Zero program) will continue to evaluate opportunities to provide these types of pedestrian safety improvements.

Crossing conditions evaluated at arterial intersections (shown in Table 5) include the following:

- **Crossing distance:** Locations where crossing distances at intersections are wide, and where pedestrians may

TABLE 5: CROSSING THE ROADWAY EVALUATION DATA

Factor	Source	Scoring
Crossing distance	SDOT Asset Management Data	1-2 lane crossing = 0 points 3 lane crossing = 4 points 4 or more lane crossing = 5 points
Controlled-crossing spacing on principal & minor arterials	SDOT Asset Management Data	Under 1/16 mile between controlled crossing locations = 0 points Over 1/16 mile = 3 points Over 1/8 mile = 4 points Over 1/4 mile = 5 points
Curb ramp status	SDOT Asset Management Data	Scoring is binary: either an intersection has a curb ramp or not.

* Only arterial intersections analyzed in the "Crossing the Roadway" evaluation.

experience a longer time exposed within the roadway when crossing

- **Controlled-crossing spacing:** Locations where traffic control devices that stop vehicular traffic to allow pedestrians to cross may be too widely spaced for comfortable pedestrian access

- **Curb ramp status:** Locations where there are opportunities to provide curb ramps where they are missing

Crossing Distance

Crossing distance refers to how long a pedestrian must be in the roadway in order to cross; the longer the crossing, the more the pedestrian is exposed to vehicles in the roadway. Shorter crossing distances increase pedestrian safety by minimizing exposure.

Figure 6 shows arterial intersections within the PIN where pedestrians must cross 2 or less, 3, or 4 or more vehicle travel lanes to reach the other side of the street.Locations where pedestrians are required to cross four or more vehicule travel lanes are most highly weighted, and are identified as priority locations for further study.

Controlled-Crossing Spacing

Traffic control devices stop vehicles to provide an opportunity for pedestrians to cross the roadway. Widely spaced distances between controlled crossings can force pedestrians to go out of their way to safety cross a street, and can result in non-compliant behavior such as people crossing busy arterial streets at unpredictable locations.

Appropriate traffic control devices can include traditional traffic signals, pedestrian-actuated "half signals," crossing beacons, and stop signs. Half signals are activated by a pedestrian waiting to cross the street and are used to stop traffic in only two directions at an intersection. Crossing beacons are devices placed on both sides of a crosswalk with pedestrian-actuated flashing LED lights that alert drivers to the presence of someone crossing the street.

Figure 7 shows how far each arterial intersection within the PIN is from a controlled crossing and identifies opportunities to evaluate intersections for new traffic control devices. Locations where controlled crossings on principal and minor arterials are greater the ¼ mile apart are most highly weighted, and are identified as priority locations for further study to provide new traffic control devices to facilitate pedestrian crossings.

Curb Ramp Status

Curb ramps are an integral part of an age friendly and accessible community. They make it easier to access the street from the sidewalk for all people, particularly for people who use wheelchairs or other mobility aids, seniors, and people with visual impairments. SDOT is proactively transitioning intersections to provide curb ramps that are compliant with the Americans with Disabilities Act (ADA).

In 2016, we conducted a city-wide curb ramp audit and conditions assessment. This up-to-date data will be used to identify locations where there are opportunities to provide or upgrade curb ramps at arterial intersections within the PIN.

An updated ADA transition plan will identify locations where curb ramp and other accessibility improvements will be provided throughout the city. While the PMP prioritization seeks to improve access to schools and transit, an ADA transition plan considers a broader array of destinations and access needs when prioritizing accessibility improvements. The PIN and curb ramp opportunity analysis will be used as an input in developing an updated ADA transition plan.

FIGURE 6: CROSSING DISTANCE AT ARTERIAL INTERSECTIONS

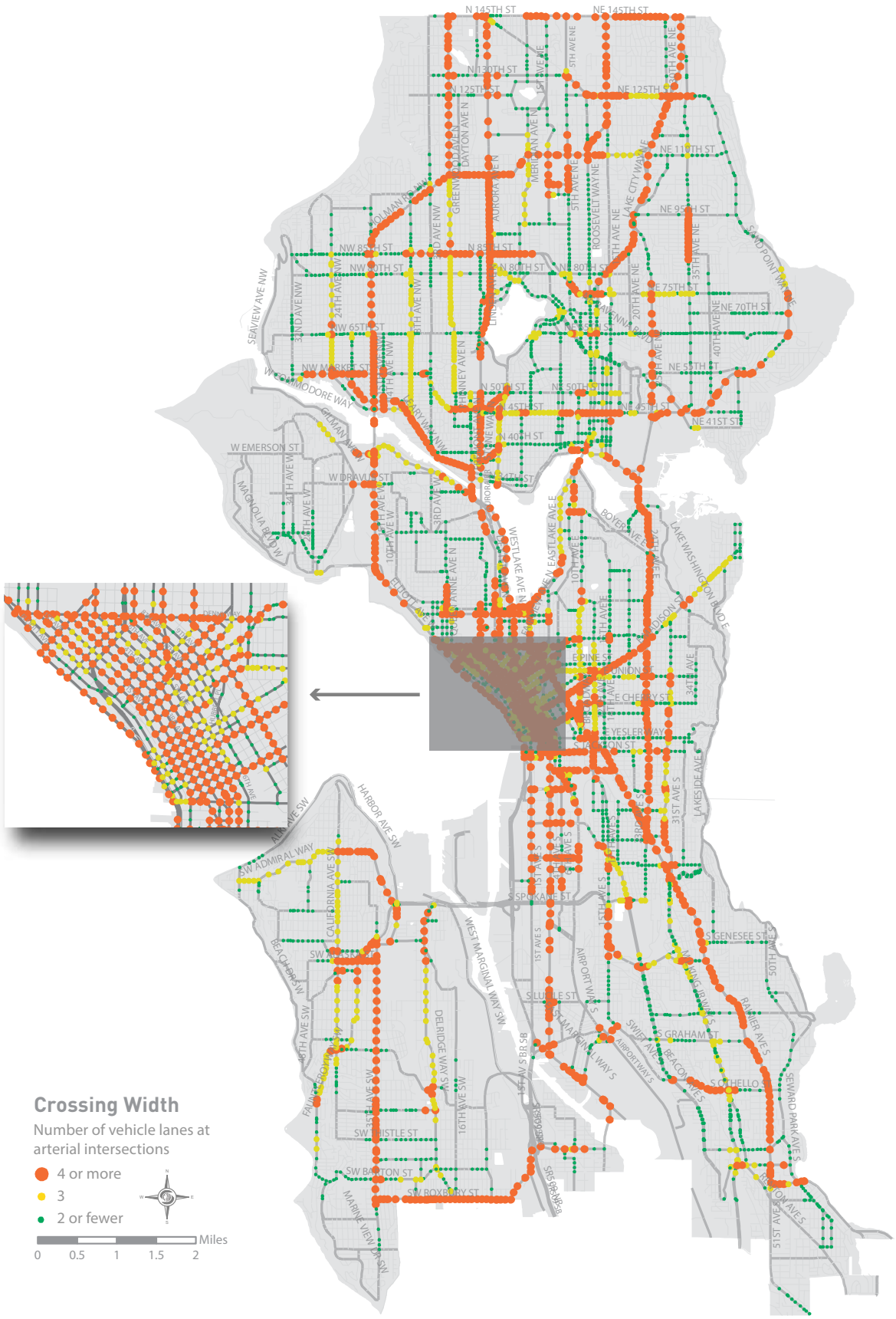
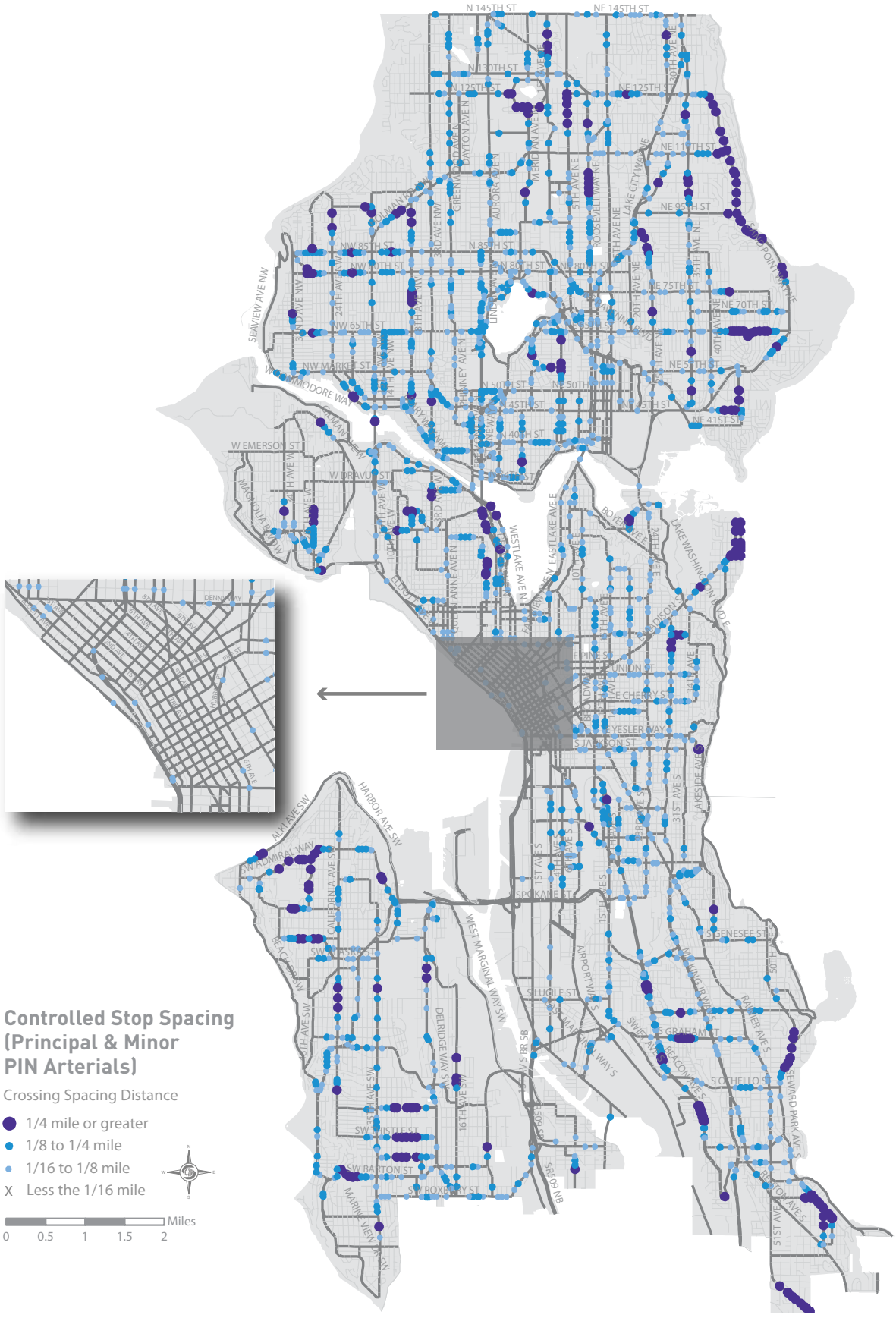


FIGURE 7: DISTANCE TO NEAREST CONTROLLED CROSSING OPPORTUNITY



STEP 3: FURTHER PRIORITIZE NEEDS USING THE PLAN'S SAFETY AND HEALTH/EQUITY ANALYSES

The PMP prioritization framework identifies the Priority Investment Network (Step 1) and the locations within that network where opportunities exist to improve conditions along and crossing the roadway (Step 2). The next step is to assess and score the opportunity locations based on quantitative data (Step 3).

To help prioritize where we should focus sidewalk and crossing improvements within the PIN, the City will assess factors associated with the PMP's safety, equity, and health goals. By quantifying improvement needs of the various opportunity locations, the City can design new pedestrian improvements that help to mitigate potential safety concerns and health and equity disparities in the city, reflecting the Plan's goals and the public's input.

The quantitative data we will use includes:

- **Safety** factors, to determine that pedestrian improvements are prioritized in locations where the most pedestrians are injured and in locations where roadway design characteristics may be correlated with pedestrian crashes
- **Equity and Health** factors that look at underlying socioeconomic conditions, including self-reported health outcomes, race, income, and disability rates so the City can provide pedestrian improvements in the areas with the greatest need

Because most of our safety data is limited to arterial streets, and because most fatal and serious-injury collisions occur on arterials, the PMP safety analysis will be used to prioritize improvements on arterials within the PIN in conjunction with the Equity and Health analysis. Improvements on non-arterial streets within the PIN will be prioritized using the Equity and Health analysis. Non-arterial street design characteristics and pedestrian collisions will be evaluated during project development when implementing pedestrian improvements.

The sections below describe the quantitative safety and equity/health analyses in Step 3 and how they will be applied to the along the roadway and crossing the roadway opportunities identified within the PIN. In Step 4 of the prioritization framework, qualitative factors will be considered to inform the implementation plan.

Safety Analysis

The PMP safety prioritization analysis identifies arterial street segments where opportunities may exist to provide infrastructure improvements to make Seattle streets even safer for pedestrians. It evaluates locations where pedestrian crashes have occurred over the last five years, and consistent with the City's Vision Zero objectives, weighs most highly locations where serious and fatal pedestrian collisions have occurred.

In addition to evaluating pedestrian crash data, the PMP safety prioritization analysis also evaluates roadway design characteristics that may be related to pedestrian crashes. This data was gleaned from SDOT's Bicycle and Pedestrian Safety Analysis (BPSA). The BPSA, completed in early 2017, developed a safety prioritization model based on this assessment of pedestrian involved collision locations. This model identifies: (1) roadway design and behavioral characteristics most highly correlated with nonmotorized crashes in Seattle; and (2) opportunities for spot and corridor improvement projects that address these factors. These factors include arterial classification, roadway width, vehicle speeds, and controlled crossing spacing. This effort helps us spend City money where it will have the most impact, and furthers the Vision Zero goal of eliminating fatal and serious injuries on Seattle streets by 2030.

Every arterial street segment in the PIN was given a safety prioritization score. The score for each factor is tallied to create a cumulative safety prioritization score, with a maximum of 30 points. After determining the cumulative scores, all PIN arterial street segments were divided into five quantiles (five groups with relatively equal records in each group). The top quantile are those arterials receiving the highest safety prioritization scores, where investments in safety improvements may have the biggest impact on pedestrian safety.

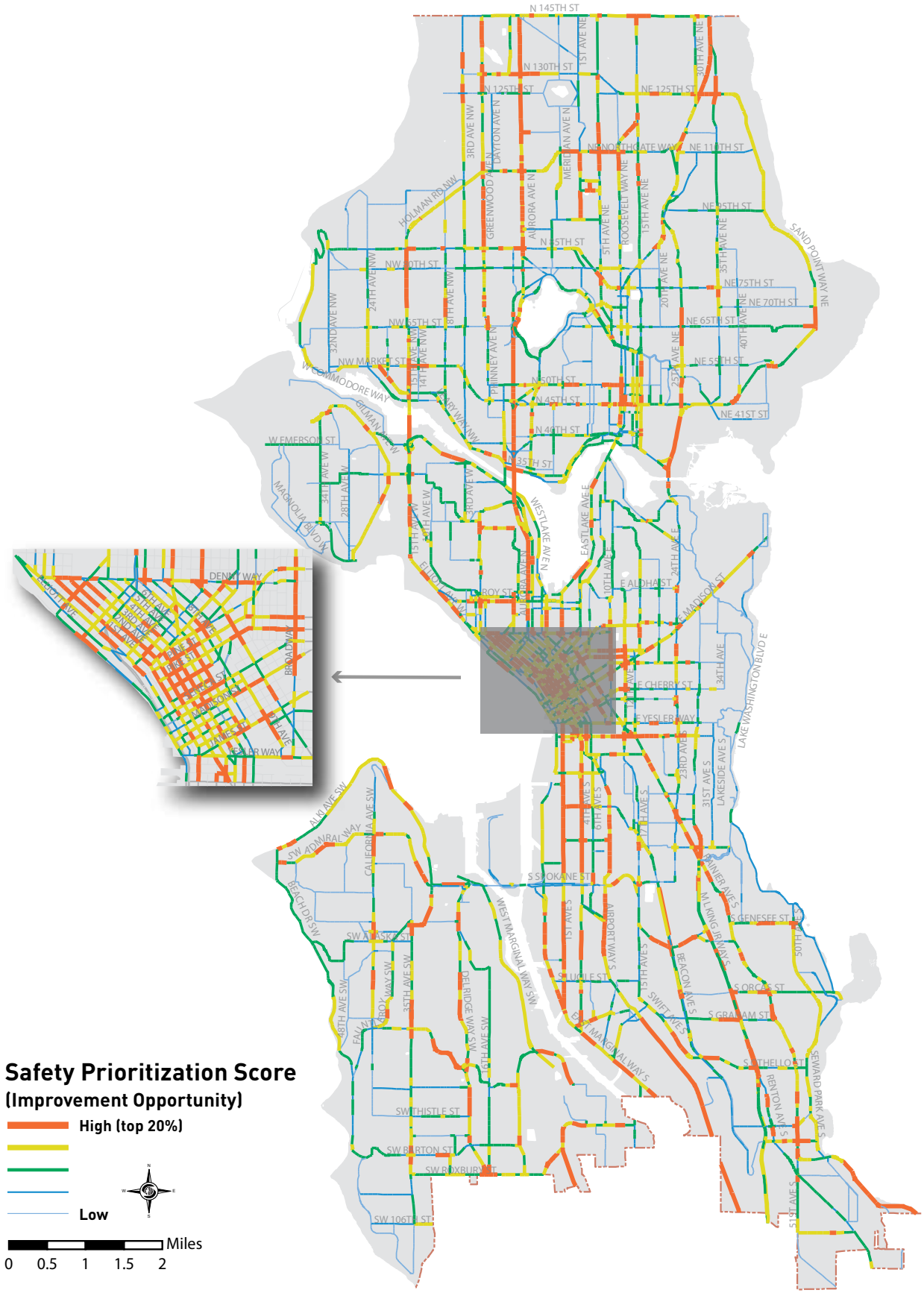
Figure 8 shows the arterial street segments within the Priority Investment Network with the safety prioritization scores applied. The top 20% of PIN arterial street segments with the greatest opportunities to provide pedestrian safety improvements are shown in orange. Along- and crossing-the-roadway improvements will be prioritized in these locations.

The factors included in the PMP safety prioritization analysis are shown in Table 6.

TABLE 6: SAFETY FACTORS

Factor	Source	Scoring
Pedestrian collisions **Includes intersection and block-level data.	SDOT/SPD Data (5 years)	Serious/Fatal Collisions = 10 points 4+ collisions = 8 points 2-3 collisions = 6 points 1 collision = 4 points
Arterial classification	SDOT GIS	Principal Arterials = 5 pts Minor Arterials = 4 pts Collector Arterials = 3 pts*
Roadway width	SDOT GIS	61'+ = 5 points 48' – 60' = 3 points 36' – 47' = 1 point
Vehicle speed	85th% speed where available, otherwise posted speed	40+ mph = 5 points 35+ mph = 4 points 30+ mph = 3 points 26+ mph = 1 point*
Controlled-crossing spacing on principal & minor arterials	SDOT GIS	Over 1/4 mile = 5 points Over 1/8 mile = 4 points Over 1/16 mile = 3 points Under 1/16 mile between controlled crossing locations = 0 points
Maximum Possible Safety Score		30 points

FIGURE 8: ARTERIAL SAFETY ANALYSIS



Equity and Health Analysis

Consistent with the PMP goals related to equity and health, we will prioritize pedestrian improvements where people rely on our sidewalks and crossings the most. This includes people who are more dependent upon pedestrian and transit networks to get around, and people in need of quality pedestrian infrastructure to help improve health.

The PMP Equity and Health analysis assesses socio-economic data to identify populations most reliant on the pedestrian network, including income, race, and disabled communities. To ensure that improvements are prioritized to facilitate better health outcomes across the city, the analysis also includes self-reported health data provided by Public Health – Seattle and King County, including self-reported physical activity rates and rates of obesity and diabetes. Table 7 summarizes the data used in the PMP equity and health analysis.

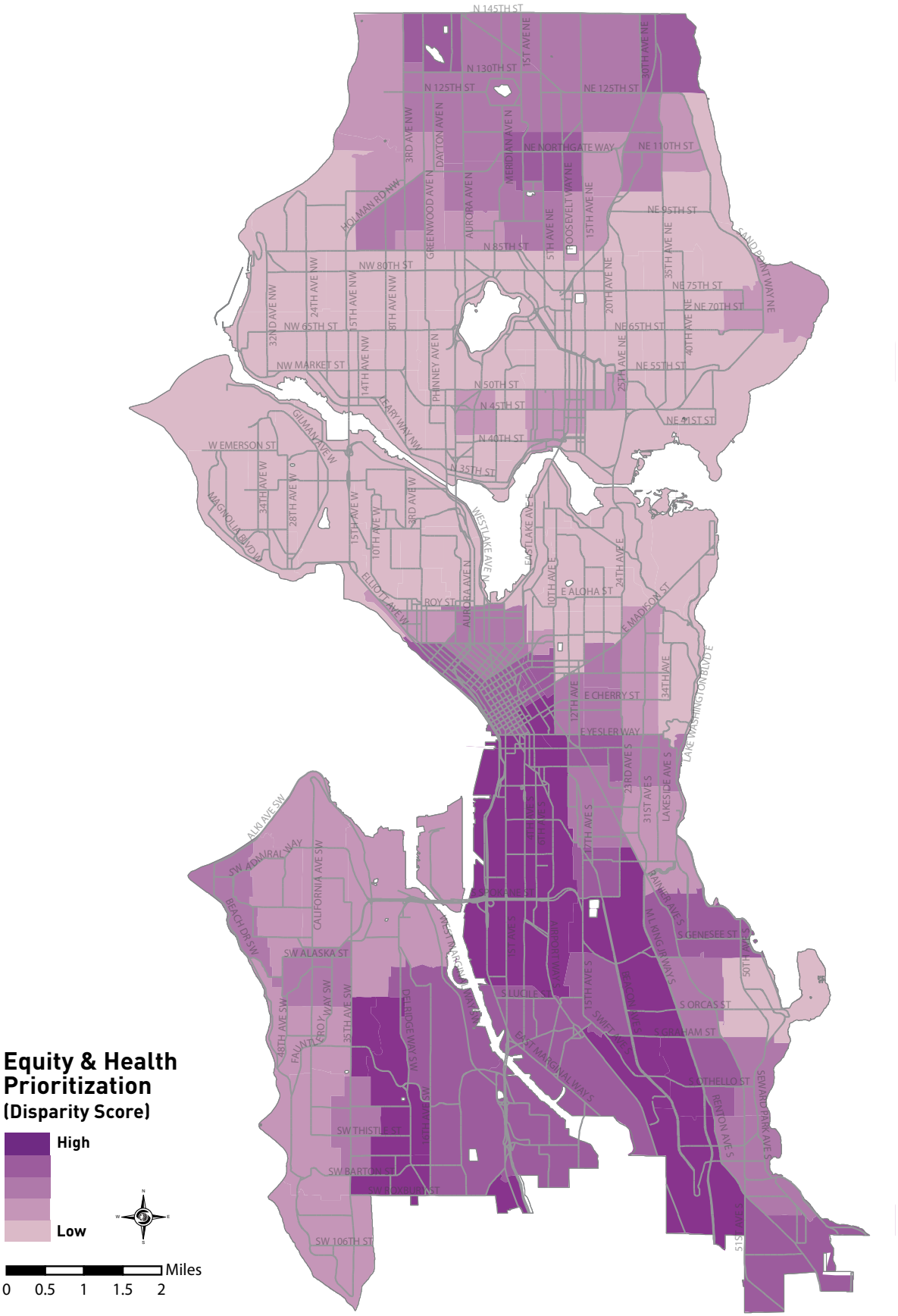
Each of the six equity and health factors were broken into five quantiles (five groups with relatively equal records in each group) based on census tract. The top quantile for each factor received 5 points, the second highest quantile received 3 points, and the third highest quantile received 1 point. The lowest 2 quantiles for each factor received 0 points. The scores from each factor analysis are tallied to create a cumulative equity and health score, with a maximum of 30 points.

Figure 9 shows the areas of the city prioritized for pedestrian improvements based on these equity and health factors. The areas of the city that would benefit the most from pedestrian infrastructure to improve equity and health disparities are shown in dark purple.

TABLE 7: EQUITY AND HEALTH FACTORS

Factor	Source	Scoring
Low income population	2010 Census	5 points max*
Disabled population	2010 Census	5 points max*
Communities of color	2010 Census	5 points max*
Physical activity	Public Health – Seattle and King County, King County Health Planning Areas (HPA) 2013	5 points max*
Obesity rates	Public Health – Seattle and King County, King County Health Planning Areas (HPA) 2013	5 points max*
Diabetes rates	Public Health – Seattle and King County, King County Health Planning Areas (HPA) 2013	5 points max*
Maximum possible equity and health score		30 points

FIGURE 9: EQUITY AND HEALTH ANALYSIS



STEP 4: IMPLEMENTATION PLAN PRIORITIES

Following PIN development (Step 1), identification of investment opportunities (Step 2), and quantitative assessment of safety, equity, and health factors for the various investment opportunity locations (Step 3), the final element of the framework is to develop project priorities (Step 4). This includes applying qualitative factors to the list of scored opportunity locations. The end result will be a list of along and crossing the roadway network investment priorities for inclusion in a 3- to 5-year implementation plan.

Qualitative factors include consideration of:

- Funding availability and delivery commitments
- Leveraging opportunities and efficient delivery packaging
- Policy directives from the Mayor and City Council
- Community interests
- Geographic balance
- Performance measurement progress.

As part of implementation plan development, the Seattle Pedestrian Advisory Board will consider how the qualitative factors are applied to determine recommended investment priorities.

Applying the Safety and Equity/Health Analyses to the PIN

The PMP Implementation Plan will assign each street segment within the PIN a score based on the safety and equity/health analyses above. That score will inform the phasing of PMP pedestrian improvements, indicating where pedestrian improvements could improve safety conditions the most, and where pedestrian investments can help address health and equity disparities

The Implementation Plan will prioritize arterial streets separately from non-arterial streets. Non-arterial street segments will be prioritized based exclusively on the equity and health analysis score, as traffic safety data is limited for non-arterial streets. Arterial street segments will be prioritized using a weighted cumulative score based on both the safety and equity and health analyses. A street segment's safety prioritization score will contribute to 60% of the total score, and the equity and health analysis will contribute to 40% of the total score, as detailed in Table 8. The weighting percentage is based on public feedback we received, and our Vision Zero objectives. The higher the street segment's score, the higher priority it is for improvement.

TABLE 8: PIN ARTERIAL PRIORITIZATION WEIGHTING

Prioritization	Maximum Raw Score	Weighting Value	Maximum Weighted Score
Health and Equity	30 points	1.33	40
Safety	30 points	2	60

Pedestrian Master Plan

APPENDIX 8: 2009 PMP PEDESTRIAN TOOLBOX

ELEMENTS OF THE TOOLBOX

DESIGNING, ENGINEERING, AND UNIVERSAL ACCESS
Designing and engineering safe and accessible roadways and pedestrian facilities.

ENFORCEMENT
Enforcing laws, proper behaviors, and use of roadway facilities.

ENCOURAGEMENT
Encouraging walking and physical activity throughout the community.

EDUCATION
Educating roadway users, property owners, and decision makers about rules, rights, and responsibilities.

PLANNING, LAND USE, AND ZONING
Short- and long-term planning, land use, and zoning for the built environment.

EQUITY, HEALTH, AND ENVIRONMENT
Ensuring equity, health, and environmental sustainability.

FUNDING
Finding funding to support and sustain pedestrian improvements

USING THE TOOLBOX

To use the Pedestrian Toolbox, begin by identifying the Common Pedestrian Issues that most closely match your concerns. Clicking on the issue will lead you to an explanation and to tools that may be used to address the problem. Clicking on a tool will connect you to a description of the tool as well as links to more information.

If you are looking for a particular tool, use the SEARCH function to quickly locate the tool. If you prefer to browse all of the tools in a specific toolbox, you may select a toolbox from the right menu.

Common Pedestrian Issues:

Creating a safer, more accessible, and more comfortable walking environment requires identifying the challenges facing pedestrians at a particular location. The common pedestrian issues identified below direct you to relevant toolboxes and specific tools within each toolbox. Keep in mind that most tools will not offer a quick fix: an effective and sustainable solution will likely involve several tools or strategies.

Each community member or agency (public or private) can employ some or all of the tools described to improve the pedestrian environment. The more comprehensive the approach, the more likely you are to achieve a successful, sustainable result.

Begin by clicking on one of the five groups of Common Pedestrian Issues that interests you. This will take you to a list of specific issues and tools available for addressing them. Clicking on a tool will connect you to its description and to other relevant links.

Common Pedestrian Issues Include:

- Safety and Security
- Crossing the Street
- Moving Along the Sidewalk
- Destinations
- Making change

Safety and Security

Pedestrian laws are not well known or followed by motorists, bicyclists, or pedestrians.

A variety of laws—many identified in the Seattle Municipal Code—impact pedestrians and the walking environment. These include laws related to yielding for pedestrians in the crosswalk, ceding right-of-way to pedestrians on the sidewalk, appropriate crossing locations for pedestrians (anti-jaywalking), white cane laws to protect people with disabilities, vehicle parking restrictions, and eliminating right-of-way obstructions.

Tools in the enforcement and education sections are most useful in addressing awareness of and adherence to pedestrian laws. However, encouragement tools and specific engineering treatments such as painting and signing can be useful as well.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to address a lack of knowledge or adherence to pedestrian laws.

1. ***Design, Engineering, and Universal Access Tools***
   Travelway Zone

2. ***Enforcement Tools***
   Campaigns & Programs
   Technology & Practice
   Infrastructure Changes
   Law Enforcement Methods: Warnings and Citations
   Community-Based Strategies

3. ***Encouragement Tools***
   Media Campaigns and Strategies
   Pedestrian Advocacy

4. ***Education Tools***
   Campaigns
   General Strategies
   Training Program Topics for Roadway/ Walkway Users
   Training Program Topics for Officials and Decision Makers
   Additional Courses, Materials, and Programs

6. ***Equity, Health, and Environment Tools***
   Campaigns and Outreach Tools
   Programs

Motorists drive too fast.

Traffic speed can be critical to walkability and safety. While pedestrians often feel comfortable on streets that carry a high volume of traffic at low speeds, faster traffic may make them feel uncomfortable and may discourage walking. At higher speeds, motorists are less likely to see and react to a pedestrian, and even more unlikely to actually stop in time to avoid a crash. Higher speed crashes are much more lethal to pedestrians, with an 85% chance of a fatal injury to a pedestrian at 40 mph compared to a 5% chance of a fatality at 20 mph.

In most cases, motorists drive too fast because roadway design encourages higher travel speeds (regardless of the posted speed limit). If motorists are breaking the speed limit, design tools—coupled with enforcement and education tools—will be most effective.

In some cases, community members believe motorists are speeding when in fact they are not. This perception may indicate the need to employ other types of tools, such as education and encouragement tools.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to address the issue of motorists driving too fast.

1. ***Design, Engineering, and Universal Access Tools***
   Travelway Zone
   Miscellaneous Development

2. ***Enforcement Tools***
   Campaigns & Programs
   Technology & Practice
   Infrastructure Changes
   Law Enforcement Methods: Warnings and Citations
   Community-Based Strategies

3. ***Encouragement Tools***
   Media Campaigns and Strategies
   Pedestrian Advocacy
   Built Environment and Infrastructure

4. ***Education Tools***
   Campaigns
   General Strategies
   Training Program Topics for Roadway/ Walkway Users
   Training Program Topics for Officials and Decision Makers
   Additional Courses, Materials, and Programs

5. ***Planning, Land Use, and Zoning Tools***
   Planning Documents
   Technical Analysis Tools

6. ***Equity, Health, and Environment Tools***
   Campaigns and Outreach Tools
   Programs
   Resources and Organizations

There are mant crashes involving pedestrians.

