Roses from Concrete: A Walkability Plan for the Rosewood Neighborhood

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A Walkability Plan For The Rosewood Neighborhood

ROSES

FROM CONCRETE
ROSES FROM CONCRETE

A Walkability Plan For
The Rosewood Neighborhood
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Going to the park should not be scary, but for Emilio, a boy who lives in Portland’s Rosewood neighborhood of east Portland, the walk there can be. There are no sidewalks on the way, and drivers sometimes speed. A couple times, they came close to hitting him and his friend as they walked along the shoulder. There are not very many crosswalks in his neighborhood, so sometimes he takes a chance and runs across the road. Even when he is at a marked crosswalk, drivers do not always stop. His mom worries about his safety, but she cannot always be with him.

EXECUTIVE SUMMARY

Roses from Concrete is a walkability plan for Portland’s Rosewood neighborhood, created by Walk & Roll Consulting (W&R).

Emphasizing youth and older adults, Roses From Concrete seeks to address the particular challenges of being a pedestrian in the historically disinvested Rosewood neighborhood.

The plan provides tools, analyses, research, and compiled perspectives from local residents and professionals, with the goal of improving the lives of people who live, walk, and roll in the Rosewood neighborhood.
Nadia, a distant neighbor of Emilio (though they do not know each other), has some of the same concerns, both for herself and her granddaughter. She picks up the toddler from her daughter’s house, using the 162nd Ave MAX station. With uneven sidewalks and a lack of curb ramps in many places, it is difficult to make trips to the market or other destinations in the neighborhood while pushing a stroller. Getting across the wide intersections before the walk signal ends can be difficult, and she fears someday an impatient driver may hit her or her granddaughter.

While Emilio and Nadia are both fictional personas, their stories are based on the research and engagement that went into developing this neighborhood walkability plan, Roses from Concrete. Real people in the Rosewood neighborhood face many of the same obstacles as Emilio and Nadia every time they walk. Many areas of Rosewood are unsafe for pedestrians, a problem disproportionately experienced by vulnerable populations like youth, older adults, residents with disabilities, people of color, and houseless community members. Like much of east Portland, the Rosewood neighborhood has experienced significant historic disinvestment from various government institutions. In particular, investments in transportation have not been distributed equitably throughout the region, especially for areas like Rosewood that are located along interjurisdictional boundaries - in this case between Portland and Gresham.

1.1. RECENT PLANNING ACTIVITY

Although not nearly enough to rectify decades of inequity, recent transportation planning activity has attempted to address some of these infrastructural issues; roughly $19 million in committed funding is set to significantly alter the pedestrian landscape of Rosewood and directly abutting areas (Appendix-C). While these projects and public funds present unprecedented opportunity for Rosewood, they also present challenges that do not fall under the auspices of any particular entity.

Challenge

There is lack of coordination between existing plans - often with overlapping or disparate components - making it difficult to discern and
Figure 1-1. Rosewood Neighborhood Boundaries

Data Source: City of Portland, Metro, Trimet (2020). Map created by W&R
communicate the totality of changes set to occur. With numerous planned near- and long-term projects in the pipeline, it is difficult for the Rosewood community and relevant stakeholders to evaluate how well and where these investments will improve walking conditions, or to what degree they have incorporated community desires.

In turn, this lack of cohesive information limits the ability for neighborhood stakeholders to effectively organize around their desires and guide funding and relevant entities towards projects that meet their needs.

Response

Walk & Roll Consulting (W&R) addresses this problem by synthesizing and analyzing all future pedestrian projects backed by committed funding within a specified study area - the first reference tool of its kind for Rosewood and a task unlikely to be completed by the numerous public entities involved.

Opportunity

While several plans contain discrete, detailed pedestrian infrastructure projects, the allocation of all funding sources is not entirely determined or planned for; other projects lack committed funding altogether. This presents an opportunity to analyze and address specific challenges experienced in the neighborhood at key locations that might otherwise be overlooked or underbuilt to effectively serve the most vulnerable walkers and rollers (i.e. those accessing the neighborhood by foot, with a mobility device, or using a stroller or other wheeled conveyance to transport children or goods).

Capitalizing on this opportunity, Roses from Concrete identifies and makes recommendations for improvements along discrete locations which embody a variety of key challenges common across Rosewood. These discrete locations are referred to as “key challenge points”.

1.2. PLAN APPROACH

8 to 80 Targeted Universalism

Roses from Concrete centers youth and older adults - two populations that experience a unique set of challenges while walking that make them among the most vulnerable pedestrians. The underbuilt and unsafe conditions in many areas of the Rosewood neighborhood exacerbate these challenges and create barriers to walking for populations of all backgrounds. By employing a targeted universalism approach through an age “8 to 80” lens, W&R aims to effectively plan for multiple demographics along the continuum of age.

This approach of targeted universalism at the pedestrian scale is simply
not yet present in many existing plans that otherwise address walkability in the Rosewood neighborhood.

**Study Area**

Working with The Rosewood Initiative, W&R established a study area (Figure 1-2.) within the larger Rosewood neighborhood with a significant presence of schools, parks, and other landmarks frequented by the community. Focusing on this important area of Rosewood allowed W&R to take a deeper dive into the different street typologies, pedestrian challenges, and future projects affecting the neighborhood.

**Focus Streets**

Within the study area, Roses from Concrete targets three focus streets:

- SE Main St/Mainmill Dr
- SE 162nd Ave
- SE 174th Ave

These focus streets present unique opportunities for improvement across different and highly frequented street typologies (high speed corridors, collectors, and residential thoroughfares). Each focus street was collaboratively chosen through an iterative selection process between W&R and representatives of The Rosewood Initiative and Oregon Walks.

**Key Challenge Points**

Key challenge points (KCPs) are discrete locations where:

- Pictorial perspectives are represented from the pedestrian point-of-view, depicting current conditions.
- Existing infrastructure conditions are abstracted, called out, and thoroughly explained.
- Digital rendered recommendations take into account street typology, future projects in the pipeline, and adjacent neighborhood assets.
- Recommendations are broken down into “tier one” (least capital intensive), and “tier two” (most capital intensive) classifications to help stakeholders and decision makers both envision and prioritize different scales of infrastructure investment.

The goal of these recommendations is threefold:

1. Provide conceptual guidance to transportation bureaucrats and decision-makers for how to address certain pedestrian challenges in Rosewood.
2. Provide all stakeholders a way to envision alternative solutions at different levels (or “tiers”) of capital
Figure 1.2. Study Area, Focus Streets, and Key Challenge Points

Data Source: City of Portland, 2020. Map created by W&R
investments.

3.) Promote pedestrian improvements that can be replicated in contextually similar circumstances across Rosewood.

The selection process for these key challenge points was informed by a combination of key informant interviews, survey results, and W&R’s field observations. Two of the four selected KCPs are located at collector intersections while the other two are split between a major arterial intersection and one residential, mid-block typology.

Representing variation across street typologies, each key challenge point highlights unique problems presented to pedestrians navigating Rosewood, thereby allowing an opportunity to tailor specific, location-based recommendations that address multiple layers of nuance. Simultaneously, many characteristics of the selected KCPs are shared throughout the neighborhood. This provides an opportunity for decision makers and stakeholders to replicate recommendations across similar contexts where appropriate.