In 2007, there were 492 crashes involving pedestrians in Seattle. Of these crashes, 53 resulted in a disabling injury and 6 were fatalities. (For additional information about pedestrian and bicycle crashes in Seattle, please see the 2007 Pedestrian and Bicycle Collision Report). Through the first quarter of 2008, 124 crashes were reported. While these crash rates are relatively low compared to other major U.S. cities, the Pedestrian Master Plan strives to reduce both the number and severity of crashes involving pedestrians.

To meet this goal, solutions should target the following objectives:

- Reduce conflicts and collisions between pedestrians and other vehicles
- Increase separation between pedestrians and vehicles along the roadway

Recommended tools are linked below. In addition to engineering and enforcement tools, education tools are vitally important in reducing the incidence of crashes in Seattle. In certain areas, planning tools may also be valuable.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to address the issue of crashes involving pedestrians.

1. ***Design, Engineering, and Universal Access Tools***
   Travelway Zone

2. ***Enforcement Tools***
   Campaigns & Programs
   Technology & Practice
   Law Enforcement Methods: Warnings and Citations
   Community-Based Strategies

3. ***Education Tools***
   Campaigns
   General Strategies
   Training Program Topics for Roadway/ Walkway Users
   Training Program Topics for Officials and Decision Makers
   Additional Courses, Materials, and Programs

5. ***Planning, Land Use, and Zoning Tools***
   Regulations and Director's Rules
   Technical Analysis Tools

6. ***Equity, Health, and Environment Tools***
   Campaigns and Outreach Tools
   Datasets and Measurement Tools

Pedestrians avoid walking at night.

People may avoid walking at night for a variety of reasons, such poor visibility. A well-lit neighborhood increases the feelings of security and comfort that encourage walking. Click here for more information.

In combination with good lighting, reducing crime makes people more likely to walk at night. Enforcement, education, encouragement, planning, and design tools can be used to increase pedestrian comfort and sense of security.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to address the reasons pedestrians avoid walking at night.

1. ***Design, Engineering, and Universal Access Tools***
   Walkable Zone
   Landscape/Furniture Zone
   Travelway Zone
   Miscellaneous Development

2. ***Enforcement Tools***
   Campaigns & Programs
   Law Enforcement Methods: Warnings and Citations
   Community-Based Strategies

3. ***Encouragement Tools***
   Media Campaigns and Strategies
   Pedestrian Advocacy
   Incentives
   Walking Programs
   Events
   Built Environment and Infrastructure

4. ***Education Tools***
   Campaigns
   Training Program Topics for Roadway/ Walkway Users

5. ***Planning, Land Use, and Zoning Tools***
   Regulations and Director's Rules
   Review Boards

6. ***Equity, Health, and Environment Tools***
   Campaigns and Outreach Tools
   Resources and Organizations

There are access challenges for people with physical disabilities.

All public places must be accessible to all people. This includes pedestrians using wheelchairs, pedestrians with vision and/or hearing loss, and older adults with limited mobility. While general design guidelines and problem solutions recommended for improving pedestrian travel apply to those with physical disabilities as well, other details become important for this population.

For pedestrians with disabilities, details matter. A vehicle blocking the sidewalk may be a nuisance to one pedestrian, but it is an obstacle to someone visually impaired or using a wheelchair. A low-hanging branch can cause injury to those with low vision, and a cracked sidewalk can cause a dangerous fall for an older adult.

There are a number of items to consider regarding the mobility needs of all pedestrians. Walkway widths are important (for wheelchair users to pass one another); the slope of a walking surface is crucial for both wheelchair users and those who have a difficult time with balance. Curb ramps with truncated domes must be included at intersections, and signal timing might need to be adjusted for slower walkers. Click here for more information.

The design toolbox contains many tools promoting universal access, although tools from most of the other toolboxes are important as well.

Recommended Tools

Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to address access challenges for people with disabilities.

1. ***Design, Engineering, and Universal Access Tools***
   Walkable Zone
   Landscape/Furniture Zone
   Curb Space Zone
   Travelway Zone

3. ***Encouragement Tools***
   Pedestrian Advocacy
   Wayfinding
   Built Environment and Infrastructure

4. ***Education Tools***
   Training Program Topics for Officials and Decision Makers
   Training Program Topics for Property Owners and Developers

5. ***Planning, Land Use, and Zoning Tools***
   Regulations and Director's Rules
   Permitting and Review Processes
   Resource Documents
   Technical Analysis Tools
   Review Boards

6. ***Equity, Health, and Environment Tools***
   Assessment Tools
   Programs
   Standards

Crossing the Street

Crossing a street should not be difficult, and there are tools to help improve pedestrian safety when crossing. The street crossing experience comes down to pedestrian and motorist behavior as well as intersection or crossing design. A variety of factors influence motorist behavior (whether, and how, motorists stop for pedestrians), including vehicle speed. A motorist driving more slowly has more time to see, react, and stop for a pedestrian. The number of pedestrians also influences motorists—in general, more people walking raises motorist awareness of the likelihood of a pedestrian crossing the street. Click here for more information.

It is difficult to cross the street because of high traffic volume or speed.

Effective traffic management can address concerns about traffic speed and volume. Many traffic management tools restrict traffic movement. In most cases the least restrictive method of solving a traffic management problem is not only the most cost effective solution, but also the one most easily accepted by both motorists and pedestrians. Most tools addressing crossing challenges are engineering treatments, but tools from the enforcement, education, and planning toolboxes are also important in addressing driver and pedestrian behavior, street types, and land uses.

Recommended Tools

Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to address difficult crossing conditions.

1. ***Design, Engineering, and Universal Access Tools***
   Travelway Zone
   Miscellaneous Development

2. ***Enforcement Tools***
   Campaigns & Programs
   Technology & Practice
   Infrastructure Changes
   Law Enforcement Methods: Warnings and Citations
   Community-Based Strategies

3. ***Encouragement Tools***
   Pedestrian Advocacy
   Events

4. ***Education Tools***
   Training Program Topics for Roadway/ Walkway Users
   Training Program Topics for Officials and Decision Makers
   Additional Courses, Materials, and Programs

5. ***Planning, Land Use, and Zoning Tools***
   Technical Analysis Tools

6. ***Equity, Health, and Environment Tools***
   Resources and Organizations

It is not clear where to cross the street.

Every public street intersection is a legal crosswalk (unless otherwise signed), regardless of whether it is marked or unmarked. For a crosswalk to legally exist at a mid-block location, it must be marked. Pedestrians have the same legal protections and rights when crossing in marked or unmarked crosswalks.

Marked crosswalks guide pedestrians to the best place to cross, warn motorists of pedestrian crossings, and remind motorists to stop or yield to pedestrians. They are also helpful at complex intersections to show exactly where to cross the street. Different jurisdictions have different policies on marked crosswalks. In general, marked crosswalks are not as commonly used on residential streets except when installed as part of a Safe Routes to School Program. In Seattle, crosswalks are marked according to Director's Rule 2004-01. To learn more, click here.

The enforcement, education, design, and planning toolboxes provide tools for clarifying street crossing locations.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to address unclear street crossings.

1. ***Design, Engineering, and Universal Access Tools***
   Curb Space Zone
   Travelway Zone

2. ***Enforcement Tools***
   Infrastructure Changes

3. ***Encouragement Tools***
   Wayfinding
   Built Environment and Infrastructure

4. ***Education Tools***
   Campaigns
   General Strategies
   Training Program Topics for Roadway/ Walkway Users
   Additional Courses, Materials, and Programs

5. ***Planning, Land Use, and Zoning Tools***
   Regulations and Director's Rules

6. ***Equity, Health, and Environment Tools***
   Campaigns and Outreach Tools

It is difficult to cross the street because of short signal cycles.

Traffic signals are an important means of traffic control. When used properly they can help improve safety, manage traffic effectively, and make it easier to cross the street. Where warranted, traffic signals (along with pedestrian signals) can benefit pedestrians.

All traffic signals should have pedestrian crossing signals if pedestrians typically cross at the signal (except for some narrow street crossings). However, some intersections do not, due to the time when the signal was installed. Pedestrian signals are essential at complex intersections or when left-turn arrows exist. They should also be used at school crossings and for wide streets where pedestrians need to know if they will have enough time to complete their crossing. Signal timing must ensure pedestrians have enough time to finish crossing the street during the flashing DON'T WALK signal (or flashing upraised hand).

When traffic signals make pedestrians wait too long for a WALK signal, people may become discouraged from using the crossing or may cross against the light. Similarly, people may ignore the signal if it does not provide enough time to cross the street. Click here for more information.

Many tools related to crossings and signals are found in the design and planning toolboxes, although education and planning tools are important as well.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to address the reasons pedestrians avoid walking at night.

1. ***Design, Engineering, and Universal Access Tools***
   Curb Space Zone
   Travelway Zone

4. ***Education Tools***
   Training Program Topics for Officials and Decision Makers

5. ***Planning, Land Use, and Zoning Tools***
   Regulations and Director's Rules
   Technical Analysis Tools

Cars are parked too near the crosswalk (or in the crosswalk).

If it is difficult for pedestrians to see motorists approaching the crosswalk, it will be equally difficult for motorists to see pedestrians attempting to cross the street. Crossings should be clear of obstacles (such as newspaper racks, large poles close to the roadway, and bushes or trees) to ensure good sight lines for both pedestrians and motorists. Click here for more information.

Engineering changes to the street, such as curb extensions, can help improve the sight lines. In addition to these engineering approaches, enforcement, education, and planning tools help keep crosswalks clear and improve motorist compliance.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to cars parked too near the crosswalk.

1. ***Design, Engineering, and Universal Access Tools***
   Walkable Zone
   Curb Space Zone

2. ***Enforcement Tools***
   Campaigns & Programs
   Infrastructure Changes
   Law Enforcement Methods: Warnings and Citations

4. ***Education Tools***
   Campaigns
   Training Program Topics for Roadway/ Walkway Users
   Training Program Topics for Officials and Decision Makers
   Training Program Topics for Property Owners and Developers
   Additional Courses, Materials, and Programs

5. ***Planning, Land Use, and Zoning Tools***
   Regulations and Director's Rules
   Technical Analysis Tools

6. ***Equity, Health, and Environment Tools***
   Standards

Motorists or bicyclists do not yield to pedestrians

In Washington, motorists and cyclists must stop for pedestrians crossing the street in both marked and unmarked crosswalks. However, regular enforcement requires extensive resources, and the law might not be appropriately emphasized in driver education. In many instances, the problem is more pronounced on higher speed streets where it is more difficult to get drivers to slow or to yield to pedestrians (for more information, see http://www.walkinginfo.org/problems/problems-crossing.cfm). Fortunately, a number of steps involving enforcement, education, encouragement, and physical changes to the roadway can improve pedestrian crossings.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to address the reasons people fail to yield to pedestrians.

1. ***Design, Engineering, and Universal Access Tools***
   Travelway Zone

2. ***Enforcement Tools***
   Campaigns & Programs
   Technology & Practice
   Infrastructure Changes
   Law Enforcement Methods: Warnings and Citations
   Community-Based Strategies

3. ***Encouragement Tools***
   Media Campaigns and Strategies
   Pedestrian Advocacy
   Events

4. ***Education Tools***
   Campaigns
   General Strategies
   Training Program Topics for Roadway/ Walkway Users
   Training Program Topics for Officials and Decision Makers
   Additional Courses, Materials, and Programs

6. ***Equity, Health, and Environment Tools***
   Campaigns and Outreach Tools Programs

Moving Along the Sidewalk

One of the key components of a walkable neighborhood is the sidewalk—the pedestrian roadway. Conditions along streets and on sidewalks affect pedestrian travel, comfort, orientation, safety, and a community's aesthetic quality.

Good sidewalks comfortably accommodate at least two adults walking side-by-side and are clear of horizontal and vertical obstructions such as overgrowth, parked cars, and garbage or recycling containers. A variety of problems might make walking on sidewalks difficult:

- Sidewalks are buckled, lifted, or cracked due to tree roots or other causes.
- Sidewalks are blocked by utility poles, sign posts, pot holes, fire hydrants, bus benches, newspaper racks, snow, parked cars, or other obstructions.
- Sidewalks are blocked by bushes or low tree branches.
- Sidewalks lack curb ramps at street corners, crosswalks, or driveways.
- The driveway side-slopes are steep and hard to cross.

Sidewalk obstacles make walking difficult and sometimes dangerous, especially if a pedestrian has to walk into the street to get around a barrier. It is difficult, if not impossible, for people using wheelchairs, canes, crutches, walkers, or strollers to contend with obstacles, especially if those obstacles are not easily moved. Low-hanging branches can injure visually-impaired pedestrians, and such pedestrians might not be comfortable going around a barrier. Depending on the nature of the obstruction, sidewalk barriers are either a public or a private responsibility (for more information, see http://www.walkinginfo.org/problems/problems-sidewalks.cfm).

Both enforcement and design tools are useful in preventing and addressing sidewalk obstructions. Additionally, educational and encouragement tools can remind property owners to be courteous to others in their neighborhood.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to address the blocked sidewalks.

1. ***Design, Engineering, and Universal Access Tools***
   Walkable Zone
   Landscape/Furniture Zone

2. ***Enforcement Tools***
   Campaigns & Programs
   Infrastructure Changes
   Law Enforcement Methods: Warnings and Citations
   Community-Based Strategies

3. ***Encouragement Tools***
   Media Campaigns and Strategies
   Pedestrian Advocacy
   Built Environment and Infrastructure

4. ***Education Tools***
   Campaigns
   Training Program Topics for Roadway/Walkway Users
   Training Program Topics for Officials and Decision Makers
   Training Program Topics for Property Owners and Developers
   Additional Courses, Materials, and Programs

5. ***Planning, Land Use, and Zoning Tools***
   Regulations and Director's Rules
   Permitting and Review Processes
   Resource Documents
   Review Boards

6. ***Equity, Health, and Environment Tools***
   Assessment Tools
   Campaigns and Outreach Tools
   Programs
   Standards
   Datasets and Measurement Tools
   Resources and Organizations

Sidewalks are in poor repair.

Well-maintained sidewalks are free of cracks or lifted sections that could trip pedestrians and block people in wheelchairs. Sidewalks fall into disrepair for many reasons, including tree roots, erosion, damage by heavy vehicles, and aging facilities.

Most communities (including Seattle) have policies requiring adjacent property owners to repair damaged sidewalks. However, there is a need to educate property owners about this responsibility. Smooth sidewalks are a necessity for pedestrians with limited mobility, and keeping sidewalks well maintained prevents falls and injuries (for more information, see http://www.walkinginfo.org/problems/problems-sidewalks.cfm).

In addition to education tools, enforcement, planning, equity, and funding tools can also be used to address a concern about the poor condition of sidewalks.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to address sidewalks in poor repair.

1. ***Design, Engineering, and Universal Access Tools***
   Miscellaneous Development

2. ***Enforcement Tools***
   Campaigns & Programs
   Law Enforcement Methods: Warnings and Citations
   Community-Based Strategies

3. ***Encouragement Tools***
   Pedestrian Advocacy
   Events

4. ***Education Tools***
   Campaigns
   General Strategies
   Training Program Topics for Officials and Decision Makers
   Training Program Topics for Property Owners and Developers
   Additional Courses, Materials, and Programs

5. ***Planning, Land Use, and Zoning Tools***
   Planning Documents
   Regulations and Director's Rules
   Permitting and Review Processes
   Incentives and Bonuses
   Resource Documents
   Planning/Policy-Making Techniques and Groups

6. ***Equity, Health, and Environment Tools***
   Assessment Tools
   Campaigns and Outreach Tools
   Programs
   Standards
   Datasets and Measurement Tools
   Resources and Organizations

The sidewalk network is incomplete or inadequate.

A continuous sidewalk network supports and encourages walking. In many cases, sidewalks are installed on both sides of a street, although this is not necessary or desirable in every location. In addition to concrete sidewalks, alternative sidewalk options can be used to construct pedestrian walkways. Click here for more information.

In addition to constructing additional sidewalks, paths, and trails, other tools can be used to communicate existing paths of travel to pedestrians. Education, encouragement, design, planning, equity, and funding tools can all be useful.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to complete the sidewalk network.

1. ***Design, Engineering, and Universal Access Tools***
   Walkable Zone
   Miscellaneous Development

3. ***Encouragement Tools***
   Pedestrian Advocacy
   Wayfinding
   Events
   Built Environment and Infrastructure

4. ***Education Tools***
   Training Program Topics for Officials and Decision Makers
   Training Program Topics for Property Owners and Developers

5. ***Planning, Land Use, and Zoning Tools***
   Planning Documents
   Regulations and Director's Rules
   Permitting and Review Processes
   Incentives and Bonuses
   Planning/Policy-Making Techniques and Groups

6. ***Equity, Health, and Environment Tools***
   Assessment Tools
   Campaigns and Outreach Tools
   Standards
   Datasets and Measurement Tools
   Resources and Organizations

Separation from traffic is inadequate (the sidewalk is too close to the street).

Separating sidewalks from traffic may increase pedestrian comfort and security. A planting strip is a common buffer, and if wide enough can include street trees, rain gardens, or other landscaping. Parked cars or on-street bike lanes also separate pedestrians from traffic. Click here for additional information.

While many of the tools for separating pedestrians from traffic are design tools, planning and equity tools can also play an important role.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to address inadequate separation from traffic.

1. ***Design, Engineering, and Universal Access Tools***
   Landscape/Furniture Zone
   Travelway Zone
   Miscellaneous Development

3. ***Encouragement Tools***
   Built Environment and Infrastructure

5. ***Planning, Land Use, and Zoning Tools***
   Regulations and Director's Rules
   Permitting and Review Processes
   Incentives and Bonuses
   Technical Analysis Tools
   Review Boards

6. ***Equity, Health, and Environment Tools***
   Standards
   Resources and Organizations

It is difficult for pedestrians to connect from the right-of-way to adjacent land uses.

Connecting from the sidewalk or walkway to adjacent land uses can be a challenge in some locations. For example, if a building entrance is not designed accessibly, people with limited mobility might have difficulty reaching their destination. Additionally, new developments sometimes fail to account for pedestrians, leaving entrances inaccessible from the sidewalk.

A combination of design, education, planning, and enforcement tools can address this challenge. Developers and property owners must understand the need for seamless connections from the right-of-way. Further, requirements for accessible connections should be institutionalized through planning and land use approaches.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to address connections between the right-of-way and adjacent land uses.

1. ***Design, Engineering, and Universal Access Tools***
   Frontage Zone
   Walkable Zone
   Miscellaneous Development

3. ***Encouragement Tools***
   Wayfinding
   Built Environment and Infrastructure

4. ***Education Tools***
   Training Program Topics for Officials and Decision Makers
   Training Program Topics for Property Owners and Developers

5. ***Planning, Land Use, and Zoning Tools***
   Planning Documents
   Regulations and Director's Rules
   Permitting and Review Processes
   Incentives and Bonuses
   Planning/Policy-Making Techniques and Groups
   Technical Analysis Tools
   Review Boards

There are competing uses for right-of-way space.

Sidewalks can become cluttered with street furniture, utility poles, and sign posts. This unnecessary crowding of valuable pedestrian space often results from many independent decisions and projects. In some cases, using existing underground vaults more efficiently could resolve the problem. With cooperation, coordination, and commitment, various public entities, private utilities, and community interests can partner to improve the pedestrian environment. The benefits of consolidated utilities, street furniture, and other important streetscape pieces are many: making the most of limited sidewalk space, reducing visual clutter, developing a distinctive character for an area, and demonstrating careful investment of taxpayer dollars.

Tools to address competition for limited space in the right-of-way include enforcement, design, and planning tools.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to address competition for space in the right-of-way.

1. ***Design, Engineering, and Universal Access Tools***
   Frontage Zone
   Walkable Zone
   Landscape/Furniture Zone
   Travelway Zone
   Miscellaneous Development

2. ***Enforcement Tools***
   Law Enforcement Methods: Warnings and Citations

3. ***Encouragement Tools***
   Pedestrian Advocacy
   Events
   Built Environment and Infrastructure

4. ***Education Tools***
   Training Program Topics for Officials and Decision Makers
   Training Program Topics for Property Owners and Developers

5. ***Planning, Land Use, and Zoning Tools***
   Planning Documents
   Regulations and Director's Rules
   Permitting and Review Processes
   Incentives and Bonuses
   Resource Documents
   Technical Analysis Tools
   Review Boards

Transit stops are difficult to access.

As transit tends to run along arterial streets, crossing a street to reach a bus stop can be a key problem for pedestrians accessing transit. Typically, a pedestrian must cross the street on either the outbound or inbound trip. Locating transit stops only at traffic signals (at least on multi-lane streets) might resolve this problem in many instances. However, signals spaced very far apart lead to inconvenient transit stop spacing that can deter some users.

Providing good transit facilities and access includes the following key elements:

- Installing bus stops on the far (downstream) side of an intersection. This decreases the likelihood that a rider will exit and then cross in front of the bus.
- Installing appropriate lighting at transit stops. Not only will this increase pedestrian comfort and reduce the likelihood of crime, it helps bus drivers see those waiting for the bus.
- Delineating the bus stop waiting area from the walkway. This encourages transit patrons to keep the sidewalk clear while waiting for a bus.
- Providing wider sidewalks at transit stops and amenities such as shelters, benches, and trash cans for the patrons. This improves the environment for both transit patrons and passing pedestrians.
- Ensuring direct and convenient access to the neighborhood or facility the transit stop serves.
- Installing concrete bus pads enabling the transit agency to deploy the bus lift. This is especially important in curbless locations (For more information, see http://www.walkinginfo.org/problems/problems-destinations.cfm).

While many recommendations for improving transit access focus on design and aspects of encouragement surrounding the built environment, the education and planning toolboxes are useful as well.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to address access to transit stops.

1. ***Design, Engineering, and Universal Access Tools***
   Walkable Zone
   Landscape/Furniture Zone
   Curb Space Zone
   Travelway Zone

3. ***Encouragement Tools***
   Pedestrian Advocacy
   Wayfinding
   Built Environment and Infrastructure

4. ***Education Tools***
   Training Program Topics for Roadway/ Walkway Users
   Training Program Topics for Officials and Decision Makers
   Training Program Topics for Property Owners and Developers

5. ***Planning, Land Use, and Zoning Tools***
   Planning Documents
   Regulations and Director's Rules
   Permitting and Review Processes
   Incentives and Bonuses
   Resource Documents
   Planning/Policy-Making Techniques and Groups
   Technical Analysis Tools
   Review Boards

6. ***Equity, Health, and Environment Tools***
   Assessment Tools
   Programs
   Standards
   Datasets and Measurement Tools
   Resources and Organizations

Destinations

Beautiful neighborhoods encourage walking. In an attractive neighborhood, trees, flowers, and bushes prevail; buildings sit close to the street; and garages or parking lots hide out of view. A neighborhood with little vegetation, buildings located far from the street, and dominating driveways, garages, and parking lots is a place that may discourage walking. Improving the pedestrian realm involves changing both behavior and the physical landscape. Click here for more information.

People don't think to walk for transportation or recreation.

The simplest way to improve walking in a neighborhood, corridor, or city is to get more people walking. There is safety (and comfort) in numbers. As more people start walking:

- There will be more opportunities for informal social interaction, which will build a stronger community.
- More people will notice walking barriers and add their voices to the discussion about improving pedestrian conditions.
- Motorists will be more aware of pedestrians.
- There will be more "eyes on the street" to discourage crime and increase pedestrian comfort and security.

While limited or insufficient pedestrian facilities deter people from walking, lack of knowledge of walking routes and popular destinations also leads potential pedestrians to their cars. Because the reasons for not walking are varied, solutions come from all of the toolboxes. Click here for additional information about reasons people may not walk for transportation or recreation.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to get more people walking.

1. ***Design, Engineering, and Universal Access Tools***
   Frontage Zone
   Walkable Zone
   Landscape/Furniture Zone
   Travelway Zone
   Miscellaneous Development

2. ***Enforcement Tools***
   Community-Based Strategies

3. ***Encouragement Tools***
   Media Campaigns and Strategies
   Pedestrian Advocacy
   Incentives
   Wayfinding
   Walking Programs
   Events
   Built Environment and Infrastructure

4. ***Education Tools***
   Campaigns
   General Strategies
   Training Program Topics for Roadway/ Walkway Users
   Additional Courses, Materials, and Programs

5. ***Planning, Land Use, and Zoning Tools***
   Planning/Policy-Making Techniques and Groups

6. ***Equity, Health, and Environment Tools***
   Assessment Tools
   Campaigns and Outreach Tools
   Programs
   Datasets and Measurement Tools
   Resources and Organizations

There's a need for interesting or important destinations within walking distance—and for information about accessing those destinations.

As obvious as it may seem, giving people a reason to walk plays a big part in whether they will walk in a particular neighborhood. Mixed-use neighborhoods (where residential space is near or mixed with retail and other commercial spaces) tend to support more walking than neighborhoods with only residential or commercial areas. For instance, a study by the University of Washington showed that walking increases based on factors such as the availability of (or distance to) various destinations such as grocery stores, eating and drinking establishments, and retail stores.

Additionally, people are unlikely to walk to destinations they don't know exist. Providing wayfinding aides (such as signs, maps, and kiosks) to destinations throughout the city will encourage more people to walk.

Increasing the number and mix of destinations in an area can be a challenge, but funding, planning, education, equity, and encouragement tools can help. Tools that provide pedestrians with information about accessing destinations come from the education and encouragement toolboxes. Click here for more information.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to increase the mix and accessibility of destinations.

1. ***Design, Engineering, and Universal Access Tools***
   Walkable Zone
   Landscape/Furniture Zone
   Miscellaneous Development

3. ***Encouragement Tools***
   Media Campaigns and Strategies
   Pedestrian Advocacy
   Wayfinding
   Walking Programs
   Built Environment and Infrastructure

4. ***Education Tools***
   Campaigns
   Training Program Topics for Officials and Decision Makers
   Training Program Topics for Property Owners and Developers
   Additional Courses, Materials, and Programs

5. ***Planning, Land Use, and Zoning Tools***
   Planning Documents
   Regulations and Director's Rules
   Permitting and Review Processes
   Incentives and Bonuses
   Planning/Policy-Making Techniques and Groups
   Review Boards

6. ***Equity, Health, and Environment Tools***
   Assessment Tools
   Programs
   Standards
   Datasets and Measurement Tools

There is little access to trails and parks for recreational walking.

Trail and park access is essential to the walking network, especially for exercise and leisure activities. It's important to connect parks and trails to neighborhoods, schools, transit stops, and other important pedestrian destinations. Tools to improve access to trails and parks can be found in the education, encouragement, design, planning, equity, and funding toolboxes.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to increase access to trails and parks.

1. ***Design, Engineering, and Universal Access Tools***
   Walkable Zone
   Miscellaneous Development

3. ***Encouragement Tools***
   Media Campaigns and Strategies
   Pedestrian Advocacy
   Wayfinding
   Walking Programs
   Events

4. ***Education Tools***
   Campaigns
   Training Program Topics for Officials and Decision Makers
   Training Program Topics for Property Owners and Developers

5. ***Planning, Land Use, and Zoning Tools***
   Planning Documents
   Regulations and Director's Rules
   Incentives and Bonuses
   Planning/Policy-Making Techniques and Groups
   Technical Analysis Tools
   Review Boards

6. ***Equity, Health, and Environment Tools***
   Assessment Tools
   Programs
   Standards
   Datasets and Measurement Tools
   Resources and Organizations

Making Change

Some pedestrian issues can be solved by community members working together to care for and maintain the streets in their neighborhoods or by community members working with City staff and elected officials to facilitate change.

There is inadequate funding for pedestrian improvements.

It can be challenging to untangle the funding web for transportation improvements, as the sources of funding are both local and national. In many municipalities, pedestrian improvement and infrastructure funding has historically been quite limited. However, changing funding structures requires understanding the existing funding. The education, equity, and funding toolboxes provide guidance to address this concern.

Recommended Tools

Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can best be used to address funding needs.

1. ***Design, Engineering, and Universal Access***
   Miscellaneous Development

3. ***Encouragement Tools***
   Pedestrian Advocacy
   Events

4. ***Education Tools***
   Training Program Topics for Officials and Decision Makers
   Training Program Topics for Property Owners and Developers

5. ***Planning, Land Use, and Zoning Tools***
   Planning Documents
   Incentives and Bonuses
   Planning/Policy-Making Techniques and Groups
   Technical Analysis Tools
   Review Boards

6. ***Equity, Health, and Environment Tools***
   Datasets and Measurement Tools
   Resources and Organizations

The process for requesting pedestrian improvements is confusing.

Navigating the internal processes of a municipality or other organization focused on pedestrian improvements can be challenging, although many organizations (including the City of Seattle) are working to develop a simple interface accessible to any user. The education, encouragement, and equity toolboxes provide solutions to address the challenge of accessing City services.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that can help people understand ways to request improvements.

3. ***Encouragement Tools***
   Pedestrian Advocacy

4. ***Education Tools***
   Campaigns
   Training Program Topics for Roadway/ Walkway Users
   Training Program Topics for Officials and Decision Makers
   Training Program Topics for Property Owners and Developers
   Additional Courses, Materials, and Programs

5. ***Planning, Land Use, and Zoning Tools***
   Resource Documents
   Planning/Policy-Making Techniques and Groups

6. ***Equity, Health, and Environment Tools***
   Campaigns and Outreach Tools
   Programs
   Datasets and Measurement Tools
   Resources and Organizations

The process for changing laws, ordinances, and codes is unclear.

Tools that explain the process for changing laws, ordinances, and codes can be found in the education and planning toolboxes.

Recommended Tools
Under each toolbox listed below, you have been directed to categories of tools. Selecting an individual category will link you to the tools from that category that provide information about the process of changing laws, ordinances, and codes.

3. ***Encouragement Tools***
   Pedestrian Advocacy
   Events

4. ***Education Tools***
   Campaigns
   General Strategies
   Training Program Topics for Roadway/ Walkway Users
   Training Program Topics for Officials and Decision Makers
   Training Program Topics for Property Owners and Developers
   Additional Courses, Materials, and Programs

5. ***Planning, Land Use, and Zoning Tools***
   Resource Documents
   Planning/Policy-Making Techniques and Groups
   Review Boards

6. ***Equity, Health, and Environment Tools***
   Campaigns and Outreach Tools
   Programs
   Resources and Organizations

1. DESIGN, ENGINEERING, AND UNIVERSAL ACCESS

The Design, Engineering, Universal Access Toolbox is a collection of pedestrian facilities, design strategies, and urban elements that can be installed or implemented to improve the pedestrian environment and advance the goals of Seattle's Pedestrian Master Plan.

These tools are organized by the zone in which they are typically located within the Right-of-Way. These zones are consistent with the Right-of-Way Improvements Manual Street Type Zones and are listed in an order that prioritizes pedestrians.

1.1 Frontage Zone:

Tools include signage, weather protection, public/private interface, etc.

The frontage zone adjacent to buildings may include things like café seating, weather protection, and signage for businesses. The Right-of-Way Improvements Manual provides ADA design considerations for this type of signage in section 4.25.2.

Public/Private Interface:

(e.g., façade improvements, encroachments, vegetation)

Public/private interface refers to the interaction between the public realm and private property or uses. For example, building façades can provide visual interest to pedestrians walking along the sidewalk. The presence of windows, porches, decks, balconies, and outdoor cafés adjacent to streets provides activity along and surveillance of the streetscape. This may contribute to an increased perception of personal security among pedestrians. Design standards that focus on the role of the public/private interface can be used as a tool to enhance the pedestrian environment and experience. However, café seating standards for establishments that serve alcohol must also meet Washington State Liquor Control Board requirements.

1.2 Walkable Zone:

Tools include sidewalks, walkways, shared use trails, stairways, and driveways.

Construction / Work Areas:

When development or redevelopment occurs, parts of the right-of-way are often used for construction activities including loading and unloading of construction materials, construction vehicle access, scaffolding, replacement or repair of sidewalks and roads, and construction offices. These projects must be issued a permit for all work within the right-of-way. Street Use Permits are granted upon approval of a Traffic Management Plan. As described in the Right-of-Way Improvements Manual, Traffic Management Plans must meet the following principles:

- Work areas are safe and congestion is minimized;
- Motorized and non motorized traffic is warned, controlled, and protected; and
- All traffic is expedited through the work zone to the extent possible.

Permitting construction and work zones in the right-of-way allows SDOT to evaluate the duration and type of closure. This information can help minimize impacts and control long stretches of closures. In addition, mitigation for the closures can be addressed. Temporary pedestrian walkways, lane closures for pedestrian access, adequate signing for temporary closures with alternative route information, and temporary lighting are elements that can maintain pedestrian access when closures are approved.

Shared Use Trails:

Shared use trails are typically off-road paths that are separated from adjacent traffic, except where they cross roadways. The Burke-Gilman Trail and Chief Sealth Trail are examples of shared use trails in Seattle. These trails serve pedestrians and may include facilities for bicycling, skate-boarding, roller-blading, and/or equestrian use. They can be constructed with hard or soft-surfaced materials, and may need to meet accessibility requirements depending on location and type of connection.

Shared use trails, can provide connections between destinations for transportation purposes. They are also used for physical activity and recreation, which are important to both physical and mental health. By providing a separate path of travel for pedestrians, cyclists, and other non-motorized transportation modes, shared use trails help to reduce conflicts between motorists and pedestrians while expanding the number and types of facilities that are accessible to pedestrians.

Shared use trails are often located adjacent to waterways, along former rail corridors, or within greenways and may provide vistas to increase pedestrian enjoyment while enhancing connections between urban residents and the natural environment. Shared use trails typically offer longer, uninterrupted stretches of path that are perceived as more family-friendly than the typical urban streetscape.

Soft surface trails (e.g., gravel or earthen paths) are popular among runners and walkers because they reduce the impact these activities have on the body. Since these trails are typically separate from motor vehicle traffic, they also may reduce pedestrian exposure to airborne exhaust and other pollutants.

Sidewalks / Walkways

As defined in the Right-of-Way Improvement Manual (ROWIM), a sidewalk is a hard surfaced walkway, usually of Portland cement concrete, separated from the roadway by a curb, planting strip, or roadway shoulder.

Sidewalks are a key component of Seattle's walkable system that helps identify where pedestrians can walk. Sidewalks create vertical and horizontal separation between pedestrians and other vehicles along a roadway. Public health studies have noted that sidewalks increase safety—by separating pedestrians from vehicles—and are positively correlated to a community's walkability.

As defined in the Right-of-Way Improvements Manual, a "pedestrian walkway" is a surfaced walkway, separated from the roadway, usually of crushed rock or asphalt concrete, that follows the existing ground surface.

Walkways (also called paths or pathways) refer to places for pedestrians to walk that are not "traditional" sidewalk with curb and gutter. They may be found on a shoulder along a rural road, adjacent to an unimproved street, as part of a traffic calmed or "woonerf" street design, in a parking lot, or through/adjacent to a park. Due to their design without curb and gutter, walkways may work well with natural drainage features. They are also typically less expensive to install than a traditional sidewalk with curb and gutter. Walkway may also be used to improve pedestrian safety and access along a route of travel and/or to/from destinations.

Stairways:

Stairways are typically constructed of concrete, but many existing stairways in Seattle are constructed of other materials such as bricks, stones, wood, or metal. Stairways can be located in the public right-of-way, on easements, or on private property.

Stairways provide important pedestrian connections in Seattle, especially given the region's hilly terrain. In many cases, a stairway may shorten the travel distance for a pedestrian since it is possible to traverse a steep slope via stairway that would be impossible on the roadway.

1.3 Landscape / Furniture Zone:

Tools include buffers, lighting, natural drainage, public art, signage, street furniture, street trees/ vegetation, utilities, wayfinding, etc.

Lighting:

Lighting in the public right-of-way, typically occurs in the form of taller street lights, shorter lights directly above pedestrian walkways, lighting that accentuates features on a building façade, in-pavement/ground/up lighting, catenary or hanging lights, and illumination that flows outward from the inside of buildings. Lighting promotes perceived personal security for pedestrians walking at night, helps provide visibility for pedestrians to motor vehicles, and can help create a vibrant and attractive evening streetscape. Lighting also helps illuminate potential hazards.

Natural Drainage:

According to the Right-of-Way Improvements Manual, "Natural Drainage Systems (NDS) are street rights of way designed to use planted swales adjacent to sidewalk or roadway pavement to do the work of pipes, by capturing stormwater and letting it soak into the ground and/or be filtered by vegetation. NDS attempts to mimic the natural system that existed before development which has significantly increased runoff and its associated pollutants. Green Stormwater Infrastructure components, such as bioretention and permeable pavements, are integral components to an NDS design...Examples of NDS systems in Seattle can be found at the City's Natural Drainage System Capital Program" (6.4.2). These elements can be located within the landscape/furniture zone to create a buffer between the roadway and a walkway.

Buffers:

Buffers can separate pedestrians on a sidewalk or walkway from motor vehicles or separate adjacent land use from the pedestrian zone. Buffers may include increased sidewalk width, street trees, a planting strip, natural drainage features, bollards, benches, bus shelters, and parked vehicles. Buffers can provide an enhanced pedestrian environment that is separate from motor vehicles. On streets with fast moving motor vehicles or high traffic volumes, a wider buffer improves pedestrian comfort and safety.

Street Furniture

Street furniture refers to objects placed within the streetscape. TheRight-of-Way Improvements Manual provides the following examples of street furnishings: "benches, litter and recycling receptacles, bike racks, multiple publication newsstands, water fountains, pedestrian scaled lighting and planters. Public art includes art instillations that have a functional component and art that is purely aesthetic. Some types of street furnishings such as automated pay toilets, public kiosks and other atypical amenities are referred to as 'Unique Objects' because they require special location and design considerations" (4.25).

Public Art:

Public art is art placed in the public realm, often supported by public funds or public/private partnerships. The SDOT Art Plan was created to provide more information about incorporating art into the right-of-way.

Examples of public art include, but are not to limited to, sculptures, theatrical performances, artist-in-residence programs (e.g., at Seattle Department of Transportation and Seattle Public Utilities), decorative manhole covers, murals, mosaics, art integrated into landscapes or buildings, etc. Seattle's public art program is funded by a one-percent for art ordinance and seeks to "integrat[e] artworks and the ideas of artists into a variety of public settings" and "provid[e} opportunities for individuals to encounter art in parks, libraries, community centers, on roadways, bridges and other public venues" and thereby "simultaneously enrich citizens' daily lives and give voice to artists".

Public art can be a tool to enhance the pedestrian environment by providing visual interest, placemaking, and identifiable landmarks and districts. Self-guided walks visiting neighborhood public art installations is an example of how public art can add interest to pedestrian activity. Some organizations provide maps for these self-guided walks. For example, SouthEast Effective Development (SEED) provides a map of public art in and around the Columbia City urban village. In the Fremont urban village, maps available at a sidewalk kiosk offer a self-guided tour of Fremont's public art installations.

Signage:

Signage in the streetscape provides information regarding regulations, warnings, guidance, services, recreational, cultural, commercial, or tourist areas, and emergency management. The Manual on Uniform Traffic Control Devices (MUTCD) published by the U.S. Department of Transportation Federal Highway Administration (FHWA) provides standards for a variety of sign types, including:

- Regulatory (e.g., stop, yield, speed limit, one-way, no parking, sidewalk closed ahead)
- Warning (e.g., pedestrian crossing, school area, playground, stop ahead)
- Guide (e.g., destination, route, directional auxiliary arrows)
- Specific Service (e.g., gas, food, lodging)
- Tourist Oriented Directional
- Recreational and Cultural Interest Area (e.g., hiking trail, swimming area, environmental study area, dogs on leash).

In addition to using standard MUTCD signage, the Seattle Department of Transportation (SDOT) also designs and produces its own signage. SDOT produced pedestrian related signage includes a warning sign that says, "Drive Carefully Think of the Impact You Could Make" and has a image of the yellow pedestrian crossing sign with the black silhouetted images of people falling with their bags flying through the air. Other SDOT produced signage includes wayfinding signage that provides directional and route guidance at a pedestrian scale. A preliminary installation of this wayfinding signage can be found on Cheshiahud Lake Union Loop. It includes blue directional signs on red posts (post colors correspond to the specific neighborhood or urban village where the signage is located).

Signage related to commercial uses adjacent to the street is an important feature in the pedestrian environment. Because pedestrians travel at slower speeds than motorists, smaller scale and more detailed signage for businesses are appropriate for pedestrian-oriented districts.

Utilities:

Utilities refer to water, sewer, stormwater, electrical, natural gas, and communication facilities. Utilities are often located within the pedestrian environment and can affect the pedestrian experience. Careful selection of utility locations and facility design features can reduce negative impacts utilities may have on the pedestrian environment and experience.

Utility elements can be located above grade, at grade, or below grade within the right-of-way. These elements include vaults, poles, wires, and maintenance holes. Vault and maintenance hole access lids and grates can be treated with a non-slip surface if these elements are located in an area where pedestrians are walking.

The placement of these utilities can reduce the sidewalk width or sight distance for both pedestrian and vehicles. Access to the utilities for maintenance must be considered during placement.

Street Trees / Vegetation:

Street Trees or vegetation are planted along the street (often between a roadway and a sidewalk or walkway in the buffer). Street trees and vegetation can serve a variety of purposes: providing habitat for birds, insects, and small mammals softening hard edges, creating a humanly scaled environment, increasing an areas aesthetic assets, increasing property values, reducing heating and cooling costs to adjacent buildings, managing stormwater, and sequestering carbon. On sunny, hot days, street trees are an important source of shade for sidewalks, walkways, and roadways. Street trees or vegetation can supply a buffer between motor vehicles and pedestrians, screen areas such as parking or electric substations, and interrupt wind flow. Street trees also provide visual interest and can be a traffic calming tool by narrowing a driver's field of vision, thus encouraging lower vehicle speeds.

Wayfinding:

Wayfinding refers to how one uses spatial and environmental cues in finding a way to or from various locations. Cues in the environment that help us navigate include paths, edges (such as shorelines), nodes (such as intersections), landmarks, and districts (such as neighborhoods or urban villages) (as proposed by Kevin Lynch, 1960, in Image of the City). Tools that are often used to help us spatially organize environmental cues include signage, maps, public art, and online route finders.

Designing a wayfinding system involves organizing spatial and environmental information to provide users with "legibility," or an understanding of their environment, by offering easily identifiable paths, landmarks, or other tactile, visual, and/or auditory cues. For example, colored tactile warning strips installed on curb ramps provide cues that are perceptible by touch and sight and are used to indicate street crossing locations for people with visual impairments. Signage that guides pedestrians to transit stations such as Seattle's downtown bus tunnel is an important feature that promotes connectivity between different travel modes.

The following are some examples of wayfinding related to pedestrians in Seattle. The Seattle Department of Transportation (SDOT) requires that tactile warning strips be installed on all new curb ramps and curb ramp retrofits at intersections (Right-of-Way Improvements Manual, 4.8). SDOT has developed pedestrian wayfinding signage that includes directional information and routes to neighborhood destinations. A preliminary installation of Seattle's pedestrian wayfinding signage can be found along the Cheshiahud Lake Union Loop. In addition to signage, Organizations such as Feet First and Seattle Public Schools have developed maps of neighborhood walking routes.

1.4 Curb Space Zone:

Tools include curbs, curb ramps, curb bulbs, parking, etc.

Curb Bulbs / Curb Extensions / Bulb-out / Neckdowns:

As defined in the Right-of-Way Improvements Manual (ROWIM), "curb bulb" is a radial extension of a sidewalk at a corner or mid-block location used to shorten the crossing distance for pedestrians, provide access to transit, and expand the landscape/furniture and/or walkable zone. Curb bulbs are a technique used to promote traffic calming.

In addition, the Pedestrian and Bicycle Information Center (PBIC) provides the following description of curb bulbs, also referred to as curb extensions: "[They] extend the sidewalk or curb line out into the parking lane, which reduces the effective street width. Curb extensions significantly improve pedestrian crossings by reducing the pedestrian crossing distance, visually and physically narrowing the roadway, improving the ability of pedestrians and motorists to see each other, and reducing the time that pedestrians are in the street."

According to PBIC, the purpose of curb bulbs/ curb extensions is to "improve safety for pedestrians and motorists at intersections, increase visibility and reduce speed of turning vehicles, encourage pedestrians to cross at designated locations, prevent motor vehicles from parking at corners, and shorten crossing distance and reduce pedestrian exposure." Particularly for pedestrians with impaired mobility, a curb bulb can offer an opportunity to cross a roadway quickly, safely and efficiently.

Curb extensions placed at an intersection also prevent motorists from parking in or too close to a crosswalk or from blocking a curb ramp or crosswalk. Motor vehicles parked too close to corners can present a threat to pedestrian safety when they block sightlines, obscure visibility of pedestrians and other vehicles, and make turning particularly difficult for emergency vehicles and trucks. Curb extensions also provide an excellent place to locate traffic signs, which will be more visible since they cannot be easily blocked by parked cars. The restricted street width provides a visual cue to motorists, encouraging them to travel more slowly at intersections or midblock locations with curb extensions. Turning speeds at intersections can be reduced with curb extensions, making curb radii as tight as is practicable. Curb extensions also provide additional space for curb ramps and for level sidewalks where existing space is limited.

Curb extensions are only appropriate where there is an on-street parking lane. Curb extensions should not extend into travel lanes, bicycle lanes, or shoulders. The turning needs of larger vehicles, such as school buses, must be considered in curb extension design.

Curb Ramps

Curb ramps are located at intersections to facilitate wheelchair, bicycle, and pedestrian street crossings. Curb ramps are sloped areas, typically located on corners at intersections that provide access from the street grade to the sidewalk. Guidance is provided in the Right-of-Way Improvements Manual.

To meet the goals of the Pedestrian Master Plan, curb ramps must be designed and installed to provide access from the street to the sidewalk for all people including those who use or have wheel chairs and other wheeled objects such as baby carriages or strollers, bicycles, grocery carts, luggage, and dollies, as well as for people with visual impairments.

Curbs:

As defined in the Right-of-Way Improvements Manual (ROWIM), "curb" means a physical curb constructed from cement concrete, asphalt concrete, or granite. "Curb cut" means a depression in the curb for the purpose of accommodating a driveway, which provides vehicular access between private property and the street or easement. Where there is no curb, the point at which the driveway meets the roadway pavement shall be considered the curb cut.

"Curb line" means the edge of a roadway, whether marked by a curb or not. When there is not a curb, the curb line shall be established by the Director of Transportation.

Curbs are a significant component of the right-of-way. They provide multiple functions including delineating the space between the roadway and streetscape and channeling surface water into drainage inlets.

Vehicle Parking:

On-street parking is allowed in the right-of-way outside of the travel lanes and off of the curbs, sidewalks, and planting strips. Off-street parking is publicly or privately owned parking located outside of the street right–of–way.

Parking configuration can impact the pedestrian environment. Cars parked parallel to the curb can provide horizontal separation between the pedestrian and vehicular travelways. The proximity of parking to crosswalks also significantly affects the health and safety of the pedestrian environment because it can allow vehicles to see pedestrians for a longer period of time, thus reducing the possibility of a collision. However, as written in Seattle Municipal Code 11.72.090, "no person shall stand or park a vehicle within twenty (20) feet upon the approach to a crosswalk" (RCW 46.61.570(b)(iii)). In addition, SMC 11.72.110 states at a driveway or alley entrance, "no person shall stand or park a vehicle in front of a public or private driveway within a street or alley or in front of or in an alley entrance or within five feet (5') of the end of a constructed driveway return or alley entrance return, or if none, within five feet (5') of the projection of the edge of the driveway or alley" (Ord. 108200 Section 2(11.72.110), 1979).

On-street parking is a technique that can be used to achieve traffic calming. Parking locations and configurations can be identified by striping, signage, pavement markings, and meters.

1.5 Travelway Zone:

Tools include pedestrian overpasses/ underpasses, crossing islands, medians, intersection geometry, road diets, roundabouts, traffic signals, traffic calming, traffic management, etc.

Intersection Geography

Intersection Geometry is the way that two or more streets connect or cross each other. Most streets cross each other perpendicularly creating right angles. There are instances in Seattle, where streets meet at a "T" or a "Y". In addition, there are some locations where more than two streets intersect.

The geometry of the intersection depends on many variables including turning movement of vehicles, the width or the pedestrian crossing, width of right-of-way, sight distance, and topography. When intersections are designed these variables must be taken into account when configuring an intersection.

Cross Islands / Pedestrian Median Islands

Making Streets that Work (1996) describes "pedestrian refuge islands" as "raised islands in the center of the street protecting the pedestrian from moving traffic. They allow pedestrians an opportunity to cross one half of the roadway, with a safe place to stop before crossing the second half of the roadway. They are typically constructed at marked crosswalks either at a midblock location or at an intersection" (p. 70).

The Portland Pedestrian Design Guide (1998) also includes in its definition the role crossing islands may play in reducing wait times for pedestrians to cross the street: "At unsignalized crosswalks on a two-way street, a median refuge island allows the crossing pedestrian to tackle each direction of traffic separately. This can significantly reduce the time a pedestrian must wait for an adequate gap in the traffic stream" (p. C-5).

According to the Pedestrian Bicycle Information Center, crossing islands serve the following purposes: "enhance pedestrian crossings, particularly at unsignalized crossing points; reduce vehicle speeds approaching pedestrian crossings; and highlight pedestrian crossings."

By providing a refuge for pedestrians that is removed from the flow of traffic, crossing islands begin to return the street environment, and the city, back to the scale of the human being. They also provide documented improvements in safety for pedestrians crossing a roadway. Medians, crossing islands and pedestrian refuges can also be a way to achieve traffic calming.

Crosswalks

As defined in the Right-of-Way Improvement Manual (ROWIM), "crosswalk" means "a portion of a roadway where pedestrians are permitted to cross the street; can be marked or unmarked. In Washington State, legal crosswalks exist at every intersection, unless otherwise signed, regardless of whether they are marked or unmarked."

In Section 11.14.135 of the Seattle Municipal Code, "crosswalk" means the "portion of the roadway between the intersection area and the prolongation or connection of the farthest sidewalk line, or, in the event there are no constructed sidewalks, then between the intersection area and a line ten feet (10') there from, except as modified by a marked crosswalk."

In addition, Section 11.14.315 of the Seattle Municipal Code defines "marked crosswalk" as any portion of a roadway distinctly indicated for pedestrian crossing by lines or other markings on the surface thereof. (RCW 46.04.290) Crosswalks are a key building block of a walkable network. Identifying and installing safe crossings help both vehicles and pedestrians avoid conflict; however it is also important to note that not all marked crosswalks improve the public's health and safety. Factors such as traffic volume, number of travel lanes, signalization, and sightlines all play a significant factor in determining whether a crosswalk will benefit the pedestrian environment in a particular location.

Raised crosswalks, which are at the same level as the adjacent sidewalk and which cause vehicles to ride over them, are an effective technique for achieving traffic-calming objectives. Raised crosswalks may also be part of an entire raised intersection.

Pedestrian Overpasses or Underpasses/Skybridges/ Pedestrian Tunnels

According to the Right-of-Way Improvements Manual (ROWIM), "Pedestrian overpasses [also referred to as skybridges] and underpasses typically span a transportation right-of-way and provide a connection between destinations that have a high volume of pedestrian use."

The State of Pedestrian Environment Report states that "pedestrian bridges and underpasses separate pedestrian traffic from motor vehicle traffic, allowing pedestrians to cross busy streets by eliminating potential conflicts."

The purpose of pedestrian overpasses or underpasses is to provide a pedestrian connection across a road or other obstruction that eliminates conflicts between pedestrians and other vehicles. Depending on the location, site conditions, and vehicle and pedestrian volumes pedestrian overpasses or underpasses help meet safety objectives.

Despite the fact that pedestrian overpasses or underpasses can help meet some of the Plan's goals, careful consideration should be given to potential negative impacts on the pedestrian environment, including:

- Increased risk to unimproved at-grade crossings if pedestrians choose not to use the bridge or underpass due to perceived or real inconvenience;
- Personal security risks if pedestrian bridges or underpasses lack adequate lighting or surveillance;
- Increased construction expenses;
- Difficult for pedestrians wayfinding; and/or
- Decreased on-street vibrancy due to a reduction in movement and activity by pedestrians.

Road Diet

Road diets occur when lane widths and/or number of lanes are adjusted to promote a slower vehicle speed and or accommodate other modes of traffic in the right-of-way including bicycles, pedestrians, and transit. Lane width is the distance between the identified spaces where vehicles travel along the roadway. On arterial streets lane widths are often identified with striping. On residential streets, the travel lane is often not striped or marked.

The number and width of the travel lanes on the street affects the pedestrian crossing width, crossing times, the speed of cars, parking, comfort of the street for pedestrians, bike lanes, and the turning movements at the intersections. A road diet is a technique that can be used to achieve traffic calming.

Roundabouts

Roundabouts are large circular raised islands, usually landscaped, located at the intersection of two or more streets. Traffic circulates around the island in the same direction. Traffic control signing and pavement markings are used instead of traffic signals. Motorists must decrease their speed to go around the raised island. Medians are typically used with roundabouts to identify lanes and minimize pedestrian crossings. Roundabouts are not the same as traffic circles used to calm traffic.

Driveways

Driveway means that portion of street, alley, or private property which provides access to, but not within, an off-street parking facility from a curb cut. Portions of the area defined as a driveway may also be defined as a sidewalk. Driveways may provide inconsistencies in the pedestrian environment by creating a potential conflict point between a pedestrian and a vehicle. Driveway aprons should be placed outside of the sidewalk so that a level surface remains for the pedestrian to travel along.

Driveway design should consider the visibility of the pedestrian and the vehicle. In addition, the turning movement of the vehicle should be assessed to encourage a slower turning speed in and out of the property. The frequency and width of driveways along the street should be considered for areas with high pedestrian activity. Some commercial and downtown areas encourage vehicle access from the adjacent alley to reduce the number of driveways along the roadway.

Pavement Markings

According to the Manual on Uniform Traffic Control Devices (MUTCD) published by the U.S. Department of Transportation Federal Highway Administration (FHWA), "Markings on highways have important functions in providing guidance and information for the road user. Major marking types include pavement and curb markings, object markers, delineators, colored pavements, barricades, channelizing devices and islands." Specific pavement markings related to pedestrian facilities include crosswalk markings, advanced stop lines as well as colored curb markings on medians or pedestrian crossing islands. According to the MUTCD,

"[c]rosswalk markings provide guidance for pedestrians who are crossing roadways by defining and delineating paths on approaches to and within signalized intersections, and on approaches to other intersections where traffic stops. Crosswalk markings also serve to alert road users of a pedestrian crossing point across roadways not controlled by highway traffic signals or STOP signs. At nonintersection locations, crosswalk markings legally establish the crosswalk" (Section 7C.03)"

Advanced stop lines are installed to guide vehicles to stop a certain distance prior to a crosswalk. If placed far enough back, advanced stop lines can increase pedestrian visibility to motor vehicles as well as offer pedestrians more time to react to vehicles that do not stop, especially at multi-lane crossings. Colored curb markings for medians or crossing islands (MUTCD specifies retro-reflective white or yellow material) warn drivers about the presence of these facilities.

Traffic Signals

Traffic signals are traffic control devices for motorized and non-motorized modes of travel. The Seattle Department of Transportation (SDOT) follows standards for traffic signals published in the Manual of Uniform Traffic Control Devices (MUTCD). The MUTCD provides guidance and standards for pedestrian related features on traffic signals such as the "walk" signal (a steady white, lighted symbol of a person walking) and the "don't walk" signal (a flashing and steady red, lighted symbol of a hand).

Signal timing and push buttons on traffic signals that can activate walk signals for pedestrians are important tools to enhance the pedestrian environment and experience. Leading pedestrian signal is an adjustment to the signal timing interval allowing pedestrians more time to walk before the light turns green for the cars. Auditory pedestrian signals and visual countdowns are commonly installed to alert pedestrians when the light has changed and they have the "walk."

Traffic Management

Traffic management includes the use of traditional traffic control devices to manage volumes and routes of traffic. Traffic management and traffic calming are often proposed together to effectively change vehicle patterns and improve pedestrian safety. Several of the techniques used for traffic calming are also effective for traffic management including street closures, diverters, and one-way streets.

Traffic Calming

Section 6.5.1 of the Right-of-Way Improvements Manual provides the following overview of traffic calming:

Traffic calming is a way to design streets to improve safety, reduce the amount of cut-through traffic traveling on residential streets, and generally encourage people to drive more slowly. Along with education and enforcement, traffic calming has been used in many Seattle neighborhoods to slow speeds on residential streets and improve neighborhood livability by reducing cut-through traffic and improving the environment for pedestrians.

Traffic calming relies on physical and visual cues in, and adjacent to, the roadway to induce drivers to travel at slower speeds. Traffic calming is self-enforcing. The design of the roadway results in the desired effect, without relying on compliance with traffic control devices such as signals, signs, and without enforcement. Street trees and lighting complement traffic calming devices and are often used to provide the visual cues that encourage people to drive more slowly.

Traffic calming is such a powerful tool because it is effective. Some of the effects of traffic calming, such as fewer and less severe crashes, are clearly measurable. Others, such as supporting community livability, are less tangible, but equally important. Experience throughout Europe, Australia, and North America has shown that traffic calming, if done correctly, reduces traffic speeds, the number and severity of crashes, and noise level. Research on traffic-calming projects in the United States supports their effectiveness at decreasing automobile speeds, reducing the numbers of crashes, and reducing noise levels in certain locations.

Typical traffic calming devices allowed in Seattle include: curb bulbs, on-street parking, streetscape improvements, signs, medians, crossing islands or pedestrian refuges, "road diets" (reducing the number of traffic lanes), speed cushions, gateway treatments, neighborhood speed watch program, vegetation, limited access roadways, all-way stop, raised crosswalks, raised intersections, speed limit reduction, chicanes, chokers, diverters, partial street closure, pedestrian districts (woonerfs), speed humps, and traffic circles. For more detail about traffic calming in Seattle, please see Chapter 6.5 in the Right-of-Way Improvements Manual.

Implementing traffic calming is essential toward achieving the goals of the SPMP. By slowing vehicular traffic, pedestrians feel more welcome into the public right of way which encourages walking, creates more vibrant business districts and promotes a more equitable public realm.

1.6 Miscellaneous Development:

Tools include physical and visual connections, developer improvements, Street Types, mixed land use, open space, parks, etc.]

Mixed Land Use

Mixed land use is a zoning tool that allows a variety of land uses. Locations that have a mix of residential, commercial, and open space can create a node of pedestrian activity. Neighborhood commercial business districts provide services for pedestrians that live in close proximity but also serve as a destination for people arriving via transit or some other vehicle.

Designing and planning for mixed land use provides an opportunity to include pedestrian amenities and make the area a destination. Mixed land use also promotes Seattle's goal of being a walkable city by creating the opportunity for residents to live near where they work and use walking as one of their primary means of transportation.

A mix of land uses also promotes interactions among residents which can improve public health and social connections. These connections between residents help reinforce social norms and maintain public safety via a community of "eyes on the street."

Physical and Visual Connections

Physical and visual connections can provide natural wayfinding. For example, view corridors through parks, between buildings and along roadways can direct pedestrians to destinations such as shorelines and cultural attractions. Consistent vegetation and unique pavement times can provide visual indicators of routes and destinations for pedestrians. Visual connections to places like parks or plazas are important because they allow people to see what is going on inside the space before they enter providing an enhanced feeling of personal security and making the space more inviting to pedestrians.

Street Types

Street types are a planning and design tool to identify preferred or required elements that support the adjacent land use and enhance the pedestrian environment. Street types are not the same as street classifications, but provide a more specific definition of the design elements that support the street's function and its adjacent land use. The Right-of-Way Improvements Manual provides design criteria for each Street Type to inform designers about the kinds of elements that need to be included in the right-of-way.

Some elements that are described include pedestrian-scaled lighting, street trees and landscaping, crossing islands, street furniture, and sidewalk width.

Developer Improvements

Right-of-way improvements by developers can help to enhance the pedestrian environment. As part of the development requirements, a project may be required to install additional or wider sidewalks, reconfigure an intersection, install public art, install canopies, provide pedestrian lighting adjacent to a building or parking lot, and make connections through and/or around the developed parcel.

Visible Open Space (public/private)

Public and private open space, that is visible from the public right-of-way, can provide places for people to expand their living space outside and meet their neighbors and community. These areas can help promote community activities and make people feel comfortable walking around.

Open spaces can be designed as active spaces and provide locations for people to rest, gather, or play. Vibrant open spaces full of people can provide social and economic benefit for adjacent businesses and services. Passive open spaces can be designed to enhance or create natural elements that provide habitat or stormwater management along the right-of-way and well as opportunities for education.

Parks

Parks can provide pedestrian destinations, recreation opportunities, links to adjacent neighborhoods, gathering places for communities, and connections to the natural environment. Parks in Seattle range from programmed spaces with sports activities and playgrounds to spaces that provide habitat and environmental benefit. Some boulevards, including Interlaken and Ravenna, are managed both byDepartment of Parks and Recreation and the Seattle Department of Transportation. Some communities have also discussed the option of creating parks, or park-like spaces, from the right of way. Access to parks has been shown to increase pedestrian activity and public health.

Locations and design of parks have a major impact on the pedestrian environment and recreation opportunities, as do their connectivity to other spaces. Many parks feature walk ways and paths, like Green Lake and Seward Park, which then connect to a significantly larger network of green spaces, expanding one's opportunities as a pedestrian significantly. Street ends that provide connections to trails and shorelines can also be identified as parks.

2. ENFORCEMENT

Enforcing traffic laws and regulating pedestrians, motorists, and other roadway users is a key element for ensuring a safe and healthy walking environment. Enforcement is not limited to law officers issuing tickets; enforcement activities can involve a variety of 'carrots and sticks' to encourage certain behaviors and deter others. Enforcement programs can be used to educate roadway users about the traffic laws that govern them, serve as periodic reminders to obey traffic rules, encourage safer behaviors, and monitor and protect public spaces, in part through code enforcement. They can also help reinforce and support educational programs and messages.

The main goal of enforcement strategies is to deter unsafe behaviors of drivers, pedestrians, and bicyclists, and to encourage all road users to obey traffic laws and share the road safely. There are a variety of behaviors that can be targeted through enforcement.

Enforcement is one of the toolboxes that can be employed to meet the goals of the Pedestrian Master Plan. However, enforcement used alone is not likely to have a long-term effect. Communities must utilize a combination of toolbox strategies to address specific needs and achieve long-term results. Enforcement includes city officials and staff, drivers, bicyclists, and pedestrians all working in conjunction with law enforcement. Working together to enforce rules for safe walking, bicycling, and driving makes it safer and easier for everyone to walk and bicycle.

Driver, Pedestrian, and Bicyclist Behaviors

Unsafe driver behaviors include:

- Speeding through residential streets and school zones. (Speed is directly related to crash frequency and severity.)
- Failing to yield to pedestrians, especially in crosswalks. (The law requires drivers to stop for pedestrians in crosswalks; it is a law that is often ignored.)
- Running red lights or stop signs.
- Passing stopped vehicles (such as school buses).
- Parking or stopping in crosswalks.

Unsafe pedestrian behaviors include:

- Failing to look left, right, and left again before crossing the street.
- Crossing a street at an undesirable location
- Darting out between parked motor vehicles.
- Wearing dark clothes when there is poor lighting.

Unsafe bicyclist behaviors include:

- Riding into traffic without looking left, right and left again.
- Riding against traffic instead of with the traffic flow.
- Turning left without looking and signaling.
- Failing to obey traffic signs and signals.
- Failing to yield for pedestrians.
- Failing to cede the right-of-way to pedestrians on a sidewalk or in a crosswalk.
- Riding out from a driveway or between parked vehicles.
- Failing to wear a bike helmet.

2.1 Campaigns & Programs:

Tools include messages and approaches to improve pedestrian safety and the walking environment by enforcing current laws, codes, and regulations.

Campaigns and programs that help to enforce desirable driver, cyclist, and pedestrian behavior include:

Vandalism & Graffiti "Report" Program

Graffiti on the sides of buildings, vehicles, and other structures and vandalism, such as the breaking and scratching of windows or cars, can look unsightly and intimidate people, thereby discouraging them from walking in your neighborhood. According to the National Crime Prevention Council (NCPC), most vandals are young people—from grade-schoolers to teens to young adults—who damage property because they may be bored, angry, vengeful, defiant, or trying to prove or display their alliance to a gang. Paint and marker ink become harder to remove over time. Therefore quick removal of any new graffiti will make removal easier. Click here for more information.