1.2. RECOMMENDATIONS

In addition to discrete infrastructure improvement recommendations at each key challenge point, final recommendations also include high level, generalizable approaches to improve walkability in Rosewood. All recommendations presented in Roses from Concrete are informed by an amalgamation of an existing conditions analysis, stakeholder input, outside research and expertise, and future planned projects.
Equity in planning requires designing and building with a focus on the most vulnerable residents, which ultimately provides a better walking environment for all users - a method called “targeted universalism.” This idea has roots within the concept of the “curb-cut effect” in transportation. Curb-cuts were originally implemented to meet the needs of those using assisted mobility devices, but they also benefit a diversity of people such as those pushing strollers, wheeling cargo, or carrying groceries.
This chapter explores the concept of targeted universalism as it specifically relates to age as well as the pedestrian challenges youth and older adults experience. In addition, this chapter applies research and other findings to build personas intended to tell stories about the challenge's youth and older adult pedestrians experience in the context of Rosewood.

While a focus on youth and older adults is designed to address the needs of all ages by planning for those who are most vulnerable, W&R recognizes the subset of challenges that may apply to other marginalized demographics, particularly relating to race and ethnicity. Using an engagement strategy that intentionally partners with organizations with diverse clientele, and cognizant that most planning efforts fail to include people of color and those of lower socioeconomic status, W&R sought to oversample the input of historically marginalized populations where possible. As will be discussed further in the “Engagement” chapter of Roses from Concrete, the COVID-19 pandemic severely undermined that effort, warranting significant future work to engage these communities and gather additional input.

### 2.1. 8 TO 80 TARGETED UNIVERSALISM

Cities globally are reimagining how they may develop to support all generations through the concept of “8 to 80 cities”. The City of Portland’s 2035 Comprehensive Plan echoes this sentiment in Policy 9.9, which establishes guidelines around building accessible and age-friendly transportation:

> “Ensure that transportation facilities are accessible to people of all ages and abilities, and that all improvements to the transportation system (traffic, transit, bicycle, and pedestrian) in the public right-of-way comply with the Americans with Disabilities Act of 1990. Improve and adapt the transportation system to better meet the needs of the most vulnerable users, including the young, older adults, and...”

![Figure 2-1. 8 to 80: Edges of the Age Continuum](image)
people with different abilities.”

When successfully implemented, this approach resolves the mismatch in the present built environment and the specific needs of people across age groups and abilities.

Targeted universalism can meet the needs of individuals across multiple age demographics by solving for those with the highest vulnerability. If older adults are able to do their grocery shopping and youth are able to travel with friends to buy ice cream comfortably and safely as pedestrians, those in the middle of the age continuum will be taken care of as well (Figure 2-2.). Selecting these target populations is also an effort to be responsive to the needs of the whole Rosewood community.

“A healthy transit system increases walking trips and access to opportunities outside of one’s neighborhood, but it also partially relies on the existence of sufficiently safe and convenient pedestrian infrastructure – something especially important to vulnerable walkers and rollers.”

Figure 2-2. 160th & Stark where older adult pedestrian was killed
2.2. OLDER ADULTS

Though older adults are not highly concentrated in Rosewood, the analysis of crash data within the study area identified the only pedestrian fatality as a man in his 70s (Figure 2-1.). Nationwide, the rate of older adults killed by drivers is 25% higher than the pedestrian fatality rate for the total population. Additional research has shown that older adults experience a higher rate of fatalities compared to younger pedestrians at equivalent speeds. W&R found a statistically significant difference in the pedestrian fatality and severe injury rate between older adults and the overall population in Portland (Appendix-A). For findings related to functional ability in older adults see Appendix-A.

2.3. YOUTH

Rosewood is distinguished by a relatively high concentration of youth, (Figure 3-1. in Existing Conditions) and a robust network of schools throughout the area. While the average youth does not experience limitations around functional ability to the same degree as older adults, youth do contend with distinct barriers to mobility. There is some evidence that youth are more sensitive than adults to indicators of social disorder such as the presence of narcotics and violence in the public realm.

“Having the MAX stops just 10 blocks away could be a huge resource because then you can get all over the place. But a lot of people don’t see it that way. They don’t want their high school kids going up to the MAX, walking up there.”

–Key informant

Those under the age of 15 or 16 typically do not drive an automobile. Many older teens do not own a car due to lower incomes or other reasons, and therefore must depend on either being driven or making use of alternative modes. Effectively, many youths have no choice but to walk or ride local transit.

For neighborhood level trips, walking has the advantage of not requiring equipment like bicycles (which can be storage- and cost-prohibitive for many youths in Rosewood) and is more flexible than transit. Youth have reported higher preference for more robust pedestrian supportive infrastructure like improved crossings, and nearby access to commercial land uses. These findings overlap with the preferences of older adults, presenting opportunities for co-beneficial infrastructure improvements.
2.4. MOBILITY AND ACCESS TO OPPORTUNITY

Mobility, in general, is a key driver of access to opportunity. Those with limited mobility experience higher rates of social exclusion resulting in lost opportunities, such as in employment and positive life outcomes. Research has shown youth and older adults are more dependent on active modes of transportation such as walking, biking, and transit, but are also more vulnerable when using these modes.

Older adults that decrease their driving are more likely to shift to walking over other modes, and if they do, they take fewer trips than those who drive. Youth are excluded from driving mainly due to age and lack of income. For both these populations, fewer trips can mean less access to opportunity and higher levels of social isolation when compared to drivers. Infrastructure that both corrects for gaps in the transportation network and better suits pedestrians would serve the target populations of youth and older adults well. Within the Rosewood area – in particular, improvements in pedestrian infrastructure will have long term and compounding positive impacts on the opportunities and outcomes of local residents.

2.5. THE ROLE OF INTERSECTIONALITY IN WALKABILITY

Rosewood is a highly diverse community and the role of intersectionality must be considered in realizing equitable outcomes for community members. Research conducted in Portland found that black pedestrians waited longer than white pedestrians for motorists to yield for them to cross the street. Additionally, focus groups held exclusively with black Portlanders found that participants reported increased barriers as pedestrians than reported citywide. These higher rates are comparable to

“If being able to send your kids to school safely is not an option, that is a barrier itself. If getting to transit to get to a well-paying job isn’t an option, that’s an issue as well. These are social justice issues that are coming out of not being able to walk where you need to safely. Having access to a car or the ability to pay for a car shouldn’t be the way to upward mobility. Being able to walk where you need to or take transit should be.”

-Key informant
2.6. PERSONAS OF ROSEWOOD TARGET POPULATION

W&R developed personas to help center the stories of youth and older adults in the planning process. A persona is based on the traits and experiences of likely real-world users, providing a lens to examine pedestrian challenges and consider potential solutions. Personas have long been used within the field of design and are increasingly being used in the urban planning and transportation sectors. The personas W&R developed were informed by a literature review of youth and older adult pedestrians, key informant interviews, publicly available administrative data, and surveys. While these personas are grounded in a variety of data, they are not validated with Rosewood residents representing the target populations due to the severe contact limitations of COVID-19. It is recommended that additional insights be collected so that these personas can be refined for continued usage in informing transportation decisions.

2.7. PEDESTRIAN JOURNEY MAPS

W&R developed two pedestrian journey maps (Appendix-A) that are paired with the personas. A journey map is a diagram that visualizes an individual’s experience as discrete stages from their perspective. This allows interventions to be developed for each stage, and the outcomes of the collective experience to be improved. Like personas, journey maps range in the presentation of information displayed.

To demonstrate an “experience,” W&R used the categories of “doing” (i.e. actions taken by the person at each stage), thinking (i.e. how the person is assessing and reacting to the conditions), and a graph based on a Likert scale which rates each stage. At the bottom of each journey map...
is an “Opportunities” section, which captures ideas for interventions to improve the future state of the pedestrian journey.

Each journey map depicts a specific trip (e.g. shopping, recreation, school) along a different focus street from the perspective of a persona in the target population. Like the personas, the journey maps are unvalidated with Rosewood residents. It is recommended that they are validated at a future date by using contextual inquiry (i.e. receiving feedback from residents while walking the focus streets).

2.8. NADIA AND EMILIO

Nadia (the persona of an older adult living in Rosewood) and Emilio (the persona of a youth) were designed to conceptualize what someone in these demographics would encounter as a pedestrian. Both are in good health and do not use a mobility device. Those who are in poor health report greater barriers to traveling as a pedestrian; therefore it should be noted that those in Rosewood with higher degrees of mobility limitations than Nadia and Emilio would encounter greater difficulties in an already challenging geography for active modes.
Nadia has lived in her house in Rosewood for 22 years. Recently widowed, and originally from Ukraine, she never obtained a drivers license, as her husband did all of the driving. Her immediate family lives in the Portland metro, including her granddaughter whom she takes to Parklane Park by stroller. Nadia accesses the majority of services outside of Rosewood by walking to, and taking the MAX from the E 162nd Ave. Station. Her health is good and she would like to continue aging in her home.

**Hindrances:**

Inefficient route options, intermittent pedestrian infrastructure, high stress conditions at intersections, crowds and chaos that feels threatening.

**Goals:**

Meet daily needs, sustain independence, age in place, remain involved in the community, feel dignified and be a supportive grandmother and caregiver.

—Nadia

“I want to feel connected to those I care for.”
TARGET POPULATION: Roses From Concrete

RACE/ETHNICITY: White non-Hispanic

OCCUPATION: Grandmother

HOUSEHOLD: Lives Alone

LOCATION: Rosewood area in Portland, OR

DEVELOPMENT PATTERN: Suburban-retrofit

ARCHETYPE: Older adult

RACE/ETHNICITY: White non-Hispanic

OCCUPATION: Grandmother

**Mode Frequency**

- Walk or roll
- Cycle
- Transit
- Private Automobile Passenger
- Private Automobile Driver

**Disability**

- Wheelchair use
- Walking with use of ambulatory aide
- Hearing Impairment
- Visual Impairment
- Limited use of hands
- Cognitive Impairment
Emilio is a youth who has lived in Rosewood with his parents and older sister at the Springtree Apartments for 3 years. He is a student at Alder Elementary School. He loves soccer and wants to play for the Portland Timbers. Each morning, Emilio is dropped off by his mother at his friend's house before she goes to work. The two boys walk to Alder under the supervision of an adult. After school Emilio will participate in the SUN program, play sports at the Boys and Girls Club Rockwood, or head to a park.

**Hindrances:**
Pedestrian spaces as an afterthought, an environment with little margin for error, dependence on others who drive, and too many barriers getting in the way of having fun along the walk.

**Goals:**
Socialize with friends, meet daily needs, become educated, daily activity, and having fun.

“I want to play with my friends and have fun.”

—Emilio
Mode Frequency

- Walk or roll
- Cycle
- Transit
- Private Automobile Passenger
- Private Automobile Driver

Disability

- Wheelchair use
- Walking with use of ambulatory aide
- Hearing Impairment
- Visual Impairment
- Limited use of hands
- Cognitive Impairment

Household: Lives with parents and sister
Location: Rosewood area in Portland, OR
Development Pattern: Suburban-retrofit
Archetype: Youth
Race/Ethnicity: White non-Hispanic
Occupation: Student
Endnotes


“The Rosewood Neighborhood is the literal and figurative ‘end of the road.’ It’s Portland but it’s also Gresham, so it’s in that area where it doesn’t get the attention it deserves.”

–Pedestrian Advocate

Between 1981 and 2001, the unofficial neighborhood of Rosewood was incrementally annexed into the City of Portland. The legacy of the former “East County” is readily observable today by the split of the Rosewood area between Gresham and Portland jurisdictional boundaries. With differing municipal priorities and funding capacities as well as a general lack of coordination and available data, this split further exacerbates public disinvestment in the area. In turn, Rosewood community members are directly impacted by unsatisfactory and unsafe walking conditions.
3.1. DEMOGRAPHICS

In addition to receiving disproportionately fewer public dollars relative to inner Portland, Rosewood also looks significantly different. Rosewood is one of the most racially and ethnically diverse neighborhoods in Portland (Figure 3-1.). In stark contrast to the city as a whole, just over half of Rosewood residents are people of color (Figure 3-2.).

The racial characteristics of Rosewood’s recent population growth are also unique: between 2009-2018, the nonwhite population increased by 46% while the total population went up only 19%.\(^1\) The foreign-born population also grew at a faster rate than Rosewood’s population as a whole; today, the immigrant population share is nearly double that of Portland’s with a total of 70 languages spoken just within the neighborhood.\(^2\)

Rosewood displays many indicators of relative marginalization. The neighborhood’s median household income is $16,000 less than the county median and many struggle with poverty.\(^3\) Rosewood’s poverty rate in 2018 was roughly 26% compared to Portland’s 15%.\(^4\)

3.2. PEDESTRIAN INFRASTRUCTURE CONDITIONS

Rosewood’s pedestrian infrastructure is characterized by a wide array of issues, many of which can only be assessed from the first person, as highlighted in the Portland Bureau of Transportation’s report Walking While Black, which was based on focus groups with African American Portland residents, research and personal stories show that drivers are less likely to stop for pedestrians if they are people of color, leading to an increased sense of indignity and danger while walking.

Lack of sidewalks and poor sidewalk conditions, few places to cross safely, and inadequate lighting were some of the most common complaints from focus group respondents about their experience walking in their communities demonstrating the common barriers that people of color from neighborhoods such as Rosewood experience every day.\(^5\)

![Figure 3-1. Demographic Overview](source: US Census, ACS 2014-2018)
street view perspective. To gain this more qualitative perspective, W&R relied heavily on key informant interviews, survey data, and field observation. However, the intention of this section is to provide an overview of quantitative data and accompanying imagery in order to objectively analyze and present current infrastructure conditions.

**Street Connectivity**

In sharp contrast to the grid pattern of older neighborhoods of Portland, the suburban-style design of Rosewood means that many streets have poor connectivity (Figure 3-3), with irregular lengths, cul-de-sacs, dead-ends, and many intersections failing to align. This makes mobility of any kind more challenging, let alone for those on foot or using rolling devices.

When desired destinations are difficult to access on foot, pedestrians are forced to walk along major arterials where many feel unsafe or uncomfortable due to speeding vehicles, poor crosswalks, poor air quality, and heat due to asphalt coverage and lack of tree canopy. Noise levels are also high along major thoroughfares, which has a negative impact on walkability.⁶

**Sidewalks**

The majority of residential streets in Rosewood lack sidewalks or may have only partial sidewalk segments (Figure 3-5). Aside from the
Figure 3-5. Sidewalk Presence in Rosewood Study Area

Data Source: City of Portland (2020). Map created by W&R

Legend
- Sidewalk Present
Figure 3-6. Crossing Gaps in Rosewood Study Area

Data Source: City of Portland, PedPDX (2019). Map created by W&R
area directly abutting Parklane Park and Parklane Elementary, SE Mill St/ Millmain Dr also has no sidewalks on either side of the street within the study area.