Seattle has a Graffiti Nuisance Ordinance requires property owners to remove graffiti in a timely manner, or have the property considered a nuisance and dealt with through four steps. It was adopted in 1994 to encourage the rapid cleanup of graffiti and to prevent its spread throughout the community. SPU's Graffiti Prevention Program enforces the ordinance. Seattleites are encouraged to use the online report form or to call the Graffiti Report Line at (206) 684-7587 to report graffiti for removal on public property, or graffiti that has not been removed from private property.

Public Safety Campaigns

Public safety campaigns may be targeted at any group of roadway and/or walkway users, but are often directed at motorists. A public safety campaign reminds the audience of the potential negative effects of certain behaviors. For example, "Think of the Impact You Could Make" is a well-known public safety campaign that calls attention to vulnerable populations (e.g., children crossing the street) and encourages drivers to think about the consequences of failing to yield to crossing pedestrians. The Federal Highway Administration's Pedestrian Safety Toolkit provides materials on which to base a pedestrian safety campaign.

Incentives & Contests

While typically used more for encouragement than enforcement, incentives and contests could be a creative way to enforce desirable driver, bicyclist, pedestrian, and property owner behavior. For example, a competition that invited people to submit photos of the best and worst examples of parking or of right-of-way maintenance from around the City could reinforce the need to follow parking and maintenance codes and laws, both among people trying to take photos and among those serving as the subjects of photos.

Traffic Complaint Hotline

A traffic complaint hotline allows community members to report traffic problems directly to law enforcement. It is used to identify the worst traffic problem areas and the most frequent traffic complaints. Law enforcement officers follow up with enforcement in the identified area and schedule additional enforcement if needed.

Tool Summary:

Traffic Complaint Hotline

Definition

- Community members report traffic problems to law enforcement.

Advantages

- Enables law enforcement to quickly identify issues.
- Enables public to be engaged.

Aggressive Driving Apprehension Team

In 2005, the Washington State Patrol (WSP) established the Aggressive Driving Apprehension Team (ADAT) throughout the state, using unmarked cars to target aggressive drivers. In addition, the WSP developed an aggressive driving Web site through which citizens can report aggressive drivers to the WSP. This information is sent to District Commanders throughout the state and used to deploy officers to areas where there are higher incidents of aggressive driving. Click here for additional information.

2.2 Technology & Practice:

Tools include patrols and speed monitoring techniques.

There are a wide variety of technologies that can be used by police departments to enforce good driver behavior. Some of these include:

Speed Trailers

Portable speed trailers visually display drivers' real-time speeds compared to the speed limit. According to the U.S. Department of Justice Speeding In Residential Areas guide (pg. 18), "Speed display boards have been shown to reduce speeds and crashes, and appear to be at least as effective as speed cameras in reducing speeds, and do so more cost-effectively." Portable speed trailers are most effective when the trailer flashes SLOW DOWN or flashes a bright white light that mimics a photo speed camera or a blue and red light that mimics a police car when drivers are moving too fast. Some speed trailers have the capability to collect traffic count data and speed data throughout the day, which can be used to identify the most dangerous traffic times when more enforcement is needed.

Speed trailers are best used in residential areas and can be used in conjunction with neighborhood speed watch programs or other safety education programs. Speed trailers need to be placed in locations where they do not block pedestrians, bicyclists, motor vehicle traffic or other vital traffic control signs. The police should be encouraged to conduct some speed enforcement downstream from the display board to increase the effectiveness of the device and educate motorists of some of the consequences they face if caught speeding. Click here or here for additional information.

Tool Summary:

Speed Trailers

Definition

- Portable trailer that displays drivers' speeds.

Advantages

- Provides immediate feedback.
- Does not require officer to be present.
- Relatively low cost.
- Can be moved to varying locations.

Consdierations

- Not a substitute for permanent action.

Tool Summary:

Active Speed Monitor

Definition

- Permanent device that displays drivers' speeds.

Advantages

- Provides immediate feedback.
- Does not require officer to be present.

Consdierations

- Cannot be moved around easily.

Active Speed Monitors

Active speed monitors, sometimes referred to as "Know Your Speed" signs, are permanent devices to keep drivers aware of their speeds and the need to slow down in certain areas (such as near schools). They are typically mounted on a speed limit sign and visually display drivers' real-time speeds as they pass. Drivers see how fast they are actually driving compared to the posted speed limit. Some active speed monitors are solar-powered.

Emphasis Patrols or Pedestrian "Decoy" Operations

Another way to bring attention to problems with drivers not yielding to pedestrians is through a "pedestrian decoy" when police officers in highly visible civilian clothes pose as pedestrians crossing the street while other hidden officers observe their attempts. If a driver violates safe crossing rules by failing to yield to the pedestrian, the hidden officers pursue and apprehend violators. Because it is such a highly visible approach, it often garners media interest and publicizes the need for drivers to be aware of pedestrians. Effective programs exist in many cities, and Seattle piloted a program in 2008 that is continuing in 2009.

Tool Summary:

Pedestrian "Decoy" Operation

Definition

- Police officers pose as pedestrians to identify drivers who fail to stop for crossing pedestrians.

Advantages

- Can be high visibility through media coverage.
- Can quickly identify offenders.
- Poses no threat to actual pedestrians.

Consdierations

- Requires police resources, which may include overtime pay.
- Needs to be done at regular intervals.

Speed "Traps"

Speed "traps" are another type of emphasis patrol, focusing on slowing drivers in high speed or high crash areas. Typically, a police car with a radar gun will be slightly hidden in order to catch drivers in the act of speeding. "Traps" are usually set in the same place for several days in a row, and officers should return to the area periodically to ensure that speeds have been reduced. While citations are the typical result of speed traps, providing the offending driver information about the dangers of high speeds is important as well.

School Zone Speed Vans

Camera-equipped vans have been used in areas where speeding is a particular concern, such as school zones. Schools provide a good target for automated enforcement because of the potential for high public acceptance. In areas with automated enforcement, a warning sign must alert drivers that camera enforcement is in effect. Seattle deployed its first school zone speed van in fall 2008, and drivers who speed face the same fines if caught by the mobile speed trap as they would by patrol officers. That penalty is currently $189. However, under Washington law, such camera-detected violations are considered civil infractions and are not included on driving records.

Camera Radar Enforcement / Red Light Cameras

Automated photo speed enforcement takes a real-time photo of traffic to record vehicle speeds and behaviors. It can be used to document speeders and those who drive dangerously through crosswalks. Automated photo speed enforcement (photo radar) is just one of many tools law enforcement has to influence driver behavior and reduce vehicle speed. Photo radar systems typically operate on set speed thresholds (e.g., 11 mph or more over the posted speed limit) only capturing images of motor vehicles moving at or above the established threshold. When a violation occurs, the system captures speed data, as well as images of the motor vehicle (and in some systems the driver) at the time of the violation. Citations are typically issued through the mail to the registered owner of the vehicle after a review of the vehicle and registration information is completed.

Seattle currently has a red-light camera program in place that has been effective at reducing speeds and raising awareness about the potential consequences of red-light running among drivers. In several evaluations nationwide, the presence of photo enforcement at intersections has resulted in fewer drivers running red lights and a decline in collisions. Soon after a camera radar enforcement system was used in Fort Collins, Colorado, overall compliance to the speed limit rose from 17 percent to 38 percent. In some jurisdictions, the relatively inexpensive protective boxes in which speed cameras are placed are mounted in many locations, leaving drivers uncertain as to which boxes actually contain cameras at any particular time.

As controversial as camera radar enforcement has been, there is no doubt that it has raised the awareness about speeding and its consequences. To make camera radar enforcement more acceptable to the public and elected officials, the speed limits must be reasonable and well-signed. The community must understand that the goal of this enforcement tool is to improve safety and not to spy or generate revenue. Click here for more information.

Tool Summary: Camera Radar Enforcement / Red Light Cameras

Definition

- Mobile cameras connected to speed measuring devices or to red lights record violations and citations can be issued.

Advantages

- Flexible, does not require presence of officer.
- An effective deterrent as would-be offenders do not know when camera is operating.
- An effective part of an overall traffic safety program.

Considerations

- Does not replace traditional approach to traffic enforcement.
- Equipment costs.
- Requires public and political support to be effective.
- Can lead to reaction without effective public education efforts.
- Requires input from a variety of sources, such as courts, prosecutors and community groups, for maximum effectiveness.

2.3 Infrastructure Changes:

Most infrastructure changes can be found in the design toolbox, but striping and signage are also important regulatory and enforcement elements.

There are many types of infrastructure changes that can affect driver and pedestrian behavior. Two types of enforcement-related changes include:

Striping & Painting

(No Parking Zones, Speed Zones, Crosswalks)

Striping and painting can be used to indicate both where an action is permitted or should take place (e.g., crosswalks, stop bars) and where an action is prohibited (e.g., no parking zones, bus stops). Paint can also serve as an alert to motorists that a change is needed (e.g., speed zones). Some striping and painting can improve the pedestrian environment by providing clarity, but overuse of this tool is a concern for some.

Signage

(No Parking, Parking Restrictions, Posted Speed Limits, No Right on Red, Drug Free Zones)

Traffic signs can be either regulatory, warning, or guide signs. Regulatory signs, such as STOP, YIELD, or turn restrictions require certain driver actions and can be enforced. Warning signs can provide helpful information, especially to motorists and pedestrians who are unfamiliar with the area. Guide signs provide direction or location information. Examples of signs that may help pedestrians include warning signs for motorists, warning signs for pedestrians, pedestrian push button signs, NO TURN ON RED signs, and guide signs. Advance pedestrian warning signs should be used where pedestrian crossings may not be expected by motorists, especially if there is a high number of motorists who are unfamiliar with the area. A new, brighter fluorescent yellow/green (FYG) color is allowed for use in pedestrian, bicycle, and school warning signs. All signs should be periodically checked to make sure that they are in good condition, free from graffiti, reflective at night, and continue to serve a purpose. Click here for additional information.

Parking Restrictions

"No Parking" signs are installed on a street to increase mobility and safety when roads are narrow, used extensively by emergency vehicles, or the curb lane is used as a travel lane. "No Parking" signs are also placed near an intersection to increase sight distance, thereby decreasing the likelihood of an accident. It is also possible to install "No Parking" signs that are in effect during peak hours or for special events. "No Parking" signs on residential streets can be removed when neighbors choose to add parking to their street, if the street is at least 25' wide. Adding parking on both sides of the street narrows the usable and effective street width and causes motorists to drive more slowly.

2.4 Law Enforcement Methods: Warnings & Citations:

Tools include penalties for violating codes, laws, and/or regulations.

A variety of law enforcement methods can help change unsafe behaviors, making walking safer and more attractive for everyone. Regardless of the method used, enforcement activities require follow-up to maintain their effectiveness. To measure the impact of an enforcement activity in a specific situation, make a quick study before and after the enforcement effort. Before-and-after studies do not have to be elaborate and can be as simple as measuring speeds or observing behaviors at crosswalks. Examine the results and decide on the next steps. If the results are positive, the method used may be enough to improve behavior. If the results indicate little change in unsafe behaviors, perhaps another method should be used. Even with initial success, communities will need to repeat enforcement efforts periodically in order to sustain improvements in drivers' behaviors.

Types of warnings and citations include:

For Motorists

(Failure to Yield Citations)

Police enforcement is useful in educating motorists of the requirement to stop for pedestrians in a crosswalk. Police enforcement is most effective when it is part of a public safety information campaign. Enforcement campaigns designed to increase yielding behavior can produce a marked and sustained increase in the percentage of motorists yielding to pedestrians depending on how long the campaign lasts (i.e., longer campaigns equate to more sustained success). While enforcement projects are helpful, more long-term, on-going police enforcement measures should also be undertaken. Click here for additional information.

For Pedestrians

(Jaywalking Citations)

Failing to obey a DON'T WALK signal is commonly referred to as "jaywalking." Many municipalities, including Seattle, have begun to issue citations for illegal pedestrian crossings. Citations for jaywalking are typically issued as part of "emphasis patrols," where a number of officers target a particular intersection for enforcement. While jaywalking citations may be effective in stopping some pedestrians from crossing against the signal, the overall effectiveness of jaywalking enforcement has not been evaluated.

"Repeat Offender" Program

A "repeat offender" program might be used to enforce speed limits, parking restrictions, or yielding to pedestrians in crosswalks. The idea of such a program is that fines or tickets would increase in cost as motorists continue to violate the same law/restriction. For example, the first time a motorist is caught speeding in a school zone, the ticket might cost $50. The second time, the same motorist is caught in a school zone, the ticket might cost $75; the third time, the ticket could cost $100. There are endless ways to configure such a program, but the goal is to "force" motorists to recognize that their behavior patterns must change in order to avoid increasingly stiff penalties. Such a program requires that law enforcement officials have appropriate technology to identify repeat offenders.

Progressive Ticketing

Progressive ticketing is a method for introducing ticketing through a three-staged process. Issuing tickets is the strongest strategy of an enforcement program and it is usually reserved for changing unsafe behaviors that other strategies failed to change or that pose a real threat to the safety of pedestrians.

There are three main steps of an effective progressive ticketing program:

1. Educating—Establish community awareness of the problem. Raising awareness about the problem will change some behaviors and create public support for the enforcement efforts to follow.
2. Warning—Announce what action will be taken and why. Give the public time to change behaviors before ticketing starts. Fliers, signs, newspaper stories, and official warnings from officers can all serve as reminders.
3. Ticketing—Finally, after the warning time expires, hold a press conference announcing when and where the police operations will occur. If offenders continue their unsafe behaviors, officers issue tickets.

Beginning a ticketing program with education and warnings is important, as it provides time to build support for the program as well as time for offenders to change their behaviors. Issuing warnings allows police to contact up to 20 times as many non-compliant drivers than the writing of citations does. In addition, the high frequency of stops ensures not only that many people directly make contact with law enforcement, but also that many others witness these stops and are prompted to start to obey the rules.

Issuing tickets is needed, however, to deal with the drivers who continue the unsafe behaviors. Ticketing also gives the program credibility by showing that law enforcement is doing exactly what they said they would do if unsafe behavior did not change.

Tool Summary: Progressive Ticketing

Definition

- After a period of awareness building, unsafe behaviors are detected and ticketed.

Advantages

- Can be high visibility through media coverage.
- Can quickly identify offenders.
- Consequences are often sufficient to deter behaviors.

Considerations

- Requires police resources, which may include overtime pay.
- Needs to be done at regular intervals.
- Should be reserved for serious offenses.

Parking

(towing, parking tickets, boots for unpaid tickets, parking "scofflaw" lists)

In order to improve the pedestrian environment, parking violations must be enforced and priced at a level that creates true disincentive to illegal parking. As of July 5, vehicles that have four or more overdue, unpaid parking tickets are defined as scofflaws per City ordinance #123447. For all Scofflaws:

- Their vehicle may be immobilized ("booted") when parked on a city street.
- Once booted, to get the vehicle released they have 48 hours to pay all parking tickets, default penalties, interest, collections agency fees, and a boot fee.
- If they do not pay within 48 hours (excluding weekends) of being booted, the vehicle may be towed and impounded. To release the vehicle from impound, you will need to pay all fees and fines, plus tow fees, per Seattle Municipal Code.
- If the vehicle is not claimed from impound within 15 days, it may be sold at auction to help pay your debts.

Doubling Fines in School Zones

Strict enforcement of speed laws in school zones is one law enforcement tool that can improve the safety for children walking and bicycling to school as well as drivers. Some jurisdictions employ a zero tolerance policy for speeders in school zones and a doubling (or other increase) in fines for drivers who violate the posted school zone speed limit.

Tripping Hazard Warnings

San Francisco enforces the requirements for property owners to eliminate tripping hazards (i.e., buckled or cracked sidewalks, extruded tree roots) in the right-of-way adjacent to their property by "flagging" violations, posting a notice, and re-inspecting sites after 30 days to ensure compliance. While there is staff time involved in identifying tripping hazards, the flagging program in San Francisco has been effective.

Tickets for Right-of-Way Obstructions

While uncommon in Seattle, citations for right-of-way obstructions (e.g., A-boards on sidewalks, tree/vegetation overgrowth) are used in some municipalities. One barrier to active enforcement of codes, regulations, and laws prohibiting right-of-way obstructions is the time required to identify violations and to re-inspect (and re-ticket, if necessary) to ensure compliance.

2.5 Community-Based Strategies:

In addition to enforcement activities by law enforcement personnel, community members can use these tools to address neighborhood concerns.

Representatives of communities can improve safety behaviors in many ways. Older youth can become safety patrol members and help younger students get to and from schools. Adults can become crossing guards to enforce safe behaviors at crossings. Neighborhood speed watch programs can provide opportunities for residents to educate drivers about their driving speeds while making drivers aware that the neighborhood is concerned about safety. All adults in a community need to set good examples for their children and others by crossing streets in crosswalks when they are available and following other traffic rules.

Types of community-based strategies include:

Pace Car Program

A Pace Car Program is a traffic calming (or speed "enforcing") approach that depends on residents to set examples as good drivers. Participants sign a pledge and mount a yellow triangle on the backs of their vehicles to signify that they will drive courteously, at or below the speed limit, and follow other traffic laws. According to the Web site LessTraffic.com, cars with the Pace Car designation can serve as a "mobile speed bump." Click here for information about a sample program.

Tripping Hazard Warnings

Neighborhood speed watch programs, a traffic-related variation of neighborhood watch or crime watch programs, encourage citizens to take an active role in changing driver behavior on their neighborhood streets by helping raise public awareness and educate drivers about the negative impact of speeding. In these programs, residents concerned with speeding traffic in their neighborhood use this educational program to inform motorists they are speeding. Neighborhood representatives are loaned a radar gun by SDOT to record speeds and identify chronic speeders. The City will send letters to drivers traveling more than 30 mph, reminding them of the importance of obeying the 25 mph speed limit, and that children and pedestrians are endangered by high speeds. Participation in the Neighborhood Speed Watch program helps to document traffic speeds and volumes on a street, and is recommended as a first step before considering other traffic control devices.

Though some residents feel that such monitoring is time consuming, people who have participated in such programs feel it is a worthwhile educational program, helping citizens understand the speeding issues in their neighborhoods and encouraging motorists to drive more slowly. Click here for more information.

Reminders to Clear Sidewalk

A simple community enforcement technique involves the distribution of reminders to neighbors about ordinances governing right-of-way obstructions. These types of leaflets typically include a friendly message reminding the property owner to remove a garbage can from the sidewalk (for example) and may cite the relevant portion of the municipal code.

Anti-Drug Patrols

If there is a significant amount of drug or other illegal activity in a neighborhood, people may be discouraged from walking due to personal security concerns. While law enforcement officers are ultimately responsible for detaining drug offenders, community members can provide a valuable service to their neighborhood by starting an anti-drug patrol.

A wide variety of citizen initiatives is possible, with different levels of responsibility and leadership. Effective community anti-drug efforts encourage residents to address drug problems from a perspective broader than that of drugs alone, taking a comprehensive approach to drugs and crime. Police play a particularly pivotal role in community members' assault on drugs, as partnerships involving citizens, police, and other agencies provide useful strategies.

3. ENCOURAGEMENT

Walking is one of the easiest, safest, and most cost-effective forms of transportation and exercise. You can walk anytime and anywhere—during the lunch hour, on a wooded trail, indoors or outside, on vacation, or in your neighborhood. A range of useful strategies can be employed to encourage walking for both transportation and health.

By promoting walking, individuals and organizations plant the seeds for initiating change, creating awareness about pedestrian issues and alerting others to the benefits of walking and the ways that walkable places foster healthier, more livable communities. This toolbox examines concepts for changing values, perceptions, and behaviors related to walking and provides ideas and strategies for promoting walking in your community.

3.1 Media Campaigns & Strategies

Media campaigns are central to promoting and encouraging walking: they reach a large audience and convey a variety of messages.

Media campaigns create program awareness, encourage community support, and influence individual action. They encourage behavioral change through a variety of avenues: bus billboards, banners, signs, Web sites, and residential mailings. In linguistically diverse communities, messages should be provided to the public in all relevant languages.

Sample Media Campaigns:

- Safe Streets for Seniors (New York)
- Safety City (New York)
- Safe Streets (Chicago)

For more information on the basics of pedestrian advocacy marketing, visit www.walkinginfo.org/promote.

Types of media campaigns and strategies include:

Social Marketing Campaigns

Social marketing, developed in the 1970s and employed by an increasing number of nonprofit and public agencies, is a highly focused media campaign that appropriates commercial marketing techniques to achieve a social good by effecting specific behavioral changes (e.g., increased seat belt use, reduced smoking rates) in targeted populations (e.g., teen drivers, teen smokers). Social marketing can utilize any of the mediums available to traditional media campaigns.

Sample Social Marketing Programs:

- Pedestrian crossing flags (Seattle)
- Watch the Road (Los Angeles)
- Drive Safe, Stop Safe (Chicago)

For more information on social marketing, visit http://www.social-marketing.org, or see Philip Kotler and Nancy Lee's Social Marketing: Influencing Behaviors for Good, 3rd edition.

Public Awareness Campaigns

Public awareness campaigns are a vehicle to garner public support. An effective campaign can serve as a first step for follow-up initiatives and increase the likelihood of success. Encouragement campaigns can be delivered via broad public relations efforts that utilize local media (e.g., television, radio, billboards, and posters placed at common venues such as transit stations).

Public awareness campaigns promote pedestrian and driver safety practices and focus on specific topics. For pedestrians, these topics might include interpreting pedestrian signals, being visible at night, and watching for turning cars. Campaigns for drivers might focus on watching for pedestrians when making turns at intersections and being aware of the legal responsibility to yield to pedestrians at intersections.

Sample Public Awareness Campaigns

- The Wave
- Pedestrian Safety

Public Service Announcements

A public service announcement (PSA) or community service announcement (CSA) is a non-commercial advertisement broadcast on radio or television, ostensibly for the public good. PSAs are intended to modify public attitudes by raising awareness about specific issues; health and safety are the most common topics. A typical PSA is part of a public awareness campaign to inform or educate the public about an issue such as safe walking or driving behavior.

Sample PSA:

- Kirkland, Washington has two excellent examples of pedestrian safety PSAs, produced by the Kirkland Senior Council, the Kirkland Steppers, and the Kirkland Youth Council. These can be accessed through the city's Web site at: http://www.ci.kirkland.wa.us. Go to "Watch on demand programming"—under "Archives Index" choose "Kirkland Television Special Programming"—choose "Excel as a Pedestrian - Senior Council Video" OR "We've Got Issues."

Targeted Campaigns

Targeted campaigns aim to change specific behavior patterns in specific groups. A successful campaign will be an ongoing effort that has long-term results.

Targeted campaigns focus on specific safety practices, such as informing small children to stop at the curb and look left, right, and left again, and locating radar reader boards along school walk routes to alert drivers of their driving speeds in school zones. Targeting countermeasures to specific age and ethnic groups has demonstrated promising results, although more intensive education than currently practiced may be necessary to reduce pedestrian crashes involving older, ethnic pedestrians.

Sample Targeted Campaigns:

- Don't Block the Box
- Safe Routes to School
- Know Your Speed

Individual Campaigns

Individual campaigns attempt to influence the behavior of targeted groups through an intermediary such as safety guards, doctors, celebrities, and other figures of authority and perceived credibility. Individual campaigns may involve both specific target populations and individuated materials, such as trading cards with celebrity figures on one side and pedestrian safety tips on the other side. For more information, visit http://www.walkinginfo.org/pedsafe/pedsafe_curb1.cfm?CM_NUM=48#top.

Sample Individual Campaigns:

- Neighborhood messaging cards
- Door hangers

Pair Transportation Options

There's a multiplicity of methods to remind people of the many ways they can pair walking or biking with transit to explore the city. Destination-specific bus signs (to Seattle Center, Pike Place Market, Main Library, etc.) are a great way to remove some of the mystery the uninitiated may feel into trying to decipher a system map, and can even lead to spur of the moment trips. Advertisements highlighting destinations and linkages "Got Bike? You're just a 15 minute bus ride form the Burke-Gilman," or "Only 12 minutes from here to downtown shopping" could be similarly effective.

Sample Transportation Pairings:

- Destination-specific bus signs (Chicago)
- Commute Trip Reduction (Seattle)
- Bikes on Buses (Seattle)

Public Endorsements

Endorsements and testimonials promote programs or initiatives through the support of outside individuals or organizations.

The term endorsement usually refers to advertisements featuring public figures (such as celebrities) and organizations, while the term testimonial generally refers to campaigns utilizing consumers and clients. Endorsements and testimonials can be used in any medium, from television and radio spots to direct mail fliers and magazine or newspaper advertisements. For more information, visit www.referenceforbusiness.com/small/Di-Eq/Endorsements-and-Testimonials.html.

Sample Program:

- Seattle Climate Action Now (CAN).Seattle CAN encourages residents to take individual and community-wide actions to reduce their carbon footprint and combat global warming. The Seattle CAN homepage contains an audio endorsement featuring Mayor Greg Nickels discussing the threat posed by global warming and outlining some of the simple steps residents can take to reduce their contributions to climate change. For more information, visit www.seattlecan.org

New Resident Mailings

Seattle is a verdant city with a vibrant cultural life, abundant parks and green space, and myriad shopping opportunities. A mailing highlighting local attractions and introducing new Seattleites to the basics of the city's robust transit system can get folks new to town off their couches and out of their cars, encouraging them to explore the city on foot, bike, and transit. Mailings can include transit, pedestrian, and bike maps, a free daily or weekly Metro pass, and a zip-code-based and coupon-laden list of local shops and eateries within walking distance.

3.2 Pedestrian Advocacy

Tools include information about existing organizations and potential partnerships to promote walking.

Types of pedestrian advocacy include:

Organizations

Advocacy organizations work to improve the pedestrian environment and to encourage walking through lobbying, research, and community involvement. Feet First, for example, is an active, Seattle-based organization.

Feet First is a 501(c)(3) non-profit organization serving Washington, with a focus on the Puget Sound Region. Feet First was founded in 1996 to promote pedestrian rights and interests and to encourage walking. Feet First is known around the region for its long history of innovation and volunteer activities. The organization serves communities statewide and is regularly consulted and invited to participate in national initiatives and research programs.

Sample Advocacy Organizations:

- Feet First
- Pedestrian Bicycle Information Center

Partnerships (health, transportation, parks, businesses, King County Public Health Southeast/Active Living by Design & SDOT)

Information coming soon...

Community Members (turn on porch light, open windows, create "eyes on the street")

Information coming soon...

Advisory Groups

Advisory groups are a key tool in developing plans that will ultimately reflect the needs of all community members; they incubate stakeholder investment and mobilize community support.

The Pedestrian Master Plan Advisory Group (PMPAG) is a committee of key stakeholders established by City Council resolution. The PMPAG has 25 members, elected co-chairs, and a steering committee. Members represent the Seattle Pedestrian Advisory Board (SPAB), neighborhood organizations, regional bodies, the public health community, seniors, public schools, pedestrian advocacy groups, safe-driving organizations, and people with disabilities. PMPAG members were selected because they bring important perspectives on pedestrian issues to the table. Members share views on pedestrian issues through subcommittees, stakeholder roundtables, and interviews. Many advisory group members work closely with the organizations they represent to solicit input on the Pedestrian Master Plan process. The PMPAG is staffed by SDOT and meets monthly to review and comment on the project.

Sample Advisory Groups:

- Pedestrian Master Plan Advisory Group (PMPAG)
- Seattle Pedestrian Advisory Group (SPAB)

3.3 Walking Incentives

Incentives reward behavior. Providing different incentives or gifts can motivate people to try walking or to take more frequent or longer walks.

Incentives include:

Give-Aways and Promotions

Promotions encourage people to walk by providing a benefit related to a walk they might not normally take.

Promotions sometimes encourage walking to the site of the promotional event, but often they provide motivation for future walks, as is the case with Metro's Adopt-a-Stop program. Walking to transit is an important piece of non-auto transportation, and free bus tickets encourage it.

Handing out walking gear—pedometers, rain gear, or walking sticks—can motivate people to walk. Giveaways should directly target desired behavior; therefore, an item that can be used while walking is ideal. Research shows the simple pedometer—a small, inexpensive, step-counting device—is an excellent motivational tool.

Sample Promotions and Giveaways:

- Pedometer giveaways and progress charting
- Discounts on wheeled shopping carts
- Fee waivers for park shelters
- Employee reimbursement for walking to off-site meetings
- King County Metro's "Adopt-a-Stop" Program
- Way to Go, Seattle!

Support Programs

Support programs provide another important walking incentive and can encourage people of all ages to be more physically active by walking for transportation, health, and recreation. A wide range of programs have been effective with different age groups and populations. To design a support program appropriate for the people you're encouraging to walk, it's important to understand why they're not walking now. A simple survey of friends, neighbors, and community members can quickly reveal people's preferences.

For some people, a walking partner makes all the difference. Walking buddies can increase feelings of comfort and security by enabling people to explore new and different routes than they may have tried alone. The knowledge that someone else is counting on them to walk can also motivate people to get out and walk instead of staying in the house or driving alone.

A recent focus group of Seattle teens indicated free walking playlists might encourage young people to walk more frequently. Playlists can be created based on walk length, pace, or mood, or they can narrate the history and interesting features of a mapped route.

Sample support programs:

- Walking buddies
- Free "walking music" playlists
- King County Healthy Incentives

Trip Reduction

Automobile trip reduction programs provide alternatives to owning and operating a private vehicle. By having several options such as short-term car rental, a transit pass, or a guaranteed ride home, people maintain control of their travel choices and schedule. In other cases, a show of appreciation and support can make the difference between driving and choosing other modes.

The flexibility and cost savings of car sharing programs such as Zip Car allows some people to give up car ownership entirely. Guaranteed ride home programs, together with car rentals and subsidized transit passes, provide insurance against being "stranded." A diversity of options, together with the assurance of being able to get home, means more people will choose walking.

Disincentives to Driving

In addition to supplying other transportation choices, part of creating a walkable city is managing the demand for vehicle travel. Discouraging trips by car--particularly unnecessary trips--can be aided using appropriate free-market pricing policies.

Free or below-market-rate parking hides the true cost of driving. Parking spaces, when added up, take up an enormous amount of our city's most valuable resource: land. Research shows that when parking is subsidized, demand for car travel increases. This in turn requires more land, leading to a vicious cycle. Charging appropriate market rates for parking has been shown to reduce trips by car.

While market rate parking and congestion pricing are effective strategies for reducing car demand, communicating with drivers can also be useful. When air quality is predicted to be poor, air quality alerts can be issued encouraging drivers to either stay home or avoid making unnecessary trips.

Awards (recognition at work, homeowner maintenance awards)

Recognizing pedestrians and others who improve Seattle's walkability is an important piece of encouraging more trips by foot. Awards can either be purely recognition, or they can be accompanied by some other form of reward such as a prize or money.

When employers recognize employees for walking, they accomplish several things. For example, they are demonstrating that walking is valued by the company and that walking is an accepted norm among fellow employees. Recognizing existing walkers may also help strengthen resolve or encourage increased walking.

Homeowners have a vital role in maintaining Seattle's walking infrastructure. By keeping the walkable zone clear, and by repairing broken sidewalks, homeowners are contributing to Seattle's walkability. Awards can recognize homeowners for this effort as well as provide an opportunity to apprise other homeowners of their legal responsibilities in a positive manner.

Contests

One of the advantages of walking is that it is a community activity. Walking is more enjoyable where there are other people walking. Contests capitalize on this social aspect of walking by building community amongst walkers.

Contests can also be used to improve the streetscape. By highlighting good or bad areas for walking, photo contests can help fellow walkers avoid challenging areas and identify trouble spots for the city.

"Walk Around the World" programs help provide individuals with a sense of accomplishment by tracking walking mileage. This can also be used for good-natured competition to encourage walking and fitness goals.

3.4 Wayfinding

Architect Kevin Lynch coined the term wayfinding in 1960. For the purposes of pedestrian advocacy today, wayfinding describes an engaged approach to orienting all road users in their urban context. Operating on a scale ranging from the step-by-step to the city-wide, wayfinding utilizes a battery of audio, visual, and tactile techniques to safely guide people to destinations of which they might have been unaware when they stepped outside their doors. Particularly for people unfamiliar with an area, providing directional tools can encourage them to walk more frequently or try walking someplace new. Wayfinding tools such as crossing signs and path markings also show pedestrians where to walk.

Tools include maps, kiosks, and signs for getting people to destinations.