Sidewalks present on major thoroughfares such as SE Stark and SE 162nd are damaged and uneven in certain segments, or partially blocked by utility poles. In the case of SE 174th Ave, no sidewalks are present at all in the study area, even though this segment of the street is parallel to two elementary schools and a park. Along this street, pedestrians are relegated to crude gravel/dirt walkways with poor surface runoff management.

**Crossings**

Having adequately marked crosswalks at regular, short intervals is one factor in saving lives, as it provides a more visible location for people to cross; however, with substantial distances between marked crosswalks (Figure 3-6.), most of Rosewood does not meet the City’s Crosswalk Spacing Guidelines. By the City’s own standards, these dangerous areas should be built to safer and higher quality standards in order to make walking safer for Rosewood residents. Additionally, many of the crosswalks that do exist are not built to an 8 to 80 standard (Figure 3-7.).

**Street Lighting**

Throughout Portland, approximately 35 miles of wide High Crash Network streets have lighting on only one side of the street, creating patchy illumination that can make it hard for people to see each other or for drivers to see them. In addition, most crossings lack shorter, “pedestrian scale” street lights which increase the visibility of people in crosswalks and make it easier for people walking to spot hazards, like uneven parts of the sidewalk.

The most lighting-deficient streets in Portland are located east of I-205, which includes Rosewood. Compared to inner Portland, Rosewood has fewer street lamps and darker streets (Figure 3-8), and this is an important factor in safety as intersections that are illuminated have a 42% reduction in crashes. Portland residents on average have 74% more street lighting compared to residents living in Rosewood census tracts that
fall within Portland city limits.8

Poor lighting was also identified as the top barrier to walking in Portland among people who identify as Black9 - a finding highly relevant to a neighborhood with double the share of Black residents compared to Portland overall.

### 3.3 VEHICLE CRASHES

Serious crashes (fatal and severe injury crashes combined) have

Commutes that begin early in the morning when pedestrian visibility is very low could be influencing residents’ choice to drive rather than walk, bike, or take transit. Improving lighting could impact residents’ likelihood of including active transportation in their daily travel.

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**Figure 3-8. Street Lighting in Portland**

*Data Source: City of Portland (2020). Map Created by W&R*
fluctuated since 2007, but recently have been increasing at the local, state, and national level. These serious crashes disproportionately impact people of color, low income individuals, and those over age 65. The majority of the High Injury Corridors and Intersections, and a majority of pedestrian deaths and severe injuries, are in race and income-marginalized communities.10

Being involved in a collision while walking is especially dangerous. While pedestrian-vehicle impacts make up just 2% of all crashes, they are 36% of all fatal ones. According to Metro, a pedestrian collision is more than 26 times as likely to be fatal than one not involving a pedestrian, and more than 110 times as likely to be fatal than

<table>
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<th>FIGURE 3-9. TIME LEAVING HOME FOR WORK</th>
<th>Rosewood</th>
<th>Portland</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00 a.m. to 4:59 a.m.</td>
<td>9.8%</td>
<td>3.4%</td>
</tr>
<tr>
<td>5:00 a.m. to 6:29 a.m.</td>
<td>25.0%</td>
<td>13.5%</td>
</tr>
</tbody>
</table>

Source: US Census, ACS 2014-2018

<table>
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<tr>
<th>FIGURE 3-10. TRAVEL TIME TO WORK</th>
<th>Rosewood</th>
<th>Portland</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 or more minutes</td>
<td>12.3%</td>
<td>6.6%</td>
</tr>
</tbody>
</table>

Source: US Census, ACS 2014-2018
Figure 3-11. Rosewood High Injury Corridors

Map created by W&R
a rear end crash, the most common crash type.

Under Portland Bureau of Transportation’s Vision Zero Policy, crash data is used to make infrastructure improvements for safer walking, biking, and driving. Rosewood contains four of the top high crash corridors - Stark, Division, Burnside, and Glisan - and high crash intersections - SE 148th and Stark, SE 148th and Division, SE 174th and Division, and E Burnside and 148th (Figure 3-11.). According to Vision Zero data, 57% of crashes happen on just 8% of Portland's streets. In the Portland metro region, 77% of serious pedestrian crashes occur on arterial roadways - two of which are focus streets identified in this plan.

3.4. TRAVEL BEHAVIOR

Another factor worth noting is that, relative to Portland as a whole,
Rosewood residents leave much earlier in the morning for work. This could be due to their longer commutes from living on the outskirts of the city or different jobs profile than those living in inner Portland. Though public transit usage is higher in Rosewood than Portland overall, car use dominates even more, with 77% of residents driving versus 66%, potentially indicating that Rosewood residents are more car dependent. Commutes that begin early in the morning when pedestrian visibility is very low could be influencing residents’ choice to drive rather than walk, bike, or take transit. Improving lighting could impact residents’ likelihood of including active transportation in their daily travel.
Endnotes


Chapter Image: S. Bermudez, W&R Consulting.
Having an in-depth community-centered process that focused heavily on engagement with vulnerable populations - including youth, older adults, and people of color who represent a significant percentage of Rosewood - was a major goal of W&R Consulting for producing Roses From Concrete. However, the outbreak of the COVID-19 respiratory virus effectively made robust, in-person engagement impossible. Despite the unprecedented disruption, equity and inclusion remain a focus of this plan, and W&R improvised by assessing and adapting the original outreach plan to fit the new reality.
4.1. ORIGINAL ENGAGEMENT PLAN

Community engagement was intended to be the most significant component of Roses from Concrete. The original strategy included focus groups at senior centers and other gathering sites for older adults. A local Meals on Wheels Dining Center was to be the location of the first older adult focus group. Meanwhile, to reach younger demographics, W&R scheduled tabling at the Rockwood Boys & Girls Club, intending to talk with youth about their experiences walking in the neighborhood. Additionally, W&R set up two sessions with the SUN Programs at Parklane and Oliver Elementary schools, respectively. Working with SUN school coordinators, the engagement team planned to visit classrooms and interactively present on pedestrian issues the kids may encounter. Additionally, W&R’s engagement team specifically scheduled to work with 5th-grader classrooms on fulfilling hands-on art projects wherein students created models of the kinds of streets they want. W&R also considered a walking audit, but was concerned with the risks associated with recruiting vulnerable road users - youth and older adults - to walk on roads without sidewalks and cross dangerous intersections.

Aware that the population of Rosewood is over-surveyed - often with disjointed and uncoordinated parties, and that previous transportation surveys did not reach a substantial percentage of people of color, W&R originally avoided conducting a survey. Roses From Concrete was intended to favor in-person engagement methods that aimed to oversample marginalized groups who had previously been left out of planning data collection strategies to date. Paradoxically, though the area is oversampled and comparatively more diverse than the greater Portland area, previous plans have simply neither elevated nor successfully represented minority voices within this community.

COVID-19 Related Changes

On March 12, W&R received word that, because of the spread of COVID-19, Portland State University would be moving to remote learning and most in-person gatherings would be cancelled. Although the team initially hoped activities might only be postponed or at least appropriately modified, official requirements continued to prohibit social gatherings. It quickly became clear that all interactions would need to be shifted to entirely remote platforms, necessitating significant changes in W&R’s community engagement strategy.

COVID-19 Related Outcomes

Due to disruption of face-to-face interactions from COVID-19, Roses From Concrete has failed to accurately represent and elevate the voices of real people who live and identify as minorities within the Rosewood
community. Direct engagement with community stakeholders was intended to demonstrate the planning team’s commitment to the neighborhood improvements these residents deserve while providing the higher quality feedback that comes with real conversations.

Accepting these limitations, W&R revamped the engagement strategy to provide a foundation of content that can be verified by and flexibly tailored to the needs and perspectives of specific community members upon a later date - when direct engagement is again feasible.

“Walkability is the ability to walk anywhere and feel safe doing so but also having a collection of places we can walk to. The combination of safe and accessible pathways alongside places where people want to go and transit accessibility are each defining components of walkability.”
4.2. KEY INFORMANT INTERVIEW OVERVIEW AND METHODOLOGY

Though initially key informant interviews were intended to be a supplementary component of Roses From Concrete, due to the requirement to suspend group activities and the need to gain an in-depth perspective from those with knowledge of the pedestrian challenges facing communities like Rosewood, W&R Consulting chose to make this a main part of the engagement strategy.

Interviews were conducted with twelve individuals - separate from the twelve who provided survey data - representing a combination of transportation and educational professionals, walkability and neighborhood advocates, and Rosewood community stakeholders to gather direct input for this plan.

Each interview lasted 30-60 minutes and took place either in person or through video conferencing with one or two members of the W&R team. Some interview questions were specific to each interviewee, but each received the same set of four questions in order to better evaluate the diversity of perspectives that arose. The four common questions included:

1. What does a street look like when an 8 year old and an 80 year old can comfortably walk together anywhere in the neighborhood?

2. What are the barriers to creating these conditions in the Rosewood area?

3. What are the opportunities for creating these conditions in the Rosewood area?

4. What does walkability mean to you? What does it mean to the populations you work with or serve?

A comprehensive analysis across all responses helped to paint a broad picture of thoughts and opinions on walkability both conceptually and as it pertains to Rosewood specifically, while also highlighting several recurrent themes. This information was highly informative in setting the backdrop for the work W&R set out to perform.

4.3. RESPONSES FROM KEY INFORMANT INTERVIEWS

The twelve key informants interviewed by W&R provided a significant amount of feedback on walkability in general and as it may apply to Rosewood. Their responses have been organized into the following themes:

Response Theme: Principles of 8 to 80 Walkability

- Walkability across all age groups entails an environment
that promotes ease, comfort, and convenience while walking. Pedestrian infrastructure and the built environment should elicit excitement and motivation to walk. Walking as a mode of transportation should be a desirable and viable choice rather than something people are forced to do out of necessity despite potential hazards.

- A walkable area provides the freedom to access any destination within a reasonable radius without the preoccupation of concern for personal safety – day or night. People interested in walking should not have to spend time planning out a route that makes them comfortable, which requires ample connectivity of walking infrastructure. Extra effort to simply make the choice to walk will result in people opting out for other modes.

- Physical and perceived/psychological safety is critical to walkability. Infrastructural conditions should produce low to no risk of pedestrian/vehicle collisions, but this does not only entail physical safety from vehicles. Walkability also means the ability to walk without being profiled by dominant culture and the police. It means having a sense of belonging to the surrounding community while walking.

- Visibility is an important component of walkability for youth and older adults. Pedestrian infrastructure should be highly visible and intuitive for those with impaired vision and children learning to navigate the pedestrian landscape. Regardless of height, pedestrians should be able to easily see and judge oncoming traffic from either direction at intersections while also being visible to drivers.

- Children are much more likely to make mistakes or require additional time to cross streets. Walkability for young children means a margin of error must be built into pedestrian infrastructure.

- Walkability for those aged 8 to 80 should be measurable in demonstrably improved outcomes, with no disproportionate effects on older adults and increased rates of walking for youth.

“Walkability also means the ability to walk without being profiled by the police. It means having a sense of belonging to the surrounding community while walking.”
• ADA accessibility must be included for a walkable environment; this would improve conditions for youth and older adults by accommodating walkers, strollers, and wheelchairs.

• Walking infrastructure is only one small piece of making an area more walkable; people need a robust selection of healthy, balanced, and desired destinations to walk to and from (e.g. mixed income housing, grocery stores, parks, essential services, etc.).

• Improving walkability is largely a battle against a deeply embedded culture of autocentrism shared by residents and decision-makers alike.

• Persuading stakeholders to prioritize the pedestrian environment is critical to developing an equitable practice of investment and planning.
Response Theme: General Challenges to Creating Walkability

- Land-use and infrastructural issues surrounding right-of-way are logistically complicated and expensive. Seemingly small changes can easily become extremely lengthy and expensive projects (e.g. utility pole removal/relocation).
- Once a plan for improving pedestrian infrastructure includes repurposing private property or placing right-of-way maintenance responsibility on property owners, the political battles increase greatly.
- Sidewalks cost about $1 million a mile and many cities simply do not have the funds to place, track, and maintain sidewalks everywhere.

Response Theme: Barriers to Walking in Rosewood

- Many residents fear for their safety and the safety of their family and children along major corridors (162nd, 174th, Stark, etc.).
- Many areas of Rosewood have extremely poor lighting. This adds to fears of crime, perceived lack of safety, and lack of visibility to oncoming traffic.
- Sidewalks are incomplete, non-continuous, and/or poorly maintained in several areas.
- Poor sidewalk connectivity creates longer walking trips, which is much more amplified for those with disabilities. Many side streets do not connect or pass through to major destinations, forcing people to walk alongside major arterials.

- Pedestrians cannot reliably make safe decisions about their own movement.
- The residential infrastructure in Rosewood was not originally designed to accommodate full-sized sidewalks.
- Much of the existing pedestrian crossing infrastructure is ineffective and underbuilt to safely serve all walkers and rollers.
- Most of Rosewood’s right-of-way is dedicated to vehicular traffic.
- Major roads are very wide (often 5 lanes wide) and underutilized, which incentivizes drivers to speed and makes pedestrian crossing extremely dangerous.
- Drivers do not obey speed limits generally.
• Due to the nature of the built environment of Rosewood, poor air quality, heat from excessive concrete and asphalt coverage, and lack of tree canopy is pervasive.

• The cost and build duration of significant and wide-spanning infrastructure improvements is exorbitant if not prohibitive, e.g. complete sidewalks, signals, crossing beacons, etc. (This is the #1 cited barrier across all interviews).

• Since Rosewood straddles two cities, there are significant jurisdictional challenges in regard to implementing a plan focused on the neighborhood specifically.

• The culture of autocentrism is dominant for many living and working in Rosewood, and many are resistant to perceived reductions in driving convenience.

• There is little to no indication in the built environment that there is a high concentration of children in several areas (e.g. the study area of this plan). The demographic makeup of Rosewood highlights and amplifies the social inequities resulting from the lack of pedestrian options.

• Many are walking because they do not have and/or cannot afford other transportation.

• Many residents feel a sense of discouragement and lack of ability to affect desired change.

• Rosewood, and particularly its residents, are politically underrepresented. Within and across the Portland region, there is an east vs west political and socioeconomic imbalance that ultimately neglects low-income communities of color.

“Our vision for safe routes – everyone has access and the ability and feels safe on the road to choose however they want to get to school. That would be amazing. If kids said, ‘I want to walk today and don’t want to go in the car’ – they can do that.”
Rosewood falls into several overlapping jurisdictions, each of which has its own approach to community safety. While neighborhood associations tend to prioritize low-cost efforts, like improving lighting along pedestrian routes, local government often prioritizes interventions like enforcement and visible police presence. Roses From Concrete focuses on strategies that improve underlying infrastructural conditions, as these improvements increase community safety at low cost.

“We will never win if the goal is sidewalks everywhere... the vision for collectors and arterials has to change to acknowledge a lack of budget.”