Online Tools

An increasing number of wayfinding tools are available online. These tools provide easy access to directions, maps, and suggested walks for all users. Directions and walking routes are easily tailored to individual user needs.

Sample Online Tools:

The American Heart Association's MyStart site

Google Maps (click on the Get Directions link, then select Walking as the mode of transportation)

Walking Maps

Walking maps serve many purposes and feature destinations ranging from commercial and cultural attractions to amenities such as restrooms and water fountains. They build geographical knowledge, encourage people to experience places on foot, and provide alternative walking routes. Thematic maps target narrower interests, perhaps highlighting downtown antique shops, architecturally significant structures, historical sites, or safe routes to schools. For example, Feet First, a nonprofit organization working to make the Puget Sound region more walkable, has developed a number of walking maps for Seattle neighorhoods, including a Central District map featuring dozens of historically relevant sites in this traditionally African American community.

Walking maps should include the following elements:

- Schools, parks, libraries, community centers, playgrounds, farmers' markets, and other neighborhood destinations
- Practical amenities such as public restrooms, water fountains, and police stations
- Routes residents might not know about (walking trails, community gardens, staircases)
- Viewpoints and benches
- Distance between destinations (in miles or time)
- Traffic signal and crosswalk locations
- Mass transit stops
- Car share locations

Sample Walking Maps:

- Feet First
- Walk Boston

Informational Kiosks

Informational kiosks show people where they are currently located and provide information about nearby destinations. West Seattle will soon have informational kiosks in two locations, and additional kiosks are planned as funds become available.

Downtown Seattle has a wayfinding system in some locations, and new kiosks will soon be installed throughout downtown. Many people traveling downtown are unfamiliar with the transit system and don't know the exact location of their destination. For this reason, it is important that downtown Seattle has a wayfinding system including the following features:

- A cohesive system of directional signs, maps, and informational kiosks telling pedestrians how to travel between major regional destinations, parks, historic sites, neighborhood attractions, and transit stops
- A color-coded and icon system to explain downtown transit circulation
- A downtown walking map sponsored and distributed by downtown businesses

For more information, see the 2003 Center City Circulation Report.

Signs

Highly visible pedestrian signs guide both residents and visitors to potential destinations. Signs can be welcoming, informational, and directional and can mark destinations, facilities, crossing locations, and many other aspects of the pedestrian realm. Good signs are hard to miss and should be especially visible at dawn and dusk.

Pedestrian wayfinding signs should feature a consistent size, shape, and color scheme, making it easy for pedestrians to identify signs and recognize that they provide helpful information. The sign below, from Portland's Pearl District, exemplifies many key elements of excellent wayfinding signs. It identifies the neighborhood in which it's located and uses arrows to indicate directions to bookstores, theaters, gardens, and transit. In addition, the white circle in the map identifies everything within a five-minute walk from the sign itself.

3.5 Walking Programs

The number of walking programs that currently exist or might potentially exist is nearly limitless. Any individual, organization, or community can develop a walking program. In order to develop a successful program, it's important to understand what participants want to gain from it. Participants may want to socialize, lose weight, or get to school safely.

Tools include examples of walking programs sponsored by various groups and organizations.

feet first
PROMOTING WALKABLE COMMUNITIES

"City Walks" Events

In the same way that Seattle has employed a "City Reads" campaign, inviting all residents to read the same book simultaneously, promoting a "City Walks" campaign might encourage more people to walk. By selecting a new walk every week, residents would have the opportunity to walk in new and interesting places and to get to know others in the community. To facilitate easy access to the campaign, and to quickly and easily communicate the wide variety of walking activities and events available, a "City Walks" Web site and calendar could be developed.

Community-Based Programs

Online and community-based programs encourage walking and provide incentives for reaching mileage goals, either individually or in groups. Some programs allow people to enter their mileage online as they walk. For example, Walk Across Texas!, a program initiated by Texas A&M University, tracks participants' mileage and weight loss on a Texas road map. Another good example is AARP's online walking program for older adults, Get Fit on Route 66. Participants record exercise minutes, with one minute of activity equal to one mile on the route. Time spent walking, biking, swimming, and playing tennis counts as exercise minutes, as do all activities that increase the heart rate and encourage movement.

Organized neighborhood walks, used in Seattle on Neighborhood Walks Day (May 10, 2008), bring neighbors together and get them walking in their own neighborhood. Some examples include:

- A walk to visit a new park or pathway;
- A walk to an event (neighborhood fair or farmers' market, local coffee shop);
- A nighttime holiday walk to view decorations; and
- A fitness walk or walking just for the sake of walking.

Sample Community-Based Programs

- Walk Across Texas!
- Get Fit on Route 66
- The International District Housing Alliance's weekly Intergenerational Walk (contact Joyce Tseng at XXX.XXX.XXXX)
- The American Heart Association's Walking to Recovery program
- Seattle Art & Seek
- Sound Steps for seniors

Worksite Programs

Employers implement numerous programs encouraging employees to walk, bike, and take transit. Such policies can focus on traffic congestion or employee health, but most inherently address both issues. Sample programs include transit reimbursements, parking cash-outs (i.e., offering the cash equivalent of subsidized parking costs to employees who commute without a car), worksite showers and lockers, and walk-to-work days or other fitness programs.

A good example of a worksite walking group is that at the University of California at Berkeley. It meets three days a week with varying routes and accommodates all fitness levels. The group sometimes provides prize incentives for those participating during the summer months. For more information, see http://uhs.berkeley.edu/facstaff/healthmatters/walkinggroup.shtml.

While all types and sizes of worksites can develop walking programs, they are most commonly found in larger worksites.

Sample Programs and Resources:

- American Heart Association's Fit-Friendly Companies program
- Weigh to Health corporate nutrition and preventative health
- Walk Across Washington

School-Based Programs

Walking school bus programs encourage children to walk to school by grouping students with one or more adults for the daily walk to school. Easily organized by a few parents, a walking bus can be as informal as two families taking turns walking their children to school or as structured as a planned route featuring meeting points, a timetable, and trained volunteers.

National and local safe routes to school programs seek to reduce pollution, traffic, and childhood obesity by creating safer pedestrian and bicycling routes to schools and initiating programs encouraging children to utilize those routes. Walking school bus programs sometimes constitute part of a safe routes to school program.

While elementary and high school student-encouragement programs receive more publicity, many colleges and universities have initiated programs encouraging staff and faculty to walk and bike to campus. Larger institutions also seek to increase intra-campus pedestrian trips.

School-Based Programs and Resources:

- National Center for Safe Routes to School
- Seattle Safe Routes to School
- Feet First Safe Routes to School and walking bus information
- Seattle Public School walking maps for all K-5 city schools
- University of Washington's walking campaign

City-Sponsored Programs

Walking programs sponsored by a city or other municipality can effectively encourage large numbers of people to walk. Large-scale programs focus on encouraging walking through incentives or through disincentivizing driving to work alone. Seattle's Commute Trip Reduction program encourages more people to walk by providing incentives for taking transit.

Sound Steps, a volunteer-supported walking program run by Seattle Parks and Recreation, encourages seniors to walk regularly. The park district connects participants with other walkers at their level and provides them with tools to measure their progress. Volunteer walk leaders offer encouragement and regular check-ins (http://www.seattle.gov/parks/seniors/SoundSteps.htm).

Sample Programs Include:

- Neighborhood Walks
- "Easyride"
- Sample Programs:
- Seattle Department of Transportation's Commute Trip Reduction Program
- Sound Steps

3.6 Events

Events range in scale from neighborhood get-togethers to charitable walks organized by national non-profit organizations that draw thousands of participants. Events are a great way to market walking as a more regular activity.

Tools include one-time or recurring events, good motivational tools for walking.

Health Issue Walk/Runs

Health issue walks promote program awareness and often include a fundraising component to fund research or support a nonprofit organization. Although health issue walks may not be designed specifically to encourage people walking, participants have often been affected by the health issue and an organized walk may encourage them to walk during recovery.

Sample Health Issue Walks

- March of Dimes Walk
- Start! Heart Walk (American Heart Association)
- Step Out: Walk to Fight Diabetes (American Diabetes Association)
- Making Strides Against Breast Cancer (American Cancer Society)

Conferences

Conferences connect pedestrian advocates, elected and appointed officials, transportation experts, land-use planners, safe routes to school coordinators, public health practitioners, and other interested individuals who want to create more walkable cities and communities. Conferences encourage walking by sharing information and developing capacity to improve pedestrian infrastructure.

Sample Conference:

- Pro Walk/Pro Bike '08

Conferences

Neighborhood events allow friends and neighbors to connect with each other, often improving their neighborhood at the same time. They encourage people who usually park in their garage and leave the neighborhood without ever stepping on their own street to get out on the sidewalk and socialize.

In support of Seattle's Climate Action Now program, SDOT is making it easier to secure block party permits and turn neighborhood block parties into Car-Free Summer events by incorporating on-the-spot actions to reduce car trips.

In addition to block parties, pedestrian advocates can help devise and coordinate other neighborhood events to draw residents onto their neighborhood sidewalks. Sidewalk sales, festivals, concerts, picnics, parades, and noncompetitive walks and runs are some of the most successful techniques for encouraging walking; they also support local businesses, stimulate park use, and foster community spirit. Model events, such as the annual Crown of Queen Anne, combine many or even all of these events into a larger festival supporting charitable causes.

Interested residents can also initiate neighborhood clean-up days, which develop neighborhood bonds while rendering the area more pleasant for walking. For more information, see walkinginfo.org.

Sample Neighborhood Events

- Block Parties

Neighborhood Sidewalk Sales, Festivals, Parades, and Fun Walks/Runs:

- University Village Annual Sidewalk Sale
- West Seattle Summerfest
- Madison Park Days
- Ballard SeafoodFest
- Crown of Queen Anne

City-Wide Events

City-wide events utilize resources across the city and can temporarily modify elements of the transportation grid to encourage walking and cycling, to engender a sense of community, and to increase green space and park usage.

In 2008, Seattle initiated the Car Free Days campaign to combat global warming by encouraging residents to drive their cars 1,000 fewer miles each year. Car Free Days embrace the idea of linking recreational activities in parks to neighborhood business centers without needing an automobile. Car-free days are gaining in popularity in cities from Bogota, Colombia, to Portland, Oregon.

Sample City-Wide Programs

- Seattle Car Free Days
- Ciclovia (Bogota, Colombia)
- Sunday Parkways (Portland, Oregon)
- Seattle PARK(ing) Day
- National PARK(ing) Day
- Walk to School Month
- It's a Walk in the Park

3.7 Built Environment & Infrastructure

No program, campaign, event, or incentive encourages walking as much as the quality of the built environment and roadway infrastructure. Neighborhoods and cities featuring continuous sidewalk networks, multi-use zoning, and streets built to an intimate and human scale are always neighborhoods and cities where people not only walk to work, to the pharmacy, and to the local bar, but also places where people stroll after dinner, jog in the morning, find a bench during lunch¾places where children jump rope on the sidewalk and the retired gather on stoops.

Elements of the built environment that can encourage people to walk include:

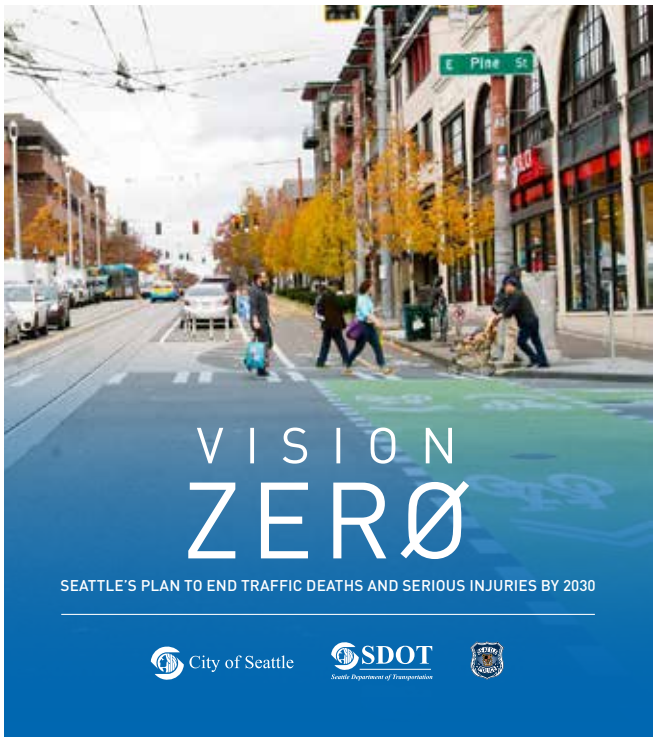
- Destinations (businesses, parks, lookouts, bus stops)
- Amenities (benches/street furniture, trash containers, lighting, art, restrooms)
- Landscaping (planting strips, buffers)
- Design Guidelines/Design Review (pedestrian-scale focus: new condo design, avoid installation of tall fences)
- Physical Improvements (façade grants, sidewalk cafes)
- Eliminate Barriers (A-boards, cracks, branches)
- Designated Pedestrian Zones (street type classification, woonerfs, festival streets, pedestrian boulevards)
- Low-Impact Surfaces (dirt trails, unpaved paths)
- Supportive Land Uses (mixed use neighborhoods, TOD)
- Connectivity & Accessibility (stairways, access to parks/transit/destinations)
- Density (population, employment)
- Weather Protection (rain refuges, tree canopies)
- Green/Sustainable Design (Green Factor, Complete Streets, developer incentives/fees in lieu)

4. EDUCATION

Education can be a powerful tool for changing behavior and improving safety skills. Pedestrians, bicyclists, motorists, enforcement officers, public officials, and others can all benefit from educational tools and messages that teach them the rules, rights, and responsibilities of various travel modes.

There are major differences in the walking abilities, behavioral patterns, and learning capacities of different groups of pedestrians and other road users. For example, children have different physical and psychological abilities than adults, young drivers exhibit different behaviors and driving skills than older drivers, and college students can be reached through unique educational outlets. Educational programs need to be tailored to specific audiences.

This toolbox provides information on the messages and educational programs available for a range of different audiences. It also offers tips and strategies for delivering educational messages to pedestrians and other road users. When designing or selecting an educational program, it is important to develop specific, measurable goals.



4.1 Campaigns

Educational campaigns motivate people to alter behavior and reduce pedestrian crashes. They teach pedestrians and motorists about traffic safety practices and guidelines and provide advice on avoiding collisions. Often, campaigns are targeted to particular pedestrian groups such as elementary age children, senior citizens, and recent immigrants. Research has demonstrated that these programs can be effective in reducing pedestrian crashes, particularly among children and seniors.

Educational tools that also convey that walking in a particular community is convenient, pleasant, healthful, and safe.

Public Service Announcements

A public service announcement (PSA) is a non-commercial advertisement broadcast on radio or television to achieve a public good, such as reduced obesity. PSAs are intended to modify public attitudes by raising awareness about specific issues. They commonly address public health and safety issues. A typical PSA is part of a public awareness campaign to inform or educate the public about an issue such as safe walking or driving behavior.

Sample PSAs:

- National Pedestrian Safety Campaign (Federal Highway Administration)
- Did You Know? (Seattle)
- Excel as a Pedestrian / We've Got Issues (Kirkland)

Public Awareness Campaigns

Public awareness campaigns are a vehicle to garner public support. An effective campaign can serve as a first step for follow-up initiatives and increase the likelihood of success. Pedestrian education campaigns can be delivered via broad public relations efforts using local media such as television, radio, billboards, and posters.

Public awareness campaigns promote pedestrian and driver safety practices and focus on specific topics. For pedestrians, these topics might include interpreting pedestrian signals, being visible at night, and watching for turning cars. Campaigns for drivers might focus on watching for pedestrians when making turns at intersections and being aware of the legal responsibility to yield to pedestrians at intersections.

Sample Campaign:

- Street Smart (Washington, D. C.)

Individual Campaigns

Individual campaigns attempt to influence the behavior of targeted groups through intermediaries such as safety guards, doctors, celebrities, and other figures of authority and credibility. Individual campaigns may involve both specific target populations and individuated materials, such as trading cards with celebrity figures on one side and pedestrian safety tips on the other side.

Targeted Campaigns

Targeted campaigns aim to change particular behavior patterns among specific groups. Successful campaigns are ongoing efforts with long-term results.

Targeted campaigns focus on specific safety practices, such as teaching children to safely cross streets and positioning radar reader boards along school walk routes to alert drivers of their speed. Targeting countermeasures to specific age and ethnic groups has demonstrated promising results, although more intensive education may be necessary to reduce pedestrian crashes involving elderly immigrants.

Sample Targeted Campaigns:

- Safe Routes to School

4.2 General Strategies

Techniques include one-time instruction, skills practice, and other programs.

Partnerships

Partnerships targeting specific groups are common and often utilize intermediaries who regularly interact with the target group. Intermediaries may be particularly successful in reaching underserved minority populations. Potential partners include schools and colleges, senior centers, AARP, parks departments, health departments, and employers.

One-Time Instruction

One-time pedestrian safety instruction is often included as part of a larger event expected to be well-attended by the target audience. Examples include senior citizen health fairs, neighborhood open houses, and transportation fairs at employment sites.

On-Demand Training & Materials

On-demand training is typically included within broad design-related exercises that involve attention to new transportation infrastructure and facilities, smart growth design, and development of walkable, sustainable communities. Local governments request assistance from expert teams that conduct intense but short training seminars with stakeholders, decision-makers, and citizens.

Sample On-Demand Training

- Safe Routes to School National Course
- Walkable Community Workshop (National Center for Walking and Bicycling)
- Public Involvement in the Transportation Decision-Making Process (National Highway Institute)

How-To Guides

Typically, how-to guides are geared to the public. Guides should be developed by experts, including city staff. A how-to guide can be developed for nearly any topic: helping citizens to assess walking conditions in their communities; creating positive change; and using new transportation modes. How-to guides can also teach people to form effective coalitions and to educate decision-makers about policies promoting successful pedestrian plan development.

Sample How-To Guides:

- A Citizen's Guide to Massachusetts State Services
- Walking audits

Skills Practice

Skills practice programs often include multiple sessions and involve lectures, videos, and simulation exercises held on-street under controlled conditions. Topics include defensive walking and street crossing workshops for children and the elderly. Programs designed for children also feature skills-related games and contests.

4.3 Training Program Topics for Roadway/Walkway Users

The most effective training programs target a specific community problem. The goals of an education program should be specific, measurable, and related to the problems identified. Training should result in an outcome that demonstrates that the program met or exceeded the objectives, determines if the program needs to be adjusted or changed, and documents the need for continued funding or program expansion. Click here for more information.

Messages focus on improving personal safety and law abidance.

Bicyclists

In Washington, it is legal for bicyclists to ride on the sidewalk, although pedestrians maintain the right-of-way. Bicyclists must be aware of their rights and responsibilities and use common sense and courtesy when interacting with pedestrians. Examples of common bicycle-related problems that can be addressed through education:

- Bicyclists ride against traffic or in unsafe places.
- Bicyclists ignore traffic signals and signs.
- Bicyclists ride unpredictably and fail to sign before turning.
- Bicyclists don't safely pass pedestrians.
- Bicyclists fail to yield to pedestrians when turning.

Educational campaigns and materials should focus on cyclist's rights and responsibilities, and the basics interacting with pedestrians and riding on sidewalks. One example of an education program for cyclists is Bike Smart.

Drivers

Behind the wheel, drivers must constantly decide where to focus their attention. While the safest choice is to remain focused on driving, a host of other objects and actions compete both inside and outside the vehicle to draw their attention away from the road ahead. Research estimates that driver inattention or distraction causes up to 30 percent of police-reported crashes.

Key messages to drivers include:

- Be alert: watch for pedestrians at all times
- Be responsible: yield to pedestrians at crossings
- Be patient: drive the speed limit and avoid aggressive maneuvers

These messages can be conveyed during driver education classes.

As a driver, a senior's risk of crashing may be increased due to the normal physiological changes that accompany aging, including slower reaction times, poorer night vision, reduced depth perception, and reduced visual contrast sensitivity. Broad-based education and training programs that address the needs of the older pedestrians and drivers may be best delivered through a coalition of interest groups including transportation professionals, advocates, and health experts.

Motorcycle and Scooter Riders

The National Highway Traffic Safety Administration offers training classes for motorcycle riders that focus on cyclist safety. However, both licensing and training programs should focus on pedestrian safety as well, particularly in regard to yielding behavior and proper parking. After licensing, this group may be difficult to reach; however, working with shop owners to distribute literature at the register in cycle or scooter shops might prove to be an effective educational tool.

Tourists

While tourists are often provided information about destinations, they typically receive few details about reaching those destinations. Educating tourists about travel options, pedestrian rights and responsibilities, and walking directions to popular destinations could draw more tourists onto city sidewalks. Promotional materials can also tout walking vacations, focusing on non-motorized travel whenever possible.

Employees & Commuters

Campaigns and educational messages aimed at commuters or employees often encourage drivers to carpool, to use transit, or to consider walking and biking. The City of Seattle's Way to Go program is one example of this type of program.

Children

To significantly improve child safety, education and training programs must provide messages and teach skills appropriate for the developmental level of the targeted children. The National Center for Safe Routes to School's online guide outlines key messages for children, including:

- Pedestrian safety skills
- Personal safety
- Health and environment benefits of walking

Information about what is being taught in school can be sent home so parents can reinforce skills with their children. Encouraging parents to take a walk with their child provides time for them to assess the child's skills, such as whether the child pays attention to traffic, chooses appropriate places to walk, and has the ability to gauge gaps in traffic that allow for safe street crossing.

All Pedestrians

While techniques and programs should be tailored to specific audiences, all pedestrians should know general pedestrian safety basics. Additionally, pedestrians should understand the rules of the road and the right-of-way. For example, many pedestrians do not know that it is illegal to begin crossing the street once a DON'T WALK crossing signal (i.e., red hand or words) starts blinking.

Other general pedestrian safety messages include:

- Be predictable. Stay off freeways and restricted zones. Use sidewalks where provided. Cross or enter streets only where legal.
- Where no sidewalks are provided, walk facing traffic.
- Make it easy for drivers to see you—dress in light colors and wear reflective material. It might be wise to carry a flashlight in very dark areas.
- If exercising, wear highly visible, reflective clothes.
- Be wary. Don't assume drivers see you—make eye contact to ensure they do.
- Use extra caution when crossing multiple-lane, higher speed streets.

Youth

Youth and teens are often overlooked in educational materials that address pedestrian behaviors, as most in-school educational programs are targeted at elementary school-aged children. However, it is important to educate young people as well, since they are a group that cannot yet drive, and they rely on public and non-motorized modes of transportation. For this age group, the way the message is delivered is often as important as the message itself, so educational materials should be technologically driven and visually interesting. Topics that may be addressed with youth include safe walking habits (i.e., using crosswalks, waiting for signals, dressing in visible clothing at night) and navigational techniques for getting to destinations via walking and/or transit.

Adults

Strategies for educating adults include pedestrian safety messages in public relations efforts (e.g., news releases, fact sheets for local officials, press events) and highlighting pedestrian facilities when introducing new infrastructure.

College Students

College students are unique in both their needs and the methods available to educate them. Below is a sample of many available educational opportunities and techniques.

1. Tailor a program to specific student needs and interests. Teach them what they can do, both personally and as part of the college or university, to improve pedestrian safety and increase walking on campus and beyond.
2. Develop educational program partnerships to generate community support. Potential partners include campus transportation services, the public safety department, campus health organizations, public health or injury prevention alliances, and student groups such as walking and bicycling clubs or environmental groups
3. Utilize university events: distribute pamphlets or other materials at new student orientations, large gatherings, or campus housing.
4. Give incentives. While distributing safety messages, garner student interest by giving away wristbands, reflective gear, posters, coupons for local restaurants, or other freebies.

Click here for an example of an educational program for college students.

Seniors

Key messages for seniors could include:

- The threats presented by turning cars
- Tips for safely crossing intersections
- Good shoe and clothing choices

Click here for an example of a senior education program.

New Parents

New parents can benefit greatly from educational messages about walking, as the birth of a child is a significant life change. Messages should focus on ways to keep children safe, navigating busy streets with a stroller, and driving safely with often distracting children in the car. There are many venues to target this demographic, including new-parent groups, child care centers, and pediatric offices.

Alcohol Consumers

For motorists:

- Do not drive drunk. Drinking slows reaction time, impairs judgment, and affects alertness and coordination.
- When you drive, particularly at night around populated areas, watch for sudden, unexpected pedestrian movements. Scan the road widely and often, and prepare for the unexpected.
- If you know someone who has been drinking and is planning to drive, call them a cab or offer to drive or escort them, even if it is only a short distance.

For pedestrians:

- Understand that alcohol affects balance, impairs judgment, and reduces alertness and coordination. It can also affect vision.
- Drink in moderation.
- If you think someone has had too much drink, don't let them walk home alone, especially at night.

Click here for an example of a Seattle-based program that provides free taxi rides home from bars.

4.4 Training Program Topics for Officials & Decision Makers

It is critical to ensure all politicians, officials, and public employees working on topics that touch on pedestrian issues are fully educated about the importance of creating and maintaining a complete and robust pedestrian network. This section outlines key messages for various officials and decision makers.

Messages focus on encouraging stronger support for policies, programs, and facilities that promote safe walking.

Transportation Officials

Key messages for transportation officials:

- Walking is the most basic transportation and an integral part of the transportation system.
- Good pedestrian presence indicates community health and vitality.
- Designing a safe, convenient, and comfortable walking environment requires planning, careful engineering, attention to detail, and ongoing maintenance and care.
- Physical improvements must go hand in hand with education, land use control, legal changes, and enforcement.
- Funding and political support for policies, programs, and infrastructure to support walking is key

City Employees / Staff

City employees and staff should be trained to understand local standards and alternatives; national best practices; relevant ordinances, laws, and regulations; and accessibility issues.

Design Professionals

Design training should address the state of the practice as well as local standards and accepted alternatives. The Association of Pedestrian and Bicycle Professionals (APBP) supports those who promote walking as part of their jobs. In 1995, APBP was established as a forum for planners, engineers, academics, and pedestrian advocates. The association has initiated a number of training programs to help ensure excellence in this emerging profession.

Magistrates/Hearing Examiners

Local magistrates and hearing examiners should be trained to identify motorists, cyclists, and pedestrians that repeatedly violate pedestrian-related laws. They should also receive training in how to deal with different types of violators: minors and recent immigrants may need education more than punishment.

Safety Officers

Effective training programs ensure that law enforcement officers know applicable state laws and local ordinances. Enforcing traffic laws and regulating pedestrians, motorists, and bicyclists helps ensure safe and healthy walking. Enforcement programs can educate people about the laws that govern them, periodically remind them to obey traffic rules, encourage safer behaviors, and monitor and protect public spaces. They can also help reinforce and support educational programs and messages.

In addition to laws and regulations that support safe pedestrian activity, agencies should have procedures for handling violators, especially young violators. Young pedestrians, bicyclists, and drivers are particularly impressionable—a law enforcement campaign can be an ideal opportunity to engendering safer behaviors for life. Studies have shown that giving citations to pedestrians, especially young ones, is counterproductive and can do more harm than good.

Field Inspectors: Code & Building Inspectors

Training for code and building inspectors should emphasize identifying violations, ensuring violations are addressed, and ensuring pedestrian needs are incorporated during plan review.

4.5 Training Program Topics for Property Owners & Developers

Developers and both commercial and residential property owners can play a critical role in creating and maintaining walkable communities. Training should be specified to the unique needs and responsibilities of each group.

Messages focus on rights and responsibilities, particularly surrounding the right-of-way, and education about permitting and inspection processes for new developments.

Residential Property Owners

Educational mailings for new homeowners can highlight property owner responsibilities as they relate to the pedestrian environment: snow, ice, and debris clearance; leash laws; and sidewalk maintenance and repair.

Developers

High-quality walking facilities—wide sidewalks, short blocks, and safe crossings—are important elements of a movement known as new urbanism or smart growth. New urbanist development incorporates design features that promote walking, reduce vehicle speeds, and make connections among different land uses. Often, these developments use increased density to support adjacent transit and encourage community cohesion.

As more and more homebuyers are looking to live in walkable communities, specialization in this area can prove fruitful for developers. Property developers interested in walkable communities can take design exercises hosted by local governments, academic institutions, or professional organizations. Such training addresses issues such as costs, regulatory implications, and economic and social benefits.

At a more basic level, training for developers should cover required and optional improvements, incentives available for optional improvements, and general right-of-way upkeep responsibilities.

Business Owners

Business owners with street-front access balance their desire for pedestrian traffic with concerns about public safety, regulatory oversight, and liability. Local government officials can enlist business owners in campaigns to enhance the pedestrian environment and promote neighborhood economic vitality. Topics to address include right-of-way responsibilities; sidewalk permitting processes; cafes; façade improvements; setback requirements; loading docks and loading spaces; and parking.

Medical Personnel

Medical personnel should be trained to teach seniors to avoid falls, and to report and track pedestrian falls.

Sidewalk Repair How-To

Both business and residential property owners can benefit from a sidewalk repair course. Such training can cover pre-approved materials and contractors, and can possibly be conducted in partnership with a local hardware store.

Construction Managers / Contractors

Training for construction managers and contractors should cover permitting requirements, inspection processes, and preservation of the pedestrian right-of-way during construction.

4.6 Additional Courses, Materials, and Programs

General educational approaches that could be used with a variety of audiences.

Publicize Alternative Travel Modes

Marketing walking, biking, and public transit can raise awareness of ways to get around town without cars. Many residents might be unaware of Seattle's extensive bus system and pedestrian and bicycling networks.

Neighborhood Council Brochures

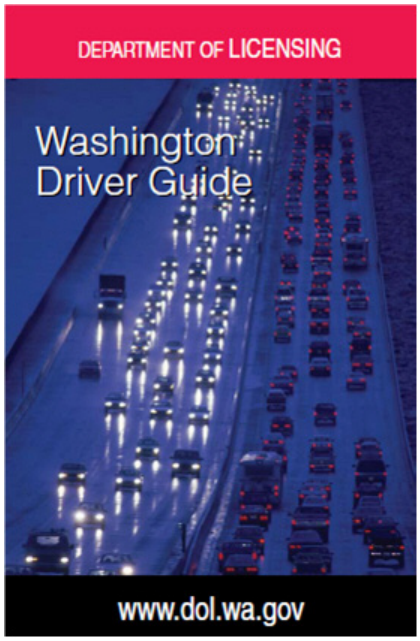
Neighborhood council brochures can educate property owners about what improvements they can make to enhance the pedestrian environment. Lists of recommended contractors, arborists, and materials can help ensure quality work on the public right-of-way.

Health Benefits of Walking

Coming soon...

Wayfinding

Refer to section 3.4 for wayfinding information (page 57).



Add Pedestrian Question to Licensing Exam

Requiring driver's license applicants to demonstrate knowledge of their responsibilities in regard to pedestrians could make them more likely to yield and observe other rules of the road impacting pedestrians.

Street Crossing Program

Programs teaching senior citizens, recent immigrants, and children the basics of street crossing can help reduce crashes.

Safety CD/DVD

Safety CDs and DVDs can help reach audiences that learn best visually and aurally.

New Resident Mailing

New resident mailings can include maps, coupons, and pamphlets outlining pedestrian rules and regulations.

Traffic 101 Class

Traffic classes present an opportunity to expand on and reinforce the importance of obeying the speed limit, spotting pedestrians, and yielding to pedestrians when turning.

Surveys

Surveys determining pedestrian preferences can be used to guide public policy and prioritize corridors for pedestrian improvements.

Comic Books and Coloring Books for Kids

Comic books and coloring books are a good way to hold children's attention while presenting walking as a fun and safe activity.

Walk Score®

Walk Score® is a tool that helps people find walkable places to live. The number of nearby destinations is one of the leading predictors of whether people walk. Walk Score calculates the walkability of an address by identifying nearby stores, restaurants, schools, parks, and other destinations. Walk Score measures how easy it is to live a car-free or less car-dependent lifestyle in a particular area. The tool does not consider neighborhood aesthetics. For more information, visit www.walkscore.com.

5. PLANNING, LAND USE, AND ZONING

Pedestrian-friendly communities have one thing in common: they place a high priority on short- and long-term planning methods and policy-making that incorporate and support non-motorized transportation. Planning so that pedestrians, bicyclists, and motorists alike can travel safely and harmoniously is sometimes a difficult balancing act, but the positive benefits reaped by a comprehensive transportation plan are overwhelming.