— Key Informant
Present Both Sides

At-grade Alt. Walkway

Pressure-based Beacon

No overhead lighting

Frequent obstructions

Informal parking
Response Theme: Examples of Real World Walkability Improvements

**Jamison Square Park - Portland, OR:**

The area around 12th & Johnson/12th & Irving and between NW 12th & 11th off of Irving St. includes several components of good, age-friendly infrastructure including storefronts/destinations, benches, pedestrian walkways, and non-auto streets.

**7th Ave Max stop – Portland, OR:**

Vibrant location with businesses and a park immediately surrounding the light rail stop. Wide sidewalks with clear pedestrian striping and tree canopy are on each side of the street. Motor vehicle traffic is reduced to single, one-direction lanes on each side of the stop.

Fig. 4-3. “Polish Totems”, NW 11th & Johnson Jamison Square Park, Portland.
Source: W&R Consulting

Fig. 4-4. 7th Avenue MAX stop, Portland.
Source: W&R Consulting
Europe:

Many areas in Europe have implemented advisory bicycle lanes, which are a method of striping a road, providing a center two-way lane for cars and an on-street bicycle lane on either side. Combining two travel lanes into one wide lane allows for bicycle lanes to be added to a roadway that would otherwise be considered too narrow. This has the effect of calming traffic and potentially leaves more space for pedestrian right-of-way.

Bothell, WA:

Bothell has implemented interim 6ft asphalt sidewalks in parts of the city, which is a low-cost way of providing pedestrian walkways that otherwise would not be affordable or cover as much distance compared to traditional sidewalks.

Fig. 4-5. Advisory Bike Lane, Netherlands. Source: Wikiwand - Cycling Infrastructure

Fig. 4-6. Curb-Protected Asphalt Walkway. Source: American Planning Association
Response Theme: Opportunities in Rosewood

• There is an existing and growing infrastructure for community organizing, with multiple community partners backing residents’ efforts, such as families advocating for Lynchview Park to be added to existing pedestrian programs like Safe Routes to School. Residents are concerned and willing to speak out about the need for better walking infrastructure.

• There are multiple important community assets in Rosewood that create the bones for a cohesive community, including Outside In, YWCA, Boys & Girls Club, parks, etc.

• Recently improved transit conditions from bus line and service expansion in the area are expected to have created a higher demand for improved pedestrian infrastructure.

• There is significant institutional momentum and public support concerning current/upcoming funding for improving walking conditions across Portland, and east Portland in particular (e.g. the transportation plans and funding sources discussed in this document).

• Wide roadways provide opportunity to physically alter the right-of-way including potential for new or retrofitted sidewalks, crossings, and lighting.

• Some residential areas hold private property, e.g. front yards, that are capable of accommodating public walking infrastructure. This would require buy-in from property-owning residents and fair-compensation through ROW acquisition by public partners.

Response Theme: Potential Solutions for Rosewood

• Lower vehicle speed limits and/or utilize speed humps and traffic cameras. (This was one of the most commonly cited approaches throughout the interviews).

• Decrease vehicle volumes via lane reduction. Decreasing the width of vehicle right-of-way will lead to less expensive pedestrian crossing infrastructure.

• Find cheaper, alternative solutions like lane restriping, advisory bicycle lanes, and interim sidewalks.

• Share right-of-ways costs with developers and property owners.

• Do not over-prioritize bicycle infrastructure in a way
that overshadows pedestrian infrastructure or caters to a demographic not highly represented in the area.

- Place median islands in crossings, particularly on wide, busy roads.
- Utilize center-mounted crossing beacons to allow visibility for all lanes and directions of traffic (particularly applicable to wide, multilane roads).
- Improve pedestrian-oriented destinations, e.g. invest in existing local parks and pedestrian connectivity to them.
- Consider scalability: If a pedestrian is trying to cross four lanes of traffic going 40 mph then a lighted stop control is necessary. When crossing a three-lane road at 25 mph, the crossing improvement can be less capital intensive.

- Improve community advocacy/organizing:
  - Parents should take time to fill out PBOT and Safe Routes to Schools surveys, because the respective organizations use that data to inform decision-making around neighborhood improvements.
  - Improve coordination between school districts regarding Safe Routes to Schools.
  - Create a mechanism for ownership and pride in the project, such as fundraising through the local PTA.
  - Make changes in City government to improve representation of marginalized and chronically underfunded communities. The makeup of City Council and lack of district-based elections makes it difficult for

“There are institutional and structural barriers that limit representation from communities of color. Unless resolved, those communities are stuck with receiving token equity money.”
neighborhoods to effectively advocate for themselves. With political will there is the possibility to alter the City charter to change the way representation functions.

- Successful implementation of walkability requires investments in other basic socioeconomic needs e.g. affordable housing, workforce development, small business support, etc.

Response Theme: Tools and Best Practices

- Sidewalks and other pedestrian right-of-way should be wide enough to accommodate 2-3 people across.

- Street trees and shadow are crucial to providing a comfortable and pleasant experience and can encourage walking and public transit use. Benches and other places for respite have a similar effect.

- Ample street lighting has a major effect on perceived personal safety at night and can incentivize walking for longer hours of the day – a critical component of accommodating pedestrians and transit users with varying work/life schedules.

- Frequent curb cuts are central to sidewalk connectivity and the accommodation of all rolling devices.

- Longer crossing times at lighted intersections and crosswalks ensure ample time for older adults to cross, while leaving room for error for small children. Similarly, leading pedestrian intervals at intersections gives pedestrians the opportunity to enter an intersection 3-7 seconds before vehicles are given a green light, allowing pedestrians to better establish their presence in the crosswalk before vehicles have priority to turn left.

- Traffic calming - including reduced speed limits, speed humps, and reduced number of lanes - should be one of the highest priorities for increasing pedestrian safety and removing psychological barriers around perceived lack of safety.

- Lighted crosswalks and pedestrian hybrid beacons should have audible signals and large, bright lights to accommodate pedestrians of all abilities while better altering traffic.

- Pedestrian right-of-way buffers/barriers (either through physical barriers or painted gaps) along higher speed roads increase feelings of comfort and safety for pedestrians.

- Transit should be accessible via ramps from pedestrian
right-of-way where necessary.

- Land use regulations can improve pedestrian conditions in a multitude of ways by requiring developers to enhance right-of-way infrastructure and/or include treatments to buildings such as high window coverage on street facing buildings.

4.7. PHOTO VOICE

With most people quarantined at home, walking has been one of the only outside activities residents can partake in, with many going for regular jaunts around their neighborhood for exercise and fresh air. As the weather warmed into spring, W&R developed a “Photo Voice” activity to gather visual data from residents’ experiences walking in their neighborhood, supplementing the written data W&R gathered. For this activity, residents were asked through Rosewood Initiative’s social media and newsletter to photograph things they like and dislike in their neighborhood as they are walking, including pedestrian infrastructure issues. They were then asked to “tag” their photos with #RosewoodWalks on social media, or email the photo and a description to an email address set up just for this. This was intended to provide a way for residents to speak through their photos on what they value and what they want improved.

Following the online requests from the Rosewood Initiative, W&R received no responses from residents and were ultimately unable to use this method to gather feedback. This could demonstrate a need for this type of activity to be guided (i.e. part of a class project) and perhaps due to a general sense of being overwhelmed by the ongoing pandemic.

“The curb-cut effect is one of my favorites. The purpose is for wheelchairs and ADA devices, but it benefits people pushing strollers, walking bikes, and even travelling with shopping carts. The effect is huge.”
Issues where people are trying to cross with strollers or carrying groceries and have to hurry to clear the way for traffic.

Unfinished road and lack of sidewalks when we walk to the park.

No sidewalks! Hard to get to the park with small children.

Cars not waiting on pedestrians while turning left against the light.

Walking to Parklane/Oliver from the south side. No sidewalks and lots of traffic at the beginning and end of school.
4.8. SURVEY

In addition to the large volume of qualitative data garnered from the key informant interviews, W&R also sought to gather quantitative data, particularly from those who live in Rosewood. Although not an ideal method for engagement due to the lack of diversity typically seen in survey respondents and the anemic number of returns typically received, after much consideration W&R chose to pursue a Rosewood Walkability Survey to be distributed online through Rosewood Initiative’s newsletter and social media pages, as well as through the SUN program and Oregon Walks Facebook pages; this way, W&R hoped to reach at least some of the same stakeholders that may have been engaged had there been the opportunity to do so in person.

The survey expanded on questions posed in Portland Bureau of Transportation’s PedPDX plan, gathering additional information on trip types. Respondents were asked to drop a pin on a map at the most problematic point for them as pedestrians in the Rosewood neighborhood; this ultimately helped W&R determine the key challenge points on which to focus (Figure 4-7). In addition, useful qualitative data was received from questions such as “Where would you like to walk in your neighborhood if it felt comfortable and safe?”(Figure 4-16)

After about four weeks of the survey being live and shared multiple times through different platforms, W&R received 16 responses, with only 12 containing usable data. This is likely due to “oversurvey fatigue” - a result of this population being surveyed frequently in the past - and a general decline in engagement via social media, especially Facebook. In addition, people’s priorities may be focused on survival during the current social and economic upheaval, with little concern for street improvements that may be years away.

4.9. OVERVIEW OF SURVEY DATA

Constraints of COVID-19

Online surveying methods served as a surrogate for the previously scheduled in-person outreach events that were cancelled due to the COVID-19 pandemic.

Methodology

Suspecting a low sample size, the questions within W&R’s Rosewood Walkability Survey were deliberately modelled after pre-existing survey findings that included the Rosewood area for a direct comparison to more statistically representative samples of the community.

Three surveys conducted by the public sector: PedPDX (2019), Portland Insights (2019), and Safe Routes to School (2018) were the templates for the array of questions in W&R’s
Rosewood Walkability Survey. Because the same questions were used, findings in the Rosewood Walkability Survey were compared with the previous surveys conducted by the public sector. These public sector surveys had the advantage of large sample sizes. Data from the public sector survey were disaggregated to be representative of Rosewood and the target population of youth and older adults (see Appendix-B for survey instruments).

Limitations

The sample size of the Rosewood Walkability Survey was sixteen individuals, with only twelve providing valid answers. Therefore, this survey is not meant to be statistically representative of all members of the Rosewood community. This is, rather, a small snapshot of the perspectives held by some of the local residents.

Furthermore, the respondents of this survey did not reflect the robust diversity of age, race, gender, and other demographics within the Rosewood neighborhood. In addition, our survey was not translated into other languages due to W&R lacking fluency in common languages spoken in Rosewood and corresponding lack of budget to pay for translation services.

Future Applications

The Rosewood Walkability Survey presents a method of collecting qualitative and quantitative data that provides insight into pedestrian challenges in Rosewood. Because of the small sample size, conclusions cannot be drawn from this survey; future opportunities for outreach could provide a more representative sample in size and demographics.

Moving forward, W&R suggests that the Rosewood Initiative, PBOT, Safe Routes to School programs, and other entities surveying walkability in the Rosewood area model surveys from those that came before to ensure a longitudinal interoperability of data - so shifts in community concerns, climate, and perspectives may be readily evaluated. In addition, these surveys should be translated into commonly spoken languages in Rosewood and distributed in person through community groups and events, schools, and other institutions frequented by a diverse spectrum of residents.

Findings

• Rosewood residents generally do not feel safe walking at night; this is a significant disparity compared to Portland residents overall.

• Parklane Park is a frequent destination of members within the community. Accessibility to and from this park is valuable to many residents.
Walkable access to stores and businesses is important to members within the Rosewood community.

Older adults living in east Portland, east Portland residents, and residents citywide prioritized walking improvements in areas where people rely on walking the most, and streets where people have been killed or injured. These preferences align with prioritizing equitable investments.

Older adults report the highest level of barriers to walking compared with all other groups.

### 4.10. SURVEY DATA

Existing survey data were used from PedPDX, Portland’s Pedestrian Masterplan, and the Portland Insights Survey. W & R also conducted a unique survey, the Rosewood Walkability Survey. While the Rosewood Walkability Survey has significant limitations resulting from COVID-19, the

#### FIGURE 4-8. BARRIERS TO WALKING (PORTLAND) 1

(1 = NOT A PROBLEM TO 6 = ABSOLUTE BARRIER TO WALKING)

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Poor lighting</th>
<th>Sidewalks/ walking paths missing on busy streets</th>
<th>Sidewalks/ walking paths missing on residential streets</th>
<th>People driving too fast on busy streets</th>
<th>People driving too fast on residential streets</th>
<th>Drivers not stopping for pedestrians crossing the street</th>
<th>Not enough safe places to cross busy streets</th>
<th>Missing curb ramps at intersections</th>
<th>Buckled/ cracked/ uplifted sidewalks, or other tripping hazards</th>
<th>Not enough time to cross the street</th>
<th>Mean</th>
<th>Total Responses (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Portland Older Adults 65+</td>
<td>4.05</td>
<td>5.04</td>
<td>4.53</td>
<td>4.75</td>
<td>4.94</td>
<td>4.68</td>
<td>4.63</td>
<td>3.57</td>
<td>4.03</td>
<td>3.65</td>
<td>4.39</td>
<td>147-159</td>
</tr>
<tr>
<td>All Portland Youth under age 18</td>
<td>3.40</td>
<td>4.14</td>
<td>3.76</td>
<td>4.17</td>
<td>4.23</td>
<td>4.21</td>
<td>4.00</td>
<td>3.07</td>
<td>3.86</td>
<td>3.54</td>
<td>3.84</td>
<td>29-30</td>
</tr>
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<td>East Portland Residents</td>
<td>3.92</td>
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<td>4.36</td>
<td>4.25</td>
<td>4.53</td>
<td>4.23</td>
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<td>3.43</td>
<td>3.03</td>
<td>4.02</td>
<td>785-903</td>
</tr>
<tr>
<td>Citywide</td>
<td>3.63</td>
<td>4.67</td>
<td>3.95</td>
<td>4.29</td>
<td>4.44</td>
<td>4.29</td>
<td>4.46</td>
<td>3.22</td>
<td>3.45</td>
<td>3.08</td>
<td>3.95</td>
<td>4313-4690</td>
</tr>
</tbody>
</table>

Source: PedPDX Public Survey
other two surveys were robust in sample size and allowed for disaggregation to the level of being representative of Rosewood. The following findings resulted from this analysis.

Barriers to walking were analyzed by disaggregating by the target populations of youth and older adults, and residents of east Portland. A low number of responses collected from youth resulted in the responses representing youth citywide (Figure 4-8). It may be assumed that Rosewood youth would report a higher degree of barriers, since east Portland residents and east Portland older adults reported higher barriers than residents citywide. Low levels of response from youth citywide also implies that standard surveys are not the best method of gaining feedback from this demographic.

Older adults living in east Portland report the highest level of barriers compared with all other groups in all but two categories, with an average rating of 4.4 (with 6 being an absolute barrier). Missing sidewalks and motorists driving too fast were the most significant barriers for this demographic (Figure 4-8).