Land use and transportation planning is key to establishing quality multimodal service and to affording choices in transportation to community members. Thorough planning enables a community to become proactive rather than reactive in addressing concerns about pedestrian access, mobility, safety, and aesthetics. In the end, this saves time, money, and lives.

The City of Seattle and SDOT have developed a number of plans and policy documents that address pedestrian issues. These documents outline the vision, broad goals, objectives, and strategies that communicate the City's ongoing attempts and long-term commitment to create a safe, walkable pedestrian environment that supports—and is supported by—compact and mixed-use patterns of development.

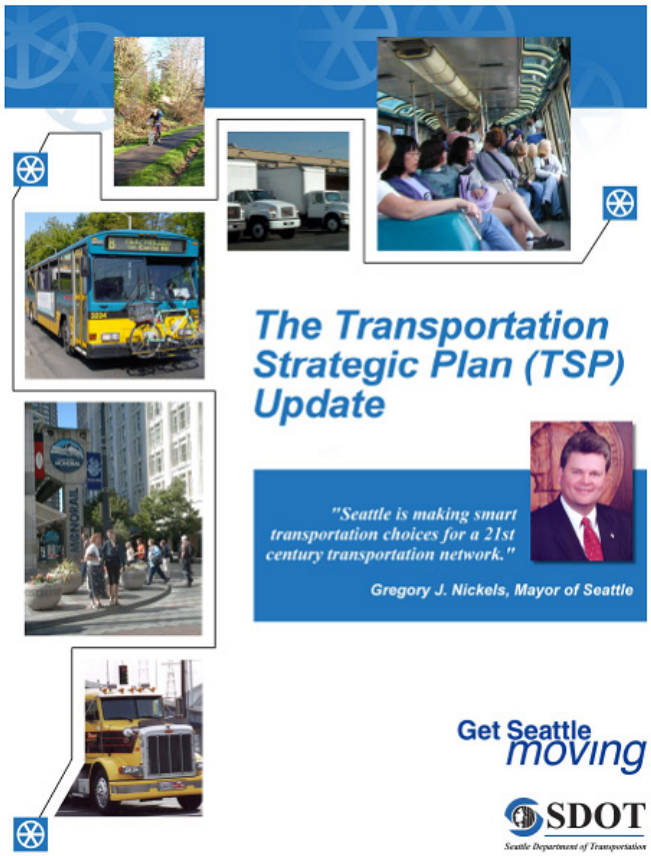
5.1 Planning Documents

Plans that guide projects and development throughout the City and across many modes.

Comprehensive Plan

The Comprehensive Plan is based upon a vision of the City organized around compact, mixed-use, and walkable urban villages, activity nodes of different sizes and scales ranging from neighborhood-sized commercial districts to much-larger destination centers such as Northgate. The Comprehensive Plan envisions a city of diminishing dependency upon the single-occupancy vehicle (SOV) where residents and visitors are heavy transits riders and where walking and biking constitute a growing number of personal and commute trips. Click here to link to Seattle's Comprehensive Plan.

Key Pedestrian Streets Designation: Under the Comprehensive Plan, neighborhood plans can designate Key Pedestrian Streets within the highest density portions of urban villages and along logical connections between villages (see the Seattle Comprehensive Plan's Transportation Element, Policy T–46). A Key Pedestrian Street designation can help a community's chances of getting the improvements it wants by directing decisions about street improvements when opportunities for such improvements arise. The Key Pedestrian Street designation means that a high priority will be placed on designing streets to be attractive for pedestrians, improving access to transit, and encouraging street level activity.



Transportation Strategic Plan

The Transportation Strategic Plan (TSP) assumes that Seattle must make the best use of existing streets. (Currently, Seattle is not considering any major roadway expansion except for regional facilities such as the Alaskan Way Viaduct). The TSP is a roadmap outlining how SDOT will accomplish its primary goal of developing and maintaining a safe, reliable, and efficient transportation system for all users. Much of the TSP describes tangible actions to be undertaken by SDOT that promote walking as a recreational and commuting choice; reduce auto dependency; curtail carbon emissions; and support compact land uses. An update of the TSP is underway and will be completed in early 2010. Click here to link to Seattle's Transportation Strategic Plan.

Transit Plan

The Seattle Transit Plan illustrates the City's vision for a robust and highly functional multi-technology transit system closely integrated with regional transit systems. The Plan identifies critical transit corridors and establishes specific performance measures and benchmarks for successful transit operations. The Transit Plan supports the provision of high-quality pedestrian facilities and networks to carry people to and from transit stations and multi-modal hubs. Click here to link to Seattle's Transit Plan.

Sub-Area Transportation Plans

Typically, sub-area plans examine current conditions and future demand upon the transportation network in a particular area and recommend projects to address today's needs and manage anticipated growth. Taking direction from the Comprehensive Plan and the Transportation Strategic Plan, these sub-area plans emphasize improvements to the non-motorized system, placing a heavy emphasis on projects that make walking a safer, more convenient and more practical mode of travel for short trips, recreational excursions, and commuting. Click here to link to Seattle's sub-area transportation plans, including the most recent, the Southeast Transportation Study.

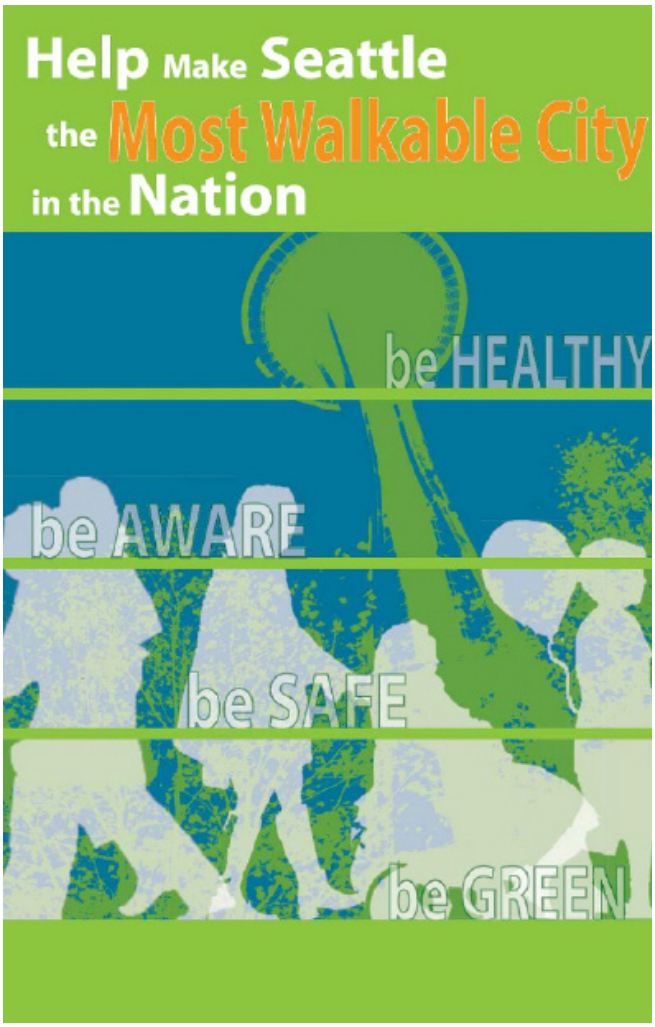
Neighborhood (and Station Area) Plans

Typically, neighborhood plans focus on local street conditions and the arterial streets that impact neighborhood livability. Therefore, pedestrian safety and comfort become major themes of the neighborhood plan with a strong emphasis on traffic calming, the need for better or new sidewalks, and pedestrian linkages to important destinations such as neighborhood schools, nearby urban villages, and transit stations. Click here for more information.

Station-Area Plans
Station-area plans aim to bring people to and from transit stations by foot, bike, or transit. Therefore, these plans emphasize high-quality pedestrian facilities such as wide sidewalks and attractive street furniture such as benches, lush landscaping, and pedestrian-scale street lighting. Station locations are seen as community gathering places that support a range of pedestrian and street-related activities, such as performance venues and food kiosks. Click here for more information.

Bicycle Master Plan

The Bicycle Master Plan is a comprehensive and long-term plan for the provision of bicycle infrastructure and facilities. The plan receives dedicated funding from the Bridging the Gap Levy that will ensure the implementation of specific projects on an annual basis over the next seven years. The plan was developed with considerable public involvement and draws upon best practices from around the world. Click here to link to Seattle's Bicycle Master Plan.



Pedestrian Master Plan

The Pedestrian Master Plan strives to make Seattle the most walkable city in the nation. Along with other transportation agencies and city departments, SDOT is involving public health experts, law enforcement representatives, issue advocates, community advisors, environmental leaders, and the general public to incorporate the best practices, most current research, and innovative design strategies into the Pedestrian Master Plan. Seattle's Pedestrian Master Plan will define the actions needed to make Seattle the most walkable city in the nation.

5.2 Regulations & Director's Rules

These tools identify design and detail elements.

Land Use Code: Development Regulations

(defines requirements for: transparency, weather protection, sidewalks and sidewalk width, landscaping, Green Factor, FAR, setbacks, mandated improvements)

The City of Seattle Land Use Code requires that streets adjacent and leading to lots being created, developed, or redeveloped, be improved or brought up to the minimum conditions specified in the Land Use Code and the Right-of-Way Improvements Manual.

The street improvement requirements vary by location, by land use zones and by street types to reflect the intensity of development, the scale and character of the zone, and to provide a balance between the need to accommodate vehicular and pedestrian traffic and the desire to preserve existing neighborhood character. In addition to the requirements for street and alley improvements contained in the Land Use Code, additional street and alley improvements may be required through the environmental review process. All required street improvements are to be constructed by the developer and accepted by the Transportation Department prior to issuance of the final Certificate of Occupancy. Click here for information about Green Factor.

Form-Based Code

In Form-Based Codes, the zones are categorized by the intensity of physical form. A variety of organizing principles regulate the scale, form, and intensity of development rather than emphasizing land uses. Those organizing principles include the transect, frontages, street types, and building types. The respective organizing principles offer advantages and disadvantages in different conditions, such as downtown redevelopment versus greenfields. Click here for more information about form-based codes.

Parking Minimums & Maximums

Parking maximums establish an upper limit on parking supply, either at the site level or across an area. Either type of maximum can be imposed in addition to or instead of minimum parking requirements. Establishing a maximum allowable amount of parking can prevent developers from building excessively large lots, or limit the parking supply in an area based on roadway capacity or community priorities. Communities looking to increase tax revenue through redevelopment of parking lots, improve pedestrian safety and comfort downtown, or reduce stormwater runoff and heat islands should consider parking maximums as a way to achieve those goals. The City of Seattle allows a maximum of one parking space per 1,000 sq. ft. of downtown office space. Click here for more information.

Land Use Code: Zoning

(includes pedestrian overlay zones, station overlay zones, rezoning, spot zoning)

The City uses the Pedestrian Zone designation to encourage and preserve the development or extension of pedestrian-friendly environments at the heart of neighborhood commercial districts. These areas are, or could become, neighborhood main streets where nearby residents access the services they need without driving, or at least with fewer automobile trips.

The P Zone designation:

- Requires specific commercial or institutional uses to be located at the ground floor—uses that cater to pedestrians and are not residential uses
- Waives some parking requirements to encourage businesses to locate in the area, recognizing that many customers will use means other than driving to get to the business
- Limits driveways across sidewalks along principal pedestrian streets
- Designates the street a "main street" per SDOT guidelines to encourage new development that will enhance the public right-of-way and give priority to pedestrian-friendly streetscape improvements.

Pedestrians and Zoning: The Seattle Land Use Code provides for special Pedestrian District overlays in commercial zones. These are known as P1 and P2 overlays. They are intended to preserve and encourage pedestrian-oriented retail areas. The overlay zones' ability to affect the street environment comes from requirements that new developments meet specific standards that include a set of permitted and prohibited uses, reduced parking requirements, and limitations on blank facades. The P1 designation encourages "intense pedestrian interest and activity at street level with a wide variety of retail and service activities, and large numbers of shops and services per block." The P2 designation is for less intense, less dense activity, but still encourages varied retail and service activities along commercial frontage uninterrupted by housing, drive–in facilities, or large parking areas. Both designations favor development built to the front property line, minimal pedestrian/auto conflicts, and a minimum of auto–oriented uses or interruptions.

Special Districts

(lighting district, historic district)

Since 1970, Seattle has established seven historic districts: Ballard Avenue; Columbia City; Fort Lawton; Harvard-Belmont; International District; Pike Place Market; and Pioneer Square. The appearance and historical integrity of structures and public spaces within each district are regulated by a citizens' board and/or the Landmarks Preservation Board in accordance with processes and criteria established by City ordinance. Therefore, pedestrian improvement projects that are to be constructed within a historic district or which will impact historic structures must be reviewed and approved by the Landmarks Board. Click here for more information.

Street Design Concept Plans

(Ballard Street Master Plan, Bell Street Plan)

Seattle has a growing number of areas where community groups, developers, or property owners are interested in developing a design concept for a street or series of streets. Concept Plans solidify a graphical vision for the street or streets included and can tie that vision back to other planning and design documents that the neighborhood or City may have developed. Typically, the Concept Plan provisions are implemented over time by multiple property owners as parcels on the block redevelop. Concept plans are voluntary guidelines for developers to follow and must meet SDOT Street Standards. For more information, see http://www.seattle.gov/transportation/rowmanual/manual/6_1.asp or http://www.seattle.gov/dpd/planning/CityDesign/Overview/

Covenants

(see Santa Fe, NM)

Covenants are typically used to regulate the form of new development. For example, covenants may address the height of buildings, limit architectural styles, or set lighting requirements for commercial development. Covenants are sometimes used by homeowners associations but are most often used by municipalities. Santa Fe, New Mexico, provides a number of covenant examples. Click here for more information.

Complete Streets Ordinance

City of Seattle/SDOT policy is to consider and, to the extent possible, accommodate the needs of all users in the design and operation of new roadway projects. Particular emphasis is placed upon the accommodation of non-motorized users of the roadway system. However, costs and other factors may preclude maximum possible accommodation for all modes on any individual project, and certain streets may be prioritized for single-type uses (e.g., pedestrians on Green Streets, freight on major truck routes). Click here to read the ordinance.

Stormwater Management Manual

(Green Infrastructure, Sea-Streets)

Natural drainage systems (NDS) are an innovative alternative to traditional stormwater management systems. The pipes and ditches of traditional drainage systems carry runoff with traces of everyday contaminants such as oil, paint, fertilizer, and heavy metals. This contaminated runoff is then deposited directly into creeks, lakes, and, in Seattle, into Puget Sound. The speed and volume of water coming out of pipes erodes stream channels. These problems decrease water quality, disrupt marine food chains, and negatively impact wildlife habitat.

Natural drainage systems limit the negative impacts of stormwater runoff by redesigning residential streets to utilize plants, trees, and soils to clean runoff and manage stormwater flows. Vegetated swales, stormwater cascades, and small wetland ponds allow soils to absorb water, slowing flows and filtering out many contaminants. Click here for more information.

Right-of-Way Improvements Manual

The Right-of-Way Improvements Manual is an online resource developed by the City of Seattle to help property owners, developers, architects, landscape architects, and engineers involved with the design, permitting, and construction of improvements to Seattle's street right-of-way.

The Right-of-Way Improvements Manual considers and attempts to balance the access and mobility needs of all users of the street right-of-way: pedestrians, non-motorized vehicles, automobiles, transit, and freight. Procedures and design criteria were developed keeping in mind the critical balance among the following: safety, the preservation and maintenance of roadway infrastructure and utility services, and preserving our environment.

Knowing that all projects have site-specific opportunities and constraints, the Right-of-Way Improvements Manual articulates the City's design criteria for street right-of-way improvements and describes a deviation process to achieve flexibility when practical.

5.3 Permitting & Review Processes

In an effort to improve the existing interdepartmental permit coordination program, simplify the preliminary permit application process, and provide more comprehensive information to applicants, the Department of Planning and Development (DPD) made the following changes to Seattle's permitting and review process, effective July 1, 2008:

- Construction Projects: For all projects that involve new structures, applicants will receive a Preliminary Assessment Report (PAR).
- IDT issues: DPD eliminated the requirement for an applicant to identify interdepartmental issues.
- Opt-Out Program and Right-of-Way Analysis: The SDOT Opt-Out program and fee for right-of-way preliminary analysis is no longer in effect.

Permits

(master use permits, right-of-way improvement permits, street use permits)

In general, projects in Seattle that involve new or changed uses of property or the construction or alteration of a building--even if the alterations can't be seen from the outside-- require a permit from the City's Department of Planning and Development (DPD).

In addition, SDOT Street Use has over 60 types of permits for use, occupation, and construction in the right-of-way. Street improvement permits include the installation of major improvements such as street paving, curbs, and sidewalks that result from private property development such as a multifamily building. Included in the permit are utilities to serve the development. This type of permit can also be issued for communities that want to improve the facilities in their neighborhood. Whenever development occurs under the DPD Land Use Code there may be requirements for improvements in the right-of-way. These improvements must meet SDOT design criteria.

Property owners are responsible for maintaining the sidewalks adjacent to their property. They must ensure that snow, ice, and debris do not pose a hazard to pedestrians. They must also repair cracks and other damage to the sidewalk. The property owner of record is notified by the district Street Use inspector of the repairs or action needed. As a property owner, if you want to repair the sidewalk in front of your property, you must first apply for a sidewalk permit. Click here for more information.

Design Review

The Design Review program and its boards review private development projects in Seattle. Only commercial and multifamily developments exceeding a certain size threshold in certain land use zones are reviewed. Design review is a tool that can help communities influence future multifamily and commercial development. This can be especially important where, with design direction, new development can contribute to enhanced street environments and improved conditions for pedestrians. The design review process is based on adopted design guidelines, which provide flexibility for new development to respond to the distinctive character of its surroundings.

Design guidelines cannot change zoning or resolve zoning disputes, control uses of property, or significantly reduce a project's height, bulk, scale or density. Design guidelines can improve the quality of development, increase community involvement in the design and development review process, and help articulate a community's design priorities. Neighborhood planning groups may develop their own localized design guidelines as part of a neighborhood plan. Neighborhood design guidelines should complement, but may supersede some, citywide guidelines, and become the basis for Design Review of specific projects reviewed within a neighborhood. (Refer to "Design Review: Guidelines for Multifamily and Commercial Buildings," and "Preparing Your Own Design Guidelines.") Both are available from the Neighborhood Planning Office.

Preliminary Assessment Report

(trigger inspection for sidewalks at certain price points, including remodels and other private investment)

The new Preliminary Assessment Report (PAR) includes information on right-of-way code and design requirements from DPD Land Use and Seattle Department of Transportation (SDOT), on-site and off-site drainage and sewer infrastructure and requirements from DPD and Seattle Public Utilities (SPU), and clearance, easement, and utility relocation requirements and conservation program information from Seattle City Light (SCL). This early assessment is to aid applicants in better preparing their submittal documents.

Inspections

(pre/post and during construction)

All permits issued by Street Use (the SDOT division responsible for issuing of permits, inspection, project coordination, public outreach, utility record keeping, and plan review) are subject to inspection. Street Use inspectors are responsible for enforcing the rules and regulations of the City of Seattle, such as permit conditions, Traffic Control Manual, Ordinances, City Specifications, and the Street and Sidewalk Pavement Opening Policy. This is to ensure that all construction, safety, and accessibility requirements of the permit are met as approved. Click here for more information.

5.4 Incentives & Bonuses

The City of Seattle offers a number of development incentives and, in 2007, reformed the commercial land use code to stimulate and enliven Seattle's neighborhood business districts—the neighborhood centers where people interact and essential goods, services, and jobs are provided. For example, the reformed code increased landscaping requirements, lowered required parking thresholds, strengthened pedestrian-oriented street front development standards and guidelines.

In addition, in May 2006, the City updated rules for the central office core and adjoining areas, including Denny Triangle and a portion of Belltown. Major changes in the new regulations include:

- Greater heights (unlimited for the main office core)
- Greater maximum floor area - required narrow widths for upper levels of residential towers
- A new program for market-rate housing to contribute to affordable housing
- A new program allowing greater development for environmentally sustainable construction (LEED silver)
- Greater transferable development rights for historic structures downtown
- Tower spacing required in some downtown areas

Fees in Lieu

"In-lieu-fee" mitigation occurs in circumstances where a permittee provides funds to an in-lieu-fee sponsor instead of either completing project-specific mitigation or purchasing credits from a mitigation bank. Fees in lieu can be attractive for developers and also for a municipality. For example, if development is occurring in an area that already has robust pedestrian infrastructure, a developer might pay a fee instead of completing mitigation in that area. The fee could then by used by the city to enhance the pedestrian environment in another area that has less development underway.

Transferable Development Rights

Transfer of Development Rights (TDR) programs use market forces to simultaneously promote conservation in high-value natural, agricultural, and open-space areas while encouraging smart growth in developed and developing sections of a community. Successful TDR programs have been in place throughout the country since 1980, and have protected tens of thousands of acres of farmland and open space.

In a TDR program, a community identifies an area within its boundaries which it would like to see protected from development (the sending zone) and another area where the community desires more urban-style development (the receiving zone). Landowners in the sending zone are allocated a number of development credits which can be sold to developers, speculators, or the community itself. In return for selling their development credits, the landowner in the sending zone agrees to place a permanent conservation easement on his or her land. Meanwhile, the purchaser of the development credits can apply them to develop at a higher density than otherwise allowed on property within the receiving zone.

Essentially, TDR is the exchange of zoning privileges from areas with low population needs, such as farmland, to areas of high population needs, such as downtown areas. These transfers allow for the preservation of open spaces and historic landmarks, while giving urban areas a chance to expand and experience continued growth. The quest for controlled growth requires creative planning and foresight. TDR is just one tool used in the battle to contain sprawl.

Preservation & Development Authority

Seattle Chinatown International District Preservation & Development Authority (SCIDPDA)

Founded in 1975 as a City-chartered community development agency, the Seattle Chinatown International District Preservation and Development Authority (SCIDPDA) has played an important role in revitalizing the Seattle Chinatown International District. Its mission is to "preserve, promote, and develop the Seattle Chinatown International District as a vibrant community and unique ethnic neighborhood."

SCIDPDA fosters neighborhood renewal by bringing new projects to the neighborhood that increase the economic viability and quality of life within the Chinatown International District. SCIDPDA encourages new projects that fit the existing historical and cultural characteristics of the multiethnic neighborhood.

SCIDPDA works collaboratively with a variety of partners to provide solutions to neighborhood-wide issues. Together, the partners work to improve public safety, affordable housing, transportation, marketing, business development, and parking in the community.

Pike Place Market Preservation & Development Authority (PDA)

Pike Place Market PDA is a nonprofit, public corporation chartered by the City of Seattle in 1973 to manage 80% of the properties in the nine-acre Market Historical District. The PDA is required to preserve, rehabilitate and protect the Market's buildings; increase opportunities for farm and food retailing in the Market; incubate and support small and marginal businesses; and provide services for low-income people. Though Pike Place Market is a public market, the PDA does not receive any public money to own and operate the Market. Revenues are derived from the Market's tenants through rent, utilities, and other property management activities. PDA activities are governed by an all-volunteer, 12-member PDA Council: four are appointed by the Mayor of Seattle, four by the Market Constituency, and four by the Council itself.

Local Improvement Districts

A Local Improvement District (LID) is a legal district established by state law to benefit a specific area. Districts issue bonds to finance improvements such as sidewalks and sewer systems, then levy assessments on real estate in the affected area to repay funds. A LID is a method by which a group of property owners can share in the cost of transportation infrastructure improvements or other types of public improvements, such as installing water and sanitary sewer lines. Most LIDs involve improving a street, building sidewalks, and installing a stormwater management system. An LID can also be used to install sidewalks on existing streets that previously have been accepted for maintenance by the City.

Denny Triangle Green Streets

A Green Street is a designation that can influence future private development on that street to be more pedestrian–friendly. Green Streets are designed to emphasize the needs of pedestrians, bicyclists, and transit users, providing improved access to a variety of destinations. There are four different Green Street designations, varying in the extent of restrictions they place on vehicular traffic. Green Streets (formerly called Street Parks) have been designated through the Downtown and Northgate Plans. Seattle residents can work with neighborhood planning project managers to propose Green Street designations.

5.5 Resource Documents

These documents help the general public to navigate City services and programs.

Client Assistance Memos

Client Assistance Memos (CAMs) produced by the Department of Planning and Development are designed to provide user-friendly information on the range of City permitting, land use and code compliance policies, and procedures you may encounter while conducting business with the City. As part of an interdepartmental effort to coordinate permit activities, other City departments also have authored CAMs. Please note each department uses a distinctive numbering and color system to help customers differentiate among them.

5.6 Planning/Policy-Making Techniques & Groups

These tools provide ways for individuals and organizations to get involved in planning and policy-making.

Plan Update Process

Plans can be revised because conditions on the ground have changed, new priorities emerge, innovative approaches become available, or because evaluative information now provides new directions for the plan. In short, plans need revision when they are outdated. Although there is no concrete rule about how often plans need to be revised, plans that are 10 or 15 years old are ripe candidates for revision.

Evaluation of a plan is useful to guide the efforts of the project staff, to demonstrate project success to the public, and to assure continued support from sponsors. The extent and methods of evaluation may differ for a pedestrian and bicycle plan at the local, municipal, or state level, but the general principles stay the same. A thorough evaluation investigates the achievement of objectives using quantifiable measures, assesses the effectiveness of particular interventions and policies, monitors public opinion, and reassesses the actual program plan.

Metropolitan Improvement District

Founded by the Downtown Seattle Association in 1999, the Metropolitan Improvement District (MID) improves the safety, cleanliness, and vitality of downtown Seattle. More than 60 MID ambassadors patrol the streets of Downtown, providing directions and information to visitors, assisting the Seattle Police Department, offering security escorts, and maintaining a clean urban environment through a comprehensive program of street sweeping, pressure washing, graffiti removal, trash removal, leaf pickup and more. The MID also supports business development and marketing initiatives and events to enhance downtown's position as a great place to live, work, and visit.

Business Improvement Areas

The City of Seattle's Office of Economic Development supports current and forming Business Improvement Areas (BIAs). A BIA provides a source to fund improvements in neighborhood business districts by assessing property and/or business owners who benefit from the improvements. BIA funds can be used for services such as parking, joint marketing, cleanup and maintenance, security, special events, beautification, and management and administration. The City contracts with an agency to manage each BIA and each BIA has a ratepayer's advisory board. The City collects the assessments and reimburses the Agency for BIA expenses.

Current BIAs are Broadway/Capitol Hill, West Seattle, International District/Chinatown, Pioneer Square, University District, and the Downtown Seattle Association. City of Seattle Council Resolution 29706 lays out the City of Seattle's policy to encourage and support the establishment of BIAs. Washington State RCW Chapter 35.87A Parking and Business Improvement Areas is the state statue allowing BIAs.

Community Visioning

(charettes, visual preference surveys)

Community visions depict alternative futures that can be achieved through planning and policy. Identifying preferred visions is a first key step in drafting a plan of any type. A vision can be thought of as the "what" and "where" for the community. A vision could be the creation of safe spaces for pedestrians, the creation of environments that support many modes of transportation.

Visions don't exist in isolation. The plans and policies accompanying a vision are the instruments through which the vision is attained. They are the "how" and "when." Easily funded and implemented plans are short, straightforward, specific, and built on strong facts. The quality and effectiveness of a plan does not depend on its length or depth but on having clear goals and policies that effectively focus resources on making the changes that improve the pedestrian environment.

Community Councils / Seattle Community Council Federation

The Federation is a coalition of neighborhood groups and community councils throughout Seattle, and welcomes guests and representatives from community-based organizations in the Seattle area.

Cost Benefit Analysis

A cost benefit analysis (CBA) is done to determine how well, or how poorly, a planned action will turn out. Although a CBA can be used for almost anything, it is most commonly done on financial questions. CBA estimates and totals up the equivalent money value of the benefits and costs to the community of projects to establish whether they are worthwhile. These projects may be dams and highways or training programs and health care systems. A cost benefit analysis finds, quantifies, and adds all the positive factors--the benefits. Then it identifies, quantifies, and subtracts all the negatives--the costs. The difference between the two indicates whether the planned action is advisable. The real trick to doing a cost benefit analysis well is making sure you include all the costs and all the benefits and properly quantify them.

5.7 Technical Analysis Tools

SDOT staff members employ a variety of quantitative and qualitative technical tools to conduct multimodal traffic analyses. They include:

- Traffic counts (volumes) that include all modes and vehicle types
- Crash types, frequencies, and rates by specific locations and along roadway corridors
- In-depth examination of factors contributing to crashes; and development of "counter-measures"
- Pedestrian, motorist, and transit rider surveys
- Design standards and guidelines (best practices)
- Ongoing review of current research
- Traffic (vehicle) forecasting methodologies
- Operations modeling (e.g. VISSIM)
- Performance measures and benchmarks for all modes (partially based upon street typologies)
- Mapping technologies
- Quantitative and qualitative evaluation criteria for project ranking and prioritization

5.8 Review Boards

These Seattle boards oversee various aspects of design and development in Seattle.

Seattle Design Commission

The Seattle Design Commission advises the Mayor, City Council, and City departments on the design of capital improvement projects as well as projects on City land, in the City right-of-way, or constructed with City dollars. The Seattle Design Commission is just one of several citizen-led boards appointed by the Mayor and City Council to review the design of projects. Other boards or commissions review the design of private development projects, designated landmarks, and historic districts.

Seattle Planning Commission

The Seattle Planning Commission (SPC) advises the Mayor, City Council, and City departments on broad planning goals, policies, and plans for the physical development of the city. The Commission's work is framed by the Comprehensive Plan and its vision for Seattle into the twenty-first century, and by a commitment to engaging citizens in reaching these goals.

The SPC was established by City Charter in 1946 and is an independent body that has 15 members who are Seattle residents. The SPC has four primary roles:

1. Foster community participation to support quality urban planning and design;
2. Advise City decision-makers on broad planning policies and goals, and on major planning projects and issues;
3. Educate leaders and citizens to promote excellence in planning, particularly at the intersection of urban design, preservation, art, and architecture; and
4. Advocate for planning decisions that support the health and vitality of the community.

Seattle Arts Commission

The Seattle Arts Commission, citizen volunteers appointed by the mayor and City Council, includes artists, arts professionals, and other citizens with diverse backgrounds and strong links to Seattle's arts community. Seven commissioners are appointed by the mayor, seven by the City Council. The fifteenth is appointed by the other fourteen members. The Seattle Arts Commission meets on the second Tuesday of the month. Meetings are open to the public.

Seattle Pedestrian Advisory Board

Founded by a temporary resolution in 1993, the Pedestrian Advisory Board was made permanent by Seattle City Council Resolution 29532 in 1997. The Board is composed of 11 regular members—six appointed by the Mayor and five appointed by the Council. The Get Engaged: City Boards and Commissions program created an additional spot in the board specifically for a young adult (18-29) member.

The Board has been chartered with four tasks:

- Advise the Mayor, City Council, and all departments and offices of the City on matters related to pedestrians, including the impact which actions by the City may have upon the pedestrian environment;
- Contribute to all aspects of the City's planning and project development processes insofar as they may relate to pedestrian safety and access;
- Promote improved pedestrian safety and access by evaluating and recommending changes in City design guidelines and policies;
- Prepare an annual report on the status of its work program and achievement of its goals to the mayor and City Council.

Board meetings are on the second Wednesday of each month from 6:00 to 8:00 p.m. in New City Hall on 5th Avenue between James and Cherry, Room L-280, Second Level. The public is welcome to attend.

Design Review Board

The Design Review Board is just one of several citizen-led boards or commissions appointed by the Mayor and City Council to review the design of development projects. Other boards or commissions review the design of public projects, designated landmarks, and in historic districts. There are seven Design Review Boards, each covering a geographic area of the city: Capitol Hill, Downtown, Northeast, Northwest, Queen Anne/Magnolia, Southeast, and Southwest. Thirty-five citizens serve on the City's Design Review Boards. Each of the seven boards has five members from backgrounds intended to represent the players in the development process.

Pioneer Square Preservation Board

The Pioneer Square Preservation Board reviews applications for Certificates of Approval for changes of use and exterior architectural alterations in the Pioneer Square Preservation District. The board recommends approval, approval with conditions, or denial to the Director of the Department of Neighborhoods, who makes final decisions concerning applications. The board may also make recommendations to the mayor, the City Council, and any public or private agencies concerning land use and social issues in the District.

The board bases its decisions on the standards established in the District Ordinance (SMC 23.66), Rules for the Pioneer Square Preservation District, and the Secretary of the Interior's Standards for Rehabilitation. The board consists of nine members appointed by the mayor and confirmed by Seattle City Council. Each member fills a specific position on the board, representing property owners, retail business owners, human services providers, architects, historians, and attorneys. There is also one at-large representative. At least one board member must be a resident of Pioneer Square.

Seattle Board of Park Commissioners

The Seattle Board of Park Commissioners is a volunteer advisory board established by ordinance. The board consults with and makes recommendations to City Council, the mayor, and the superintendent regarding the Parks and Recreation Department's policies for the planning, development and use of the city's park and recreation facilities. The Board of Park Commissioners is a seven-member citizen advisory board, serving three-year terms. The composition of the board is:

- Three members appointed by the mayor and confirmed by City Council
- Three members appointed by City Council
- One member appointed by these six board members

Landmarks Preservation Board

Since 1973, the Seattle Landmark Preservation Board has designated more than 350 individual sites, buildings, vehicles, vessels, and street clocks as landmarks subject to protection by city ordinance.

6. EQUITY, HEALTH, AND ENVIRONMENT TOOLS

The positive consequences of walking as either a healthy mode of transportation or as recreational activity span across many aspects of our lives. They can be expressed in terms of either environmental or individual health. A transportation system conducive to walking can provide benefits of reduced traffic congestion and improved quality of life. Economic rewards both to the individual and to society are also realized through reduced health care costs and reduced dependency on auto ownership (and the resulting insurance and maintenance costs). There are also other economic benefits of bicycling and walking that are more difficult to measure, such as the increased economic vitality of communities that have emphasized bicycle and pedestrian mobility. Finally, walkable communities create a more equitable society that provides transportation choices for all citizens.

Health

The health benefits of regular physical activity are far-reaching: reduced risk of coronary heart disease, stroke, diabetes, and other chronic diseases; lower health care costs; and improved quality of life for people of all ages.

Equity

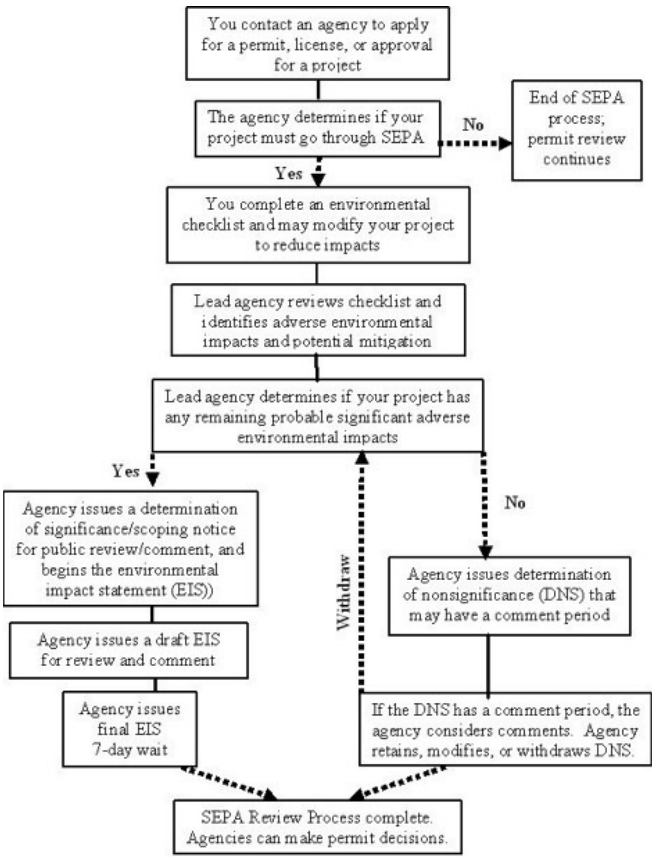
Perhaps the most important factor in walking and social justice is choice. When providing pedestrian facilities, communities allow people to choose how they want to travel. For those who do not have the option to drive—such as adolescents, those unable to afford a car, and people with certain disabilities—lack of choice in transportation creates a barrier to mobility. If automobile travel is the only feasible mode of transportation in a community, low-income families are placed at a large disadvantage. The high cost of car ownership means that low-income families will have to spend a greater portion their income on owning and operating a car or choose not have one. By providing safe and convenient pedestrian facilities, the community can ensure all citizens have access to a viable mode of transportation.

Environment

Although individual cars are much cleaner today than they were in previous decades, if total traffic continues to grow, overall air quality will deteriorate. Moreover, every day cars and trucks burn millions of barrels of oil, a non-renewable energy source. Walking is more beneficial for the environment. (See also: www.walkinginfo.org)

6.1 Assessment Tools

Tools include checklists, audits, and surveys that can be used to evaluate current or future conditions.



SEPA Checklist

The State Environmental Policy Act (SEPA) provides a means to identify possible environmental impacts that may result from governmental decisions. These decisions may be related to issuing permits for private projects, constructing public facilities, or adopting regulations, policies or plans. An environmental checklist asks questions about the proposed project and its potential impacts on the environment. Click here for more information about SEPA in Seattle.

Health Impact Assessment

A health impact assessment (HIA) is "a combination of procedures, methods, and tools by which a policy, program, or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population." HIA can be used to evaluate objectively the potential health affects of a project or policy before it is built or implemented. It can provide recommendations to increase positive health outcomes and minimize adverse health outcomes. A major benefit of the HIA process is that it brings public health issues to the attention of persons who make decisions about areas that fall outside of traditional public health arenas, such as transportation or land use.

HIAs are similar in some ways to environmental impact assessments (EIAs), which are mandated processes that focus on environmental outcomes such as air and water quality. However, unlike EIAs, HIAs can be voluntary or regulatory processes that focus on health outcomes such as obesity, physical inactivity, asthma, injuries, and social equity. The major steps of an HIA include: screening, scoping, assessing risks and benefits, developing recommendations, reporting, and evaluating. Click here for more information about HIAs.

Environmental Impact Assessment

An environmental impact assessment (EIA) is a tool used to identify the environmental, social and economic impacts of a project prior to decision-making. It aims to predict environmental impacts at an early stage in project planning and design, to find reduce adverse impacts, to shape projects to suit the local environment, and to present the options facing decision-makers. By using EIA, both environmental and economic benefits can be achieved. Such benefits include reduced cost and time of project implementation and design and avoided treatment/clean-up costs. Click here for more information about EIA.

Walking Audits

A walking audit, which could be quite short or several hours long, provides an opportunity for a group of decision makers, community members, planners, and other stakeholders to experience a pedestrian environment together and observe where infrastructure changes should be made to improve walking routes for pedestrians. Click here for more information about walking audits.

Indicator Reports/Assessment Tools

A health indicator is a numeric measure that depicts the status of a population or a health system on a core public health construct. An indicator report, sometimes referred to as an indicator profile, provides numerical data for a health indicator as well as its public health context, including what the current status is and what is being done to improve it. Click here to link to sample Environmental Health Indicators Reports.

Scorecard

A scorecard is used to measure and rate the overall quality or effectiveness of an organization or project. Scorecards can be developed for a wide range of purposes, such as a scorecard for developers. A developer scorecard could be completed by community members and might rank the quality of projects produced by a developer or might evaluate how easy it was for the community to work with the developer. One example of a scorecard is the Idaho Smart Growth Neighborhood Development Scorecard.

Surveys

A survey is a research tool used to collect information about individuals (which is sometimes aggregated to provide information about groups). The purpose of conducting a survey is to develop an understanding of the knowledge and attitudes that motivate people to action or to understand the behaviors in which people engage. Surveys can also be used to learn about people's preferences. Data obtained through surveys can help to inform project prioritization and program development, in order to ensure that such initiatives meet the needs of the people who will receive them.

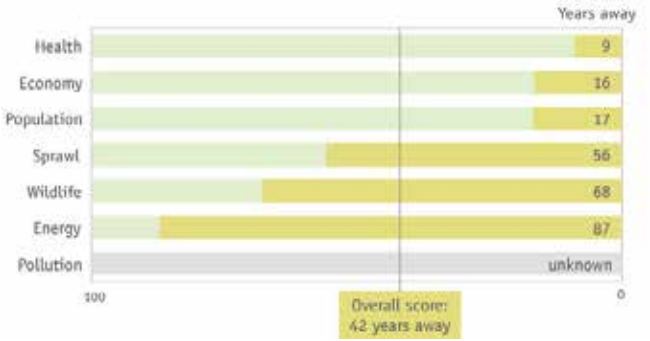
For example, the National Household Travel Survey (NHTS) is a U.S. Department of Transportation (DOT) effort sponsored by the Bureau of Transportation Statistics (BTS) and the Federal Highway Administration (FHWA) to collect data on both long-distance and local travel by the American public. The joint survey gathers trip-related data such as mode of transportation, and the duration, distance and purpose of trip. It also gathers demographic, geographic, and economic data for analysis purposes. Policy makers, state DOTs, metropolitan planning organizations, industry professionals, and academic researchers use the data to gauge the extent and patterns of travel, to plan new investments, and to understand potential implications for the nation's transportation infrastructure. BTS specifically targets data on the volumes and patterns of passenger transportation.

LEED-ND

LEED for Neighborhood Development (LEED-ND) emphasizes the creation of compact, walkable, vibrant, mixed-use neighborhoods with good connections to nearby communities. Research has shown that living in a mixed-use environment within walking distance of shops and services results in increased walking and biking, which improve human cardiovascular and respiratory health and reduce the risk of hypertension and obesity.

6.2 Campaigns & Outreach Tools

Tools that promote community engagement and provide information to the wide range of people and interests represented in Seattle.



Messaging

There are as many types of media and messaging campaigns as there are topics for which a campaign might be needed. Some good examples related to the environment (and, ultimately to increasing walking) come from the Sightline Institute, a Seattle-based nonprofit organization aiming to create a more sustainable Pacific Northwest. Revealing maps from Sightline's 2009 Cascadia Scorecard visually demonstrate how neighborhood design impacts not only the health of its residents, but of the environment as well.

Focus on Benefits of Walking

A campaign focusing on the health benefits of walking may help to increase the number of people walking and may also improve community health. Walking burns calories; strengthens back muscles and bones; lowers blood pressure; shapes and tones muscles; cuts cholesterol; reduces the risk of heart disease and other chronic conditions; reduces stress; and can improve sleep, mood, and outlook on life. Walking is also easier on joints than many other forms of exercise, requires no equipment and can be done almost anywhere, and allows time for friends, family, and neighbors to connect with one another. And, most importantly, walking is free. Click here for more on the benefits of walking.

Way to Go, Seattle!

Way to Go, Seattle! is the City of Seattle's umbrella for a variety of initiatives intended to improve livability by reducing automobile usage for non-work trips—and increasing the use of busing, biking, walking, trip consolidation and carpooling instead.

Multilingual Tools

It is important to provide information in a variety of languages to connect to all audiences. In ethnically diverse communities, providing messages in varying languages and with culturally relevant messages will be critical for the success of efforts to get more people walking and to ensure equity.

Trip Calculators

Trip calculators can provide a measure of "avoided driving" that can be attributed to walking and bicycling. Click here for additional information.

Public Engagement

To be successful, the Seattle Pedestrian Master Plan needs meaningful participation from members of Seattle's diverse communities and neighborhoods. The public engagement strategy aims to reach a broad and representative group of community members to better understand people's knowledge, attitudes, and behaviors as they relate to pedestrian issues. The strategy employs a variety of methods to gather input from members of communities that historically have not been reached through traditional public participation processes and from communities dependent on walking as a primary form of transportation. The input gained from public engagement is being used to help shape the Pedestrian Master Plan's projects, programs, and policies.

Public engagement must be an early and continuing part of the transportation and project development process. It is essential that the project sponsor knows the community's values in order to avoid, minimize, and mitigate impacts, as well as to narrow the field of alternatives (for planning) and alignments (for projects). The community also needs to understand the constraints and tradeoffs of the development process and to buy-in to projects. Click here for more information about public engagement.

6.3 Programs

Tools or strategies for increasing walking by addressing community challenges related to equity, health, and/or the environment.

Sound Steps

The Sound Steps Walking Project is a parks department program designed to improve the health and wellness of seniors by establishing a community-based walking program designed to encourage physical activity and social interaction.

Green Factor

Administered by the Seattle Department of Planning and Development, the Green Factor is a program aimed at extending and improving open-space landscaping throughout the city's business districts. Allowing developers to choose from a variety of strategies to meet target requirements, the program encourages the layering of vegetation in areas visible to the public and along streets adjacent to new development. Bonuses are provided for rainwater harvesting and choosing plants with low water requirements. Use of larger trees, tree preservation, green roofs, and vegetated walls is encouraged. Aside from the obvious direct environmental benefits, research demonstrates that people are more likely to walk when potential routes feature the beauty and protection from the elements provided by meaningful and useful green spaces.

Health Promotion Programs

Two examples of health promotion programs in King County are the Health Reform Initiative and the In-Motion Program.

The Health Reform Initiative is a combination of an innovative benefits structure, health promotion programs, and a collaborative effort at the regional level to improve quality and reduce health care costs.

The In-Motion Program is a partnership between King County Metro Transit and local communities to encourage residents to use healthier travel options like the bus, carpooling, bicycling, and walking. Metro can demonstrate travel alternatives that keep up with busy lifestyles.

Youth Programs

Youth programs can involve teens and other young people in the planning process, as well as encourage them to become active members of their community.

Introducing "Green" to our Communities: Five to ten low-income youth from central and south Seattle will be developed as leaders to broaden their communities' understanding of a sustainable green society, including the potential for green collar jobs.

Pilot Projects

Various City of Seattle departments use pilot projects to test innovative approaches to improving the pedestrian environment, among other things. One example of a pilot project is SEA Streets. SEA Streets is an alternative street design that uses grading, soil science, plant selection and layout combined with traditional drainage infrastructure to function more like an undeveloped ecosystem. It provides a sidewalk and traffic calming, all at a cost comparable to a traditional curb, gutter and sidewalk street improvement.

Incentives

An incentive is any factor (financial or non-financial) that provides a motive for a particular course of action, or counts as a reason for preferring one choice to the alternatives. For example, Seattle's Commuter Cash program provides incentives for people to stop driving alone to work five days per week. By reducing two to four days of drive-alone commuting per week, an individual can earn up to $150.

See the Encouragement Toolbox for more information about specific incentives that can increase walking among all people, improving both individual health and the environment.

Transportation Demand Management

Transportation Demand Management or TDM (also called Mobility Management) refers to various strategies that change travel behavior (how, when, and where people travel) in order to increase transport system efficiency and achieve specific planning objectives. TDM is increasingly used to address a variety of problems. Click here for more information about TDM.

In 1991, the Washington State Legislature passed the Commute Trip Reduction (CTR) law requiring employers to work with employees to reduce the number and length of drive-alone commute trips made to the worksite. The City of Seattle and SDOT encourage all commuters to use alternatives to driving alone to work. People who ride the bus, carpool, vanpool, bike, or walk to work—or even use telework arrangements—enjoy additional benefits from these modes. They also help to stem further air quality deterioration, reduce energy use, and put the brakes on traffic congestion in the Puget Sound area. Click here for more information about CTR in Seattle.

Arbor Day

Arbor Day is a nationally-celebrated observance that encourages tree planting and care. Founded by J. Sterling Morton in Nebraska in 1872, National Arbor Day is celebrated each year on the last Friday in April. Arbor Day and other activities that lead to tree planting can get more people walking by improving the pedestrian environment.

Environmental Justice

Environmental justice (EJ) is the confluence of social and environmental movements dealing with the inequitable environmental burden born by groups such as racial minorities, women, or residents of developing nations. It is a holistic effort to analyze and overcome the power structures that have traditionally thwarted environmental reforms. Environmental justice proponents generally view the environment as encompassing "where we live, work, and play" (sometimes "pray" and "learn" are also included).

Executive Order 12898 of February 11, 2004 detailed "federal actions to address environmental justice in minority populations and low-income populations." The order declared that all federal agencies must "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States."

Neighborhood Leadership Training

The City of Seattle funds programs designed to strengthen neighborhoods, including funding for neighborhood leadership training. The neighborhood leadership training program will help neighborhood leaders learn how to successfully advocate for the infrastructure and community building that neighborhoods need to thrive.

Healthy Food/Food Security Initiatives

King County's work to promote fairness and opportunities for all its residents is getting a financial boost from the W.K. Kellogg Foundation, which has awarded the county a competitive grant to help advance the Equity and Social Justice Initiative launched earlier this year. The Initiative will use the majority of the Kellogg grant to continue its community engagement work. As part of community engagement, the county is holding conversations with local residents to raise awareness about inequities, discuss root causes of such inequities, and mobilize around solutions. Click here for more information.

Community Programs

Community programs can increase the number of people that walk by improving the pedestrian environment and promoting equitable investment in neighborhoods. There are a number of programs in Seattle that serve these functions.

The Department of Neighborhoods' P-Patch Program, in conjunction with the not-for-profit P-Patch Trust, provides organic community garden space for residents of 70 Seattle neighborhoods. The community-based areas of the P-Patch Program are community gardening, market gardening, youth gardening, and community food security. These programs serve all citizens of Seattle with an emphasis on low-income, immigrant populations, and youth. The community gardens offer 2,500 plots serving more than 6,000 urban gardeners on 23 acres of land.

The City of Seattle's Urban Forest Management Plan asks everyone in Seattle to become better tree stewards, including the City itself. City departments will review their tree care policies and update them if necessary to current best management practices. As part of that effort, the Department of Planning and Development is reviewing and revising the City's tree protection and replacement regulations for private property.

Robert Wood Johnson Foundation

The mission of the Robert Wood Johnson Foundation is to improve the health and health care of all Americans. http://www.rwjf.org/about/ Following on the heels of the Foundation's successful Active Living by Design and Healthy Eating by Design initiatives, the current program focus is on eliminating childhood obesity in the U.S. by 2015. Childhood obesity is a serious medical condition that affects children and adolescents. It occurs when a child is well above the normal weight for his or her age and height. Childhood obesity is particularly troubling because the extra pounds often start kids on the path to health problems that were once confined to adults, problems such as diabetes, high blood pressure, and high cholesterol. The Robert Wood Johnson Foundation is currently funding programs in 15 cities around the U.S. to combat this epidemic. Programs promote physical activity, including walking, and focus on communities that have traditionally been underserved.

Technical Assistance Program

Development of a technical assistance program to assist all residents in navigating City services might increase the equity of services by allowing more people to effectively and efficiently leverage programs, funds, and resources currently provided by the City. Such an assistance program might involve direct training with neighborhood leaders and/or developing an office of technical assistance to work with community members and groups that are interested in applying for City funds or permits. Some technical assistance is already provided by the Department of Neighborhoods, but the program could be expanded.

6.4 Standards

Development and adherence to standards ensures equity as well as good stewardship.

Vegetation Maintenance Standards

The City of Seattle recognizes the importance of the preservation and stewardship of the trees and landscapes that make it the Emerald City. The SDOT Landscape Architect's Office works with developers, project managers, and community representatives to ensure trees that can be preserved are properly protected during development.

Green Building Standards

The City of Seattle has partnered with the U.S. Green Building Council (USGBC), the International Council for Local Environmental Initiatives (ICLEI), and over 20 cities and counties, non-profit organizations, and state and federal agencies and utilities to launch the Playbook for Green Buildings + Neighborhoods (http://www.greenplaybook.org). The Playbook is a new tool available to local governments to help them take immediate action on climate change by rapidly advancing green buildings, neighborhoods, and infrastructures. This web-based resource addresses three areas for each sector: learning, planning and acting. The Playbook offers strategies, tips, tools, and leading actions. It also demonstrates how green development promotes economic development, leads to healthier communities, strengthens energy independence, and supports climate protection.

Design/Materials Standards

Developing design and materials standards, such as environmentally friendly sidewalk materials, could improve the pedestrian environment and encourage more people to walk. Additionally, developing standards for various types of green materials would enable residents to access a greater variety of materials, particularly important in situations where the City cannot currently fund pedestrian improvements. (See also: http://www.perviouspavement.org, http://www.rubbersidewalks.com, and http://www.stoneycreekmaterials.com

International Communication Standards

The use of international communication standards—particularly in public signs, signals, and maps—is important in making these walking supports accessible to everyone. By standardizing the symbols and measurement conventions that are used, new immigrants, international visitors, and those who are not literate will still be able to navigate the pedestrian system.

Inspection Standards

Street Use Inspectors are responsible for enforcing the rules and regulations of the City of Seattle, such as permit conditions, the Traffic Control Manual, ordinances, city specifications, and the Street and Sidewalk Pavement Opening Policy. This is to ensure that all construction, safety, and accessibility requirements of the permit are met as approved. Click here for more information.

Fleet Fuel Reduction Goals/Standards

The Office of Sustainability and Environment manages the Clean and Green Fleet Plan, a program designed to protect and improve air quality and to encourage smart fuel and vehicle choices in the community by making its own vehicle fleet a model of environmental best practices. In fall of 2006, the mayor released the City's Climate Action Plan, which details plans for continuing to reduce greenhouse gas emissions and for greening the City's fleets, as well as fleets throughout the community.

- To cut down on smog forming emissions, in 1992, the City started adding cars that run on compressed natural gas (CNG), a cleaner burning fuel.
- Since 2003, 78 percent of the City's new light-duty vehicle purchases have been hybrid or biodiesel vehicles.
- In 2001, the entire diesel fleet was converted to cleaner ultra-low sulfur diesel. And work started on retrofitting 400 of the City's heavy duty trucks with emission control devices. These two measures cut toxics and particulates by about 50% per vehicle.
- In 2002, the fleet was downsized by 200 vehicles, returning it to 1998 levels.
- At least half of all compact cars purchased by the City each year use alternative fuels or get at least 45 miles per gallon.
- The diesel fleet now uses a blend of 20% biodiesel and 80% ultra-low sulfur diesel.
- Personal mobility vehicles (i.e., Segways) are used for jobs like water meter reading. Segways have zero emissions, are cost efficient to recharge and, in some cases, replace the use of a car.

Environmental Management System

The citywide Environmental Management System (EMS) was developed to create a framework for reducing the environmental impacts of City operations and services, such as chemical use, fleet management, land use permitting, and facilities maintenance (see below for links to some of these programs). The framework establishes environmental policies, roles and responsibilities, enhances cross-departmental communications and provides a reporting structure.

The Office of Environmental Management guides governmental operations toward sustainability by coordinating implementation of Seattle's EMP and the Mayor's Environmental Strategy. The mission of the EMP is to foster the City's compliance with environmental laws, to assist departments to reduce environmental impacts from operations, and to improve environmental performance. Areas of City operations that most impact the environment have been identified, from landscape management to use of chemicals to fleet fuel use. Policies to improve the City's environmental performance in each of those areas have been developed for inclusion in the EMP. Click here for more information.

Regulations

The Right-of-Way Improvements Manual is an online resource developed by the City of Seattle to help property owners, developers, architects, landscape architects, and engineers with the design, permitting, and construction of improvements to Seattle's street right-of-way.

The Right-of-Way Improvements Manual considers and attempts to balance the access and mobility needs of all users of the street right-of-way: pedestrians, non-motorized vehicles, automobiles, transit, and freight. Procedures and design criteria were developed to balance safety and environmental preservation concerns with the need to preserve and maintain roadway infrastructure and utility services. Knowing that all projects have site specific opportunities and constraints, the Right-of-Way Improvements Manual articulates the City's design criteria for street right-of-way improvements and describes a deviation process to achieve flexibility when practical.

Prioritization Criteria

The purpose of prioritization criteria is to provide a rational, quantitative system for prioritizing needed pedestrian improvements. With limited funding available for all transportation projects, the Seattle Department of Transportation (SDOT) recognized the need to develop criteria to make the prioritization process as transparent and reliable as possible. To this end, prioritization criteria have been developed for new sidewalks and curb ramps, and criteria for pedestrian lighting are currently in development. Prioritization criteria for maintenance of various facilities, such as stairways, are also used. Examples of the components of two prioritization programs are provided below.

Sidewalk Prioritization Program: The goal of the sidewalk construction program is to improve comfort and safety for pedestrians. Currently, 27% of Seattle's streets lack sidewalks. Sidewalk construction is currently prioritized in areas that have the most potential for people walking, particularly people for whom walking is a primary means of transportation. Therefore, sidewalk projects within urban villages, on streets that are adjacent to pedestrian-friendly land uses that also have relatively high vehicle volumes and speeds typically rank high. In addition, sidewalk projects will receive priority if:

- They are near a facility that generates higher-than-average pedestrian traffic (such as a transit stop or a library);
- They serve a population that uses walking as a primary form of transportation (such as school-age children); and
- They fill in or expand the existing sidewalk network.

Stairways Maintenance: SDOT owns over 480 stairways, totaling over six miles, that are used by pedestrians to shortcut their way up or down a hill, to get from one street to another, or to access public areas such as schools, parks, playgrounds, senior centers, and bus stops. The SDOT Roadway Structures Division conducts a periodic inspection program to develop a list of stairways for repairs. Repairs range from replacing the handrail to removing and replacing landings, treads, or concrete slabs. The list is prioritized and the work is scheduled accordingly. The 2006 budget for stairway maintenance was approximately $177,000. This funded the repair or retrofit of nearly 50 stairways. The City also budgeted $375,000 for major stairway rehab work in 2007.

Permitting (Natural Drainage)

A natural drainage system (NDS) design is an alternative approach to a typical curb and gutter street improvement with underground drainage and detention systems. An NDS uses swales, landscaping, and permeable pavements to accomplish the following:

- Reduce the amount of impermeable surface in the street right-of-way;
- Filter pollutants from surface water through soil and plants; and,
- Slow the flow of water to improve habitat for fish and other wildlife in Seattle's urban creeks.

Click here for more information about NDS in Seattle.

King County Equity and Social Justice Initiative

The King County Equity and Social Justice Initiative takes aim at long-standing and persistent local inequities and injustices. Government and local communities are better prepared than ever to address these challenges. The King County Equity and Social Justice Initiative aims to end persistent local inequities and injustices that result in, among other things, higher rates of disease among low-income populations and disproportionate rates of young black men in jail. Ending such inequities and injustices involves the steps outlined below.

- Developing and testing an equity impact assessment and review tool and incorporating the tool into decision-making.
- Collecting and publishing measures to highlight inequities and to mark progress in correcting them.
- Beginning a community dialogue process, using the new PBS series "Unnatural Causes," to increase awareness among community members of inequity and social determinants of health and to spur action, especially around policies.

Appropriate Plantings List

In order to effectively control the types of plantings used throughout the city in the right-of-way, it would be wise to further develop and more broadly publish a list of appropriate trees and shrubs that may be planted. Plantings are an important way to improve the pedestrian realm and make positive contributions to individual and environmental health. However, inappropriate plantings can contribute to maintenance issues such as heaving sidewalks and right-of-way encroachments. Click here and here for more information.

Race & Social Justice Initiative

The City of Seattle is becoming increasingly diverse. A primary challenge of this diversity is the ongoing struggle to create a community where all people are valued, regardless of their background. Mayor Nickels' Race and Social Justice Initiative seeks to reduce disproportionate economic opportunity, education, civic engagement, health, and criminal justice; to foster more inclusive civic engagement; to ensure equity in City business and personnel practices; and to deliver City services that are relevant to Seattle's diverse populations.

Seattle residents should expect to see improved customer service, greater inclusion in programs and policies and increased sensitivity to the interests of ethnic communities. Some programs may be redesigned or revised to meet the needs of groups that traditionally have not received the same attention as others. Outcomes include:

- Hiring/promoting employees who represent Seattle's cultural and ethnic diversity.
- Significantly increasing the amount of business the City does with minority-owned businesses.
- Ensuring diversity in the city's boards, commissions and neighborhood groups.
- Making policy decisions that reflect diversity.
- Using race and social justice as a standard for good business practice and government action.

6.5 Data Sets & Measurement Tools

Tools can be used to determine impacts of changes on various populations and locations as well as to track projects and infrastructure development.

Demographics

Knowing the race and ethnic composition of Seattle residents allows us to monitor populations that may be at greater risk or may have been traditionally underserved. For example, health status and risk are often associated with interrelated socioeconomic factors such as income and education. Accurately estimating the size of this population and its subgroups is critical in calculating measures of health status such as rates of disease and death.

Participation Tracking

Regular monitoring and review of public engagement is important to determine its effectiveness. Methods to monitor engagement include surveys (distributed prior to and following a community meeting), qualitative research, and analysis of community capacity.

Regional Equity Atlas

All residents should have access to opportunities such as good jobs, real transportation choices, safe and stable housing, good education, a range of parks and natural areas, vibrant public spaces, and healthy, regionally produced foods. The benefits and burdens of growth and change should be equitably shared across our communities. Portland's Regional Equity Atlas provides a good example of this type of publication.

Inventories

An inventory is a detailed, itemized list, report, or record of infrastructure currently in place in Seattle or an evaluation of abilities, assets, or resources. To date, both a sidewalk inventory and a curb ramp inventory have been completed. A conditions assessment of the sidewalks in urban villages is currently underway, and this data will increase the robustness of the sidewalk inventory.

Resource Consumption

Resource consumption is being driven in large part by a combination of population growth and increasing per capita consumption, and it cannot be continued with risk. Consumption regulation is a lot more complex than population regulation, and it is much more difficult to find humane and equitable solutions to the problem. Click here for more information.

Staying Abreast of Current Research

In order to best serve a diverse constituency, City staff and elected officials should attempt to stay abreast of current research. Much of the work being produced by universities and research centers has direct implications for transportation planning and development in Seattle. By understanding the research underway, officials can ensure that actions will improve equity, health, and the environment for all residents.

Track Investments

To ensure that infrastructure investments, funding, and staff time are equitably distributed across Seattle's diverse populations, investments of all types should be tracked. If investments are not being equitably dispersed, the city should develop a program to more effectively balance investments. Such a tracking program will enable staff to measure changes over time and to determine if historical inequities are being addressed.

Service Equity Measures

In order to address possible environmental inequities existing within Seattle, the Office of Sustainability and Environment (OSE) has developed an Environmental Equity Program. By beginning with an external examination of Seattle's neighborhoods, OSE will then be able to successfully understand the departmental and census data available internally. This ongoing two-step process will address inequity issues within city services by informing the mayor's Environmental Action Agenda.

The City of Seattle believes that every person who interacts with city government should receive excellent service. The Customer Service Bureau will make that happen by helping residents obtain information, solve problems, and resolve complaints.

6.6 Resources & Organizations

Tools include City funds and offices that promote equitable access to resources.

Neighborhood Street Fund

In early 2008, the Department of Neighborhoods asked community leaders to work with their neighbors to identify and prioritize projects that will inform the City's Cumulative Reserve Fund (CRF) and Neighborhood Street Fund (NSF) project decisions. This partnership, between the City and its neighborhoods, has been extremely valuable to identifying priority projects by community members. In anticipation of having a $1 million Cumulative Reserve Fund (CRF) and $240,000 Neighborhood Street Fund (NSF) in next year's city budget, community members were invited to participate in the CRF/NSF Allocation Process by submitting project proposals in early 2008.

Neighborhood Matching Fund

The Neighborhood Matching Fund provides money to Seattle neighborhood groups and organizations for a broad array of neighborhood-initiated improvement, organizing or planning projects. A neighborhood group may be established solely to undertake a project—the group does not need to be "incorporated." Once a project is approved, the community's contribution of volunteer labor, materials, professional services, or cash will be matched by cash from the Neighborhood Matching Fund.

Department of Neighborhood Offices

The Department of Neighborhoods works to bring government closer to the residents of Seattle by engaging them in civic participation; helping them become empowered to make positive contributions to their communities; and by involving more of Seattle's underrepresented residents, including communities of color and immigrants, in civic discourse, processes, and opportunities. Through its programs and services, the Department of Neighborhoods provides a range of resources to help Seattle residents and neighbors build strong communities and improve their community's quality of life. The department's goal is for neighbors in Seattle to create a stronger sense of place and build stronger ties with their communities and local government.

Community Council

Community Councils allow individuals to participate in programs based on where they live (geographic), who they are (demographics), or simply because of issue-related concerns. Community Councils provide a place, a process, and a forum for engagement to address neighborhood opportunities, challenges, and issues.

7. FUNDING TOOLS

The following sections describe specific funding sources and strategies that can be used as part of the overall process to support and institutionalize pedestrian improvements.

For a broad picture of how transportation projects get funded, visit FHWA's Citizen's Guide to Transportation Decisionmaking.

7.1 City of Seattle Funding Programs

General Fund

The City deposits basic taxes and fees it collects into the General Fund. These funds are the City's most flexible revenues and can be spent in support of any general government purpose. The General Fund is the primary source of funding for functions such as police, fire, courts, parks and libraries. Revenues from state and federal sources supplement these resources, and such outside funding is particularly important for departments such as human services and transportation. With regard to uses, note that police, fire and public safety (including courts) use more than 50 percent of the General Fund's total resources. Parks and Libraries are another significant share of the total expenditure "pie."

The City budget is reviewed every year to evaluate the distribution of the General Fund. This money is distributed throughout all departments within the City of Seattle. Each year the amount of money each department receives can change based on the amount of money in the General Fund. Seattle Department of Transportation (SDOT) received approximately $43,472,000 in 2007 and $48,946,000 in 2008 from the General Fund and is expected to receive $41,760,000 in 2009. Transportation receives about 5% of the General Fund.

Click here for additional information about the General Fund.

Cumulative Reserve Fund

The Cumulative Reserve Subfund of the General Fund is a reserve fund authorized under Washington State law and is used to accumulate money until it is spent, primarily for maintenance and development of City capital facilities.

BRIDGING the GAP
Your Transportation Levy Dollars at Work

SDOT Capital Improvement Program

Seattle Department of Transportation (SDOT) is responsible for maintaining, upgrading, and monitoring the use of the City's system of streets, bridges, retaining walls, seawalls, bicycle and pedestrian facilities, and traffic control devices. Seattle's transportation system includes 1,534 lane-miles of arterial streets and 2,412 lane-miles of non-arterial streets. The system also includes 150 bridges, 561 retaining walls, 479 stairways, and 1,000 signalized intersections in the public right-of-way that SDOT is responsible for inspecting and maintaining.

SDOT's Capital Improvement Program (CIP) outlines the Department's plan for maintaining, improving, and adding to this extensive infrastructure. A large portion of this work is funded by the Bridging the Gap transportation funding package. Other major funding sources include the City's General and Cumulative Reserve Subfunds, state gas tax revenues, commercial parking tax revenues, employee tax revenues, federal and state grants, and partnerships with private organizations and other public agencies. SDOT's $232 million capital budget is appropriated as part of its $341 million budget.

Click here to learn more about SDOT's Capital Improvement Program.

Property Tax Levy

The costs of state and local government determine how much property tax will be levied. These include operating costs of schools, city and county government, and other taxing districts such as the Port of Seattle, library, hospital, fire, and sewer districts. A large part of each property tax dollar goes to pay off bonds for such capital costs as school buildings and other public projects.

The state constitution, statutory levy limits set by the legislature and excess levies approved by the voters are used to calculate the total property tax levy. The tax rate on your property is the figure resulting from dividing the dollar amount required for the taxing district by the total value of property within the district and then adding up the rates of the various districts in which your property is located. The assessed value of your property, multiplied by the combined rate, produces a tax amount which is your fair share of the total property tax levy in your area. The King County Treasurer issues tax statements and taxes are paid to the King County Treasury Operations.

Most districts can submit propositions for additional property tax levies to a vote of the people. Excess levies must be authorized by a 60% majority of the voters. Click here for additional information about property tax levies in King County.

Employee Hours Tax

Effective July 1, 2007, persons and firms that engage in business within the Seattle city limits are subject to the employee hours tax. Calculation of the tax is based upon the number of employee work hours performed within the Seattle city limits. Vacation and sick leave hours are excluded from the calculation. There is a deduction for hours worked by employees who commute to work at least 80% of the time by other than single-occupancy vehicles. Revenue from the employee hours tax will be used by the City only to fund the maintenance and improvement of local transportation infrastructure.

Click here for additional information about the employee hours tax.

Commercial Parking Tax

Seattle's commercial parking tax is levied upon a person who pays to park a motor vehicle in a commercial parking lot within Seattle city limits. From July 1, 2008 to June 30, 2009, the tax rate will be 7.5%. After July 1, 2009, the rate will be 10%. The commercial parking business is required to show the commercial parking tax amount separately from the parking fee on the parking ticket or receipt (although the receipt may show a combined amount for the commercial parking tax and the retail sales tax). Revenue from the commercial parking tax will be used by the City only to fund the maintenance and improvement of local transportation infrastructure.

Click here for more information about the commercial parking tax.

SPU Natural Drainage Program

Natural drainage projects utilize vegetation and soil to filter and slow runoff, protecting the environment from a variety of contaminants. Seattle property owners pay a drainage fee based on impervious surface coverage. The drainage fee supports many different drainage projects and programs at Seattle Public Utilities. Click here for more information.

Growth Payment Programs

Growth payment programs require property developers in fast-growing neighborhoods to pay additional fees to fund the pedestrian, bicycle, and automobile transportation improvements necessitated by the increased traffic caused by rapid growth. Payments are determined by zoning, square-footage, and number of units.

Sample Program:

Seattle's Transportation Growth Payment Program

Mitigation or Impact Fees

An impact fee is a fee that is implemented by a local government on a new or proposed development to help assist or pay for a portion of the costs that the new development may cause. An impact fee is considered to be a charge on new development to help fund and pay for the construction or needed expansion of offsite capital improvements. Impact fees are often implemented to help reduce the economic burden on local jurisdictions that are trying to deal with population growth within the area.

Click here to learn more about impact fees.

DON Neighborhood Matching Fund

The Department of Neighborhoods administers a neighborhood matching fund that provides money to Seattle neighborhood groups and organizations for a broad array of resident-initiated improvement, organizing or planning projects. For more information, click here to visit the Department of Neighborhoods online.

Office of Arts and Cultural Affairs 1% for Art

The Public Art Ordinance of the Seattle Municipal Code requires that "all requests for appropriations for construction projects from eligible funds shall include an amount equal to one (1) percent of the estimated cost of such project for works of art and shall be accompanied by a request from the Office of Arts and Cultural Affairs for authorization to expend such funds after the same have been deposited in the Municipal Arts Fund." Click here for more information.

Parks Levy Opportunity Fund

Citizens submitted nominations for park acquisition and development projects through two cycles of the Levy's Opportunity Fund, and dozens of projects are being implemented. Click here for more information.

SDOT Neighborhood Project Fund

The Seattle Department of Transportation's Neighborhood Project Fund draws from the Bridging the Gap transportation levy passed in 2006 to improve sidewalks, increase lighting in key business districts, and add new sidewalks in around schools. Click here for more information.

Office of Economic Development Funding

Seattle's Office of Economic Development funds a variety of initiatives and efforts that foster a healthy pedestrian environment and provide support for local, walkable destinations such as urban villages and farmers' markets.

7.2 Regional, State, and Federal Grants

Surface Transportation Program Congestion Mitigation and Air Quality Non-Motorized

The U.S. Department of Transportation's Congestion Management and Air Quality (CMAQ) Improvement Program, authorized by federal law in 1991, provides funds at both the state and local level to reduce transportation-related pollutans. Initiatives increasing pedestrian trips can be funded beneath this program. Click here for more information.

Washington Traffic Safety Commission

The mission of the Washington Traffic Safety Commission (WTSC) is to reduce deaths and serious injuries resulting from motor vehicle collisions by implementing programs designed to address driver behaviors through coordinated efforts of federal, state, and local agencies.

WTSC grants are available to qualified agencies and organizations throughout Washington State to fund innovative programs, projects, services, and strategies designed to meet the goal of the Strategic Highways Safety Plan: Target Zero, the elimination of deaths and serious injuries resulting from traffic collisions. The Seattle Police Department currently has a grant from WTSC that will fund 10 crosswalk sting operations in 2009.

Click here for information on the current grants available from WTSC.

Highway Safety Improvement Program

The program authorizes a new core Federal-aid funding program beginning in FY 2006 to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. Funds may be used for projects on any public road or publicly owned bicycle and pedestrian pathway or trail. Click here for more information.

Economic Development Administration

The Economic Development Administration (EDA) is an agency in the United States Department of Commerce. The EDA was established under the Public Works and Economic Development Act of 1965 to generate jobs, help retain existing jobs, and stimulate industrial and commercial growth in economically-troubled areas of the United States. EDA assistance is available to rural and urban areas of the United States experiencing high unemployment, low income, or other severe economic distress.

The EDA's stated mission is to "lead the federal economic development agenda by promoting innovation and competitiveness, preparing American regions for growth and success in the worldwide economy."

Click here to learn more about funding opportunities available through EDA.

Pedestrian and Bicycle Safety Program

Coming soon...

Public Works Trust Fund

The Washington State Public Works Board administers a trust fund to provide local communities with technical and financial assistance for critical health, safety, and environmental infrastructure. Click here for more information.

Federal Land Agencies Funding

Funds may be available through federal land agencies such as the National Forest Service, National Park Service, or Bureau of Land Management. These funds are primarily for trails and must be on federal lands.

Statewide Enhancements

Coming soon...

Safe Routes to School

Safe Routes to School (SRTS) programs aim to make walking and bicycling to school a safe and appealing form of transportation. Federal legislation and funding currently exist to support SRTS efforts, but these funds alone cannot meet all the needs of communities across the United States. Most programs can benefit from a mixture of local, state, federal, and private funding. Click here for more information about funding Safe Routes to School programs.

In August, 2005, the Federal-aid SRTS Program was created by Section 1404 of the federal transportation bill, SAFETEA-LU. Housed in the U.S. Department of Transportation's Federal Highway Administration (FHWA) Office of Safety, the SRTS Program is funded at $612 million over five Federal fiscal years (FY 2005–2009).

FHWA apportions SRTS funding annually to each State in conjunction with Federal-aid highway apportionments. For more information the Washington State SRTS program, visit State SRTS Contacts. It is the responsibility of each State to appoint a fulltime SRTS Coordinator, to develop a State SRTS program, and to disperse funds to local programs in accordance with State policies and any applicable Federal law. Although some parameters have been spelled out in the legislation, States may structure their program in ways most suitable to their needs. States may also provide their own funds.

Urban Corridor Program

Coming soon...

Trip Reduction Performance Program

Coming soon...

Urban Arterial Program

Coming soon...

Community Development Block Grants

The Community Development Block Grant (CDBG) program is a flexible program that provides communities with resources to address a wide range of unique community development needs. Beginning in 1974, the CDBG program is one of the longest continuously run programs at the U.S. Department of Housing and Urban Development (HUD). The CDBG program provides annual grants on a formula basis to 1,180 general units of local government and states.

The CDBG program works to ensure decent affordable housing, to provide services to the most vulnerable in our communities, and to create jobs through the expansion and retention of businesses. CDBG is an important tool for helping local governments tackle serious challenges facing their communities.

A grantee must develop and follow a detailed plan that provides for and encourages citizen participation. This integral process emphasizes participation by persons of low or moderate income, particularly residents of predominantly low- and moderate-income neighborhoods, slum or blighted areas, and areas in which the grantee proposes to use CDBG funds.

Examples of the types of projects funded include those listed below. Additional examples are available here.

- Commercial district streetscape improvements
- Sidewalk improvements
- Safe routes to school
- Neighborhood-based bicycling and walking facilities that improve local transportation options or help revitalize neighborhoods

Click here to learn how to apply for CDBG funding.

Urban Sidewalk Program

Coming soon...

7.3 Private Sector Funders

Business Improvement Areas

Also known as business improvement districts in some parts of the country, business improvement areas are public-private partnerships. Business owners in a business district or part of a business district agree to pay an additional tax to fund neighborhood improvements and marketing efforts.

Improvements can range from sidewalk enhancements to parks and private security.

Sample Business Improvement Area:

- Tacoma Business Improvement Area

Land Trusts

The environmental land trust movement has mushroomed in the past 20 years. Many of these organizations have raised funds to purchase land where trails are built, especially rail-trails.

Individual Developers

Coming soon...

Individual Property Owners

Coming soon...

Major Employers

There is increasing corporate and business involvement in trail and conservation projects. Employers recognize that creating places to bike and walk is one way to build community and attract a quality work force. Bicycling and outdoor recreation businesses often support local projects and programs.

- In Evansville, Indiana, a boardwalk is being built with corporate donations from Indiana Power and Light Co. and the Wal-Mart Foundation.
- In Arizona, trail directional and interpretive signs are being provided by the Salt River Project — a local utility. Other corporate sponsors of the Arizona Trail are the Hughes Missile Systems, BHP Cooper, and Pace American, Inc.
- Recreational Equipment, Inc. has long been a financial supporter of local trail and conservation projects.
- The Kodak Company now supports the American Greenways Awards program of The Conservation Fund, which was started in partnership with the Dupont company. This annual awards program provides grants of up to $2,500 to local greenway projects for any activities related to greenway advocacy, planning, design or development.

For further details and tips for accessing the corporate and business community contact the Trails and Greenways Clearinghouse at the Rails-to-Trails Conservancy: 1-877-GRNWAYS (476-9297).

Non-Profit Funders

Corporations and businesses

Residents can contact local corporations and businesses to ask if they will support your program or project with cash, prizes, and/or donations such as printing services. Your friends and neighbors they often can help you get a "foot in the door" at their places of employment. When contacting a company, ask for information about their "community giving programs."

Foundations

There are institutions throughout the country that provide funding to non-profit organizations. The Foundation Center is an excellent source of potential funding sources. Narrow your funding possibilities by first searching for geographic region of giving. Look under categories for transportation, health, environment, and community building.

7.4 Other Areas for Exploration

Community Fundraising Strategies

Community fundraising and creative partnerships are plentiful. A common approach is to find creative ways to break a large project into small pieces that can be "purchased" by the public. Some examples are listed below, and additional examples can be found here.

- In Jackson County, Oregon they had a "Yard Sale." The Bear Creek Greenway Foundation sold symbolic "yards" of the trail and placed donor's names on permanent markers that are located at each trailhead. At $40 a yard, they raised enough in private cash donations to help match their $690,000 Transportation Enhancements program award for the 18-mile Bear Creek trail linking Medford, Talent, Phoenix and Ashland.
- Selling bricks for local sidewalk projects, especially those in historic areas or on downtown Main Streets, is increasingly common. Donor names are engraved in each brick, and a tremendous amount of publicity and community support is purchased along with basic construction materials. Portland, Oregon's downtown Pioneer Square is a good example of such a project.
- In Colorado Springs, the Rock Island Rail-Trail is being partly funded by the Rustic Hills Improvement Association, a group of local home-owners living adjacent to the trail. Also, ten miles of the trail was cleared of railroad ties by a local boy scout troop.

Additionally, hosting a special event, such as a walkathon or a bicycling event, might help to fund a program. You also can choose more traditional fundraising efforts, such as bake sales, concerts, or talent shows. Partnering with the local parent teacher association (PTA) or school districts could be a great way to raise funds for a school-related program.

Public Development Authorities

Public Development Authorities (PDAs) are unique, independent entities of Seattle government, which are legally separate from the City. This allows accomplishment of public purpose activities without assuming them into the regular functions of City government. Each PDA is governed by a volunteer council, commonly called a governing board, which sets policies and oversees activities and staff. Thus, the success or failure of a public corporation is dependent on its council's abilities. State and federal law require PDA contracts to contain language to the effect that liabilities incurred by the corporation must be satisfied exclusively from their own assets, and that no creditor or other person shall have a right of action against the City due to any debts, obligations, or liabilities of the public corporation. Contact the Department of Finance Public Development Authority Coordinator at (206) 233-0031 or click here for more information and assistance with City PDAs.

PDA Facts:

- There are currently eight PDAs in Seattle.
- PDAs have flexibility to get community projects done.
- PDAs have a big impact.
- PDAs are virtually all self-sufficient.
- PDAs rely heavily on volunteers.

Washington State Parks and Recreation

The Washington State Parks and Recreation Foundation funds trails, parks, and wildlife viewing opportunities, generating pedestrian destinations across the state. Click here for more information.

Fees in Lieu

Click here for an example of a fee in lieu program from Maryland.

State Lottery Funds

A growing number of states are providing funds from non-transportation related revenue streams. However, these funds are not always eligible for the full range of pedestrian and bicycle activities. For example, Colorado dedicates a portion of its lottery proceeds to trail building.

National Institutes of Health

The National Institutes of Health (NIH) is the nation's medical research agency—making important medical discoveries that improve health and save lives. NIH is a part of the U.S. Department of Health and Human Services and is the primary Federal agency for conducting and supporting medical research.

Helping to lead the way toward important medical discoveries that improve people's health and save lives, NIH scientists investigate ways to prevent disease as well as the causes, treatments, and even cures for common and rare diseases.

Click here for complete information about funding and grant programs available through NIH.

Main Street Program

The National Trust Main Street Center is a program of the National Trust for Historic Preservation. In the 1970s, the National Trust developed its pioneering Main Street approach to commercial district revitalization, an innovative methodology that combines historic preservation with economic development to restore prosperity and vitality to downtowns and neighborhood business districts.

Today, the message has spread, as the Center advocates a comprehensive approach that rural and urban communities alike can use to revitalize their traditional commercial areas through historic preservation and grassroots-based economic development. It has created a network of more than 40 statewide, citywide, and countywide Main Street programs with more than 1,200 active Main Street programs nationally.

The Center has led the preservation-based revitalization movement by serving as the nation's clearinghouse for information, technical assistance, research, and advocacy. Throughout the nation, communities are using the Main Street approach to revitalize their traditional commercial districts, whether they have officially designated Main Street programs or simply incorporate Main Street into existing economic development, historic preservation, city management, or urban and community planning programs. Whatever form a preservation-based revitalization initiative takes, the national network of coordinating and local Main Street programs provides action and support on all levels.

Click here for more information about the National Main Street Program.

Transportation Benefit District

Through the cooperative efforts of the Association of Washington Cities (AWC) and the Washington State Associations of Counties (WSAC), significant legislation will go into effect on July 22, which results in the most important local transportation tool for cities and counties in sixteen years—Transportation Benefit Districts (TBDs). They are independent taxing districts that can impose an array of taxes or fees either through a vote of the people or through council action. TBDs are flexible: they allow cities and counties to work cooperatively on addressing both regional and local transportation challenges.

A transportation benefit district is an independent taxing district created solely to acquire, construct, improve, provide and fund transportation improvements within a defined area. That area can be defined with a great deal of flexibility—it can encompass a broad array of counties, cities, and port or transit districts depending upon each jurisdiction's willingness to enter an interlocal agreement.

A TBD also has access to a variety of funding mechanisms. Two of these—setting an annual vehicle fee and levying transportation impact fees—do not require voter approval, although they are subject to other conditions. TBDs can also ask voters to approve several new revenue sources, including increased property taxes, sales tax, annual vehicle fees, and tolls.

Click here for more information on TBDs in Washington State.

King County Grant Programs

King County is responsible for myriad environmental issues ranging from air quality to watershed protection, and offers grants for many community and nonprofit organizations capable of helping it meet these goals. Click here for more information.

Real Estate Excise Tax

The State of Washington is authorized to levy a real estate excise tax on all sales of real estate, measured by the full selling price, including the amount of any liens, mortgages and other debts given to secure the purchase at a rate of 1.28 percent. RCW 82.45.060 A locally-imposed tax is also authorized. However, the rate at which it can be levied and the uses to which it may be put differs by city or county size and whether the city or county is planning under the Growth Management Act (GMA).

All cities and counties may levy a quarter percent tax (described as "the first quarter percent of the real estate excise tax" or "REET 1"). Cities and counties that are planning under GMA have the authority to levy a second quarter percent tax (REET 2). Note that this statute specifies that if a county is required to plan under GMA, or if a city is located in such a county, the tax may be levied by a vote of the legislative body. If, however, the county chooses to plan under GMA, the tax must be approved by a majority of the voters.

Click here for more information about REET in Washington.

More tools coming soon:

- Sales Tax Allocations
- Citation Revenue
- Parking Revenue
- Sidewalk Tax
- Sidewalk Closure / Encroachment Fees
- Redistribution and Reallocation of General Fund
- Sidewalks Development Authority
- Lower or Remove Threshold for Infrastructure Improvements
- Greenways Funding Program
- Tax Benefit District
- Homeowner Incentives
- Tax Bill Surcharge
- Tax Abatement Programs

Pedestrian Master Plan

APPENDIX 9: PEDESTRIAN "TOOLBOX" BEST PRACTICES

MEMORANDUM 2

DATE: June 10, 2015

TO: Michelle Marx, SDOT
Ian Macek, SDOT

FROM: Amalia Leighton, PE, AICP
Brice Maryman, ASLA, PLA, LEED AP
Peg Staeheli, FASLA, LEED AP

RE: **Toolbox Best Practices and Evaluation**
Seattle Pedestrian Master Plan Update
SvR Project No. 15004

PURPOSE

This memorandum evaluates the 2009 Seattle Pedestrian Master Plan (PMP) pedestrian toolbox (Appendix 8) and identifies best practices for improvements as part of the scope of the PMP update. To identify current national and international best practices, SvR Design reviewed the way the current PMP pedestrian toolbox is used and assessed other cities' pedestrian master plans (or similar documents) that have been developed since 2009 when the existing PMP was adopted.

BACKGROUND

The intent of the 2009 pedestrian toolbox was to address the following issues:

- **Designing and engineering** safe and accessible roadways and pedestrian facilities;
- **Educating** roadway users, property owners, and decision makers about rules, rights, and responsibilities;
- **Enforcing** laws, proper behaviors, and use of roadway facilities;
- **Encouraging** walking and physical activity throughout the community;
- Short- and long-term **planning, land use, and zoning** for the built environment;
- Ensuring **equity, health, and environmental** sustainability; and
- Finding **funding** to support and sustain pedestrian improvements.

Each issue area had a number of tools associated with it. (For example, design and engineering discusses "walkable zones" and "frontage zones" while the education tools explore "campaigns" and "trainings"). To meet the diverse purposes listed above, the pedestrian toolbox necessarily cast a broad net, intending to serve a wide audience of both SDOT staff, other departments and agencies coordinating with SDOT, business owners and the general public who are interested in pedestrian issues and actions. However, the toolbox does not directly connect the user to the vision, goals and associated objectives of the PMP. Additionally, the toolbox has largely not been updated since it went live in 2009.

Since SDOT has started the process of the PMP update, both the Seattle Pedestrian Advisory Board (SPAB) and internal SDOT staff acknowledged that they do not use the toolbox as it is currently formulated. They indicated a better assessment of implementing strategies and actions may better advance the vision, goals, and objectives of the PMP.

SDOT is also currently in the process of updating the Right-of-Way Improvements Manual (ROWIM). The ROWIM serves as the primary implementation guidance document for the city in design, engineering and management of the public space within the City's rights-of-way. The ROWIM identifies various pedestrian facilities and amenities recommended based on the adjacent land use and expected transportation modes using the street. It includes best practices and updated national guidance from the National Association of City Transportation Officials (NACTO) Urban Street Design Guide, American with Disabilities Act design guidance and interpretation and transit facility design.

The ROWIM will be an online, graphic-rich resource to provide updated information on pedestrian facility design and integration into various roadways, with a user-friendly look and feel similar to the San Francisco Better Streets Guide. The update to the ROWIM is expected to be completed and onlinein 2017. The ROWIM has integrated many of the elements of the 2009 pedestrian toolbox.

REVIEW OF NATIONAL AND INTERNATIONAL BEST PRACTICES

The attached table summarizes the SvR review of a variety of Pedestrian Master Plans (or similar documents) developed for cities across the United States and some international cities:

- New York City
- San Francisco
- Boston
- Philadelphia
- Chicago
- Sydney, Australia
- Vancouver, British Columbia

These cities were selected based meeting both of the following criteria. They were:

- Often noted as a "walkable city" by various walking advocacy groups and/or media outlets including:
    - Walk Friendly Communities http://www.walkfriendly.org/communities/index.cfm
    - Governing Magazine http://www.governing.com/gov-data/transportation-infrastructure/walk-to-work-cities-map.html
    - Smart Growth America http://www.smartgrowthamerica.org/documents/foot-traffic-ahead.pdf
    - Walkscore https://www.walkscore.com/cities-and-neighborhoods/
- Their current pedestrian master plans (or similar documents) were created or revised since 2009 when the existing SPMP was adopted.

As part of our review of other cities, we identified the format of the toolbox and if it was included within the Pedestrian Master Plan document or if it was an external link. Since this PMP update will be a hardcopy document, the information contained in the toolbox update will need to be relevant and legible when printed, whether as a standalone document or an element of the update.

FINDINGS

Audience

All of the pedestrian master plans were written with the intent of being public-facing documents. They were graphically-rich, highlighting key policies and tools available for improving and maintaining the pedestrian environment. Since all the documents reviewed contained policy guidance as well as tools, these documents appear to have anticipated that they would be used by residents, businesses, and staff and other technical users such as architects, engineers and other designers. For example, the San Francisco Better Streets Guide identified design guidelines for three different audience categories: Building Neighborhood Support (residents), Merchant's Corner (businesses) and Develop Requirements (architects, engineers and other designers).

Formats of Plans and Toolboxes
Most cities develop their pedestrian master plans as PDF documents. There was mix of cities that included toolboxes within the master plan PDF rather than creating a separate document. The cities that included a toolbox within the PDF often focused them on a specific purpose (e.g. increased safety or design guidance like Chicago and Philadelphia, respectively).

Cities that created a toolbox that was as comprehensive as the 2009 Seattle pedestrian toolbox developed a separate document (NYC) or provided online resources (San Francisco and Boston). In both cases, the content was more consistent with the proposed format and content of the Seattle ROWIM.

Innovation
The cities that developed a separate document included a broad range of tools similar in breadth and depth to the 2009 Seattle pedestrian toolbox. In addition, they created interactive, searchable PDFs where users could key in words that they wanted to find or issues they wanted to learn more about. The guides created for San Francisco and Boston were user-friendly and graphically-rich and included innovative tactics including the following:

- Incorporated guidance from the NACTO Urban Streets Design Guide;
- Organized tools in relationship with the associated Pedestrian Plan goals and policies (e.g. safety, vibrancy, mode shift) identified for the City;
- Included public space management and street activation;
- Integrated surface green infrastructure/ stormwater management facilities into the ROW;
- Provided guidance on how to find information on maintenance and construction of accessible pedestrian facilities; and
- Addressed facilitating pedestrian movement and access during construction.

NEXT STEPS

SDOT presented these findings to both SPAB and SDOT staff to receive feedback on recommended actions regarding revisions for the PMP. It was determined that including implementing strategies and actions would be the most useful format moving forward.

REVIEW OF PEDESTRIAN MASTER PLAN (OR SIMILAR DOCUMENT) TOOLBOX BY CITY

CITY / NAME OF PLAN	DATE OF PLAN	TOOL BOX CONTENTS / INNOVATIVE TOOLS	LINK TO DOCUMENT(S)
US CITIES			
NEW YORK CITY The New York City Pedestrian Safety Study & Action Plan	August 2010	**TOOLBOX IS A SEPARATE DOCUMENT** New York created a Street Design Manual in May 2009 (the Second Edition released October 2013 is currently available) as a resource for street design standards, guidelines and policies. This document is very comprehensive and includes information about process, street geometry, materials, lighting, furniture, landscape and includes a glossary and appendix. This document is available as a hard copy and as a PDF online. Since it was first published in 2009, it has been updated two times.	**PDF of the Plan** http://www.nyc.gov/html/dot/downloads/pdf/nyc_ped_safety_study_action_plan.pdf
SAN FRANCISCO Walk First 2010	August 2010	**TOOLBOX IS A SEPARATE DOCUMENT** San Francisco created a Better Streets Plan in 2010. The document is available both as an online interactive document and also as a PDF. This document creates a unified set of standards, guidelines and implementation strategies to govern how the San Francisco designs, builds and maintains its pedestrian environment.	**Walk First** http://www.sf-planning.org/index.aspx?page=2568 **Better Streets Plan** http://www.sf-planning.org/ftp/betterstreets/index.htm

CITY / NAME OF PLAN	DATE OF PLAN	TOOL BOX CONTENTS / INNOVATIVE TOOLS	LINK TO DOCUMENT(S)
US CITIES			
BOSTON Complete Streets Plan	2014	**THIS IS MORE OF A TOOLBOX THAN A MASTER PLAN** It is available online and in hard copy (more of a textbook). It does identify new policies about modal priority. The new Boston Complete Streets approach puts pedestrians, bicyclists and transit users on equal footing with motor-vehicle drivers. The initiative aims to improve the quality of life in Boston by creating streets that are both great public spaces and sustainable transportation networks. It embraces innovation to address climate change and promote healthy living. The objective is to ensure Boston's streets are: multimodal, green and smart.	**Complete Streets Website** http://bostoncompletestreets.org/about/
PHILADELPHIA Pedestrian and Bicycle Master Plan	2012	**TOOLBOX IS LOCATED WITHIN THE PLAN AND FOCUSES ON THREE MAIN CATEGORIES:** Signalization, Geometric and Signs/markings/ operational. The Plan identifies strategies and specific recommendations to increase the number of people walking and bicycling in the City by improving the safety, connectivity, convenience, and attractiveness of the pedestrian and bicycle networks. The Pedestrian & Bicycle Plan is a key recommendation and implementation step of Philadelphia2035. Related efforts include the Complete Streets Handbook and a citywide Trails Master Plan to guide roadway design and off-road priorities, respectively.	**PDF of the Plan** http://phila2035.org/wp-content/uploads/2012/06/bikePedfinal2.pdf **Pedestrian and Bicycle Plan Website** http://www.phila.gov/cityplanning/plans/pages/PedestrianandBicyclePlan.aspx

CITY / NAME OF PLAN	DATE OF PLAN	TOOL BOX CONTENTS / INNOVATIVE TOOLS	LINK TO DOCUMENT(S)
US CITIES			
CHICAGO Pedestrian Plan	2011	**TOOLBOX IS LOCATED WITHIN THE PLAN AND IDENTIFIES 16 TOOLS ORGANZIED INTO TWO CATEGORIES: INTERSECTION AND CORRIDORS and NEIGHBORHOOD STREETS** The toolbox section of the Plan is called Tools for Safer Streets with the intent of making the streets safer for its youngest and oldest pedestrians. Chicago's pedestrian experience is one of the reasons that the city is such a great place to live, work, and play. To help ensure that Chicago continues to be a great city for pedestrians, the Chicago Department of Transportation (CDOT), in coordination with the Mayor's Pedestrian Advisory Council (MPAC),collaborated together on the Chicago Pedestrian Plan. The Pedestrian Plan identifies new opportunities and ongoing initiatives that will strengthen Chicago's already robust pedestrian environment.	**PDF of the Plan** http://www.pedbikeinfo.org/pdf/PlanDesign_SamplePlans_Local_ChicagoPed2011.pdf **Chicago Pedestrian Plan Website** http://chicagopedestrianplan.org/

CITY / NAME OF PLAN	DATE OF PLAN	TOOL BOX CONTENTS / INNOVATIVE TOOLS	LINK TO DOCUMENT(S)
INTERNATIONAL CITIES			
SYDNEY, AUSTRALIA Walking Strategy and Action Plan	April 2015	This document is primarily a policy document, but it does show the walking network. Sydney does have standards and details for design and construction of pedestrian facilities.	**PDF of Plan** http://www.cityofsydney.nsw.gov.au/__data/assets/pdf_file/0013/233320/Walking-Strategy_FINAL-for-web.pdf **Walking Website** http://www.cityofsydney.nsw.gov.au/vision/towards-2030/transport-and-access/walking-strategy#page-element-dload **Design and Construction Standards and Details** http://www.cityofsydney.nsw.gov.au/development/public-domain-works/da-associated-works/sydney-streets-technical-specifications
VANCOUVER, BRITISH COLUMBIA Transportation 2040	October 2012	This document is primarily a policy document. It provides actions for all modes including actions that will improve the pedestrian environment and walkability in the City of Vancouver, BC	**PDF of Plan** http://vancouver.ca/streets-transportation/transportation-2040.aspx **Walking Website** http://vancouver.ca/streets-transportation/walking.aspx