![Figure 4-9. Barriers to Walking (Rosewood)](image)

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Poor lighting</th>
<th>Sidewalks missing</th>
<th>People driving too fast</th>
<th>Drivers not stopping for pedestrians crossing the street</th>
<th>Not enough safe places to cross</th>
<th>Missing curb ramps</th>
<th>Obstacles and tripping hazards</th>
<th>Not enough time to cross the street</th>
<th>Public safety/Fear of crime</th>
<th>Not enough destinations I want/need</th>
<th>Mean</th>
<th>Total Responses (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosewood*</td>
<td>3.42</td>
<td>4.69</td>
<td>4.67</td>
<td>3.85</td>
<td>4.31</td>
<td>3.67</td>
<td>2.67</td>
<td>3.08</td>
<td>4.15</td>
<td>3.25</td>
<td>3.78</td>
<td>12-13</td>
</tr>
<tr>
<td>Rosewood Daily Transit Rider</td>
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<td>5.50</td>
<td>6.00</td>
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<td>5.00</td>
<td>3.50</td>
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</tr>
<tr>
<td>Rosewood Never Transit Rider</td>
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<td>4.14</td>
<td>3.43</td>
<td>4.00</td>
<td>3.43</td>
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<td>2.57</td>
<td>4.00</td>
<td>3.00</td>
<td>3.39</td>
<td>7</td>
</tr>
</tbody>
</table>

1 Source: Rosewood Walkability Survey
*Note: see respondent characteristics in Appendix-B
WIDE LIGHTING GAPS

POTENTIAL DROP-OFF
PARKLANE / OLIVER

WORN CURB CUT

BOTH SIDES
NO MARKED WALKWAYS
Youth under age 18 citywide report an average rating of 3.8 (Figure 4-8). They report motorists not stopping for them, and speeding along residential streets as the most significant barriers to walking. Since this sample is citywide, respondents could already live in neighborhoods with an established sidewalk network, therefore missing sidewalks would not be a barrier for them like in east Portland youths (Figure 4-8).

W&R conducted a Rosewood Walkability survey to gain feedback from Rosewood residents. As these data were biased demographically, it is problematic to claim they are representative of Rosewood residents. Those who ride transit daily reported a high degree of barriers to walking (Figure 4-9). This population was focused on because it is probable they are transit dependent, and must attempt to navigate the most comprehensive area of Rosewood as a pedestrian. A new category that was

![Figure 4-10. Most Important Places to Improve Pedestrian Conditions in Portland 1](image)

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Streets connecting families and children to schools</th>
<th>Streets connecting people to transit/ bus stops</th>
<th>Areas that serve people who need to rely on walking the most (for example, low-income and transit-dependent residents)</th>
<th>Streets where people walking have been killed or injured</th>
<th>Streets connecting people to neighborhood commercial districts (neighborhood shops and services)</th>
<th>Areas where the most people live and/or work</th>
<th>Streets connecting people to parks</th>
<th>Streets connecting people to libraries, community centers, and other community facilities</th>
<th>Along and across busy streets</th>
<th>Residential streets lacking sidewalks or walking paths</th>
<th>Mean</th>
<th>Total Responses (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Portland Older Adults 65+</td>
<td>5.08</td>
<td>5.03</td>
<td>5.22</td>
<td>5.28</td>
<td>4.81</td>
<td>4.74</td>
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<td>3.93</td>
<td>4.57</td>
<td>4.45</td>
<td>4.10</td>
<td>4.21</td>
<td>4.11</td>
<td>4.14</td>
<td>4.79</td>
<td>4.69</td>
<td>4.32</td>
<td>29-30</td>
</tr>
<tr>
<td>East Portland Residents</td>
<td>4.91</td>
<td>4.91</td>
<td>5.10</td>
<td>5.00</td>
<td>4.57</td>
<td>4.36</td>
<td>4.45</td>
<td>4.56</td>
<td>4.90</td>
<td>4.75</td>
<td>4.75</td>
<td>785-903</td>
</tr>
<tr>
<td>Citywide</td>
<td>4.99</td>
<td>5.06</td>
<td>5.11</td>
<td>5.08</td>
<td>4.73</td>
<td>4.54</td>
<td>4.52</td>
<td>4.65</td>
<td>4.99</td>
<td>4.54</td>
<td>4.82</td>
<td>4435-4515</td>
</tr>
</tbody>
</table>

Source: PedPDX Public Survey
added to this survey compared with PedPDX, was “public safety/fear of crime”. Rosewood residents on average reported a level of 4, while daily transit riders reported a 5. This finding is consistent with the level of fear of walking in the Portland Insights Survey (Figure 4-11).

Older adults living in east Portland, east Portland residents, and residents citywide prioritized walking improvements in areas that people rely on walking the most, and streets where people have been killed or injured. These preferences align with prioritizing equitable investments. Youth citywide prioritized investments along busy streets and residential areas lacking sidewalks. Youth may prioritize residential streets, because they would like to be making local trips in their immediate area (Figure 4-10).

Residents of Rosewood diverge in feelings of safety while walking in their neighborhood compared with residents of Portland citywide. By day, the majority of Rosewood residents at least somewhat agree that they feel safe walking in their neighborhood. However, a strong majority of residents citywide strongly agree that they feel safe walking in their neighborhood by day (Figure 4-11). It should be noted that this question did not get at the many nuances of safety such as crash related safety versus social and physical disorder.

This disparity is more pronounced when comparing feelings of safety walking at night. The majority of Rosewood residents at least somewhat disagree that they feel safe, while the majority citywide at least somewhat agree. Furthermore, Rosewood residents who strongly disagree that they

<table>
<thead>
<tr>
<th></th>
<th>By day</th>
<th></th>
<th>By night</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rosewood</td>
<td>Citywide</td>
<td>Rosewood</td>
<td>Citywide</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>31%</td>
<td>53%</td>
<td>10%</td>
<td>32%</td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>35%</td>
<td>30%</td>
<td>23%</td>
<td>23%</td>
</tr>
<tr>
<td>Somewhat disagree</td>
<td>16%</td>
<td>9%</td>
<td>24%</td>
<td>20%</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>11%</td>
<td>4%</td>
<td>32%</td>
<td>16%</td>
</tr>
<tr>
<td>Neither</td>
<td>7%</td>
<td>4%</td>
<td>11%</td>
<td>8%</td>
</tr>
<tr>
<td>Total responses (n)</td>
<td>388</td>
<td>7993</td>
<td>386</td>
<td>7973</td>
</tr>
</tbody>
</table>

1 Source: 2019 Portland Insights Survey
feel safe walking at night is double the rate citywide (Figure 4-11). These data support what was expressed by key informants that residents of Rosewood feel unsafe walking at night in Rosewood. These feelings may be attributed to a built environment that is less supportive of pedestrians such as fewer street lights, and instances of physical and social disorder compared citywide.

Multiple respondents reported that they would like to access Parklane Park if they felt comfortable and safe doing so (Figure 4-16). Safely accessing the various elementary schools was also expressed. Walking to commercial establishments, particularly the businesses along SE Stark St., was also a priority. These destinations are consistent with the literature of key pedestrian attractions.
4.11. PLANNING FOR FUTURE ENGAGEMENT

Reflecting on what was learned through stunted attempts at remote engagement, W&R recognizes the limits of exclusively digital surveys and outreach methods. Additionally, W&R recognizes that in-person interactions are mandatory to gather accurate data that reflect the breadth and depth of community experiences throughout Rosewood - especially across demographics.

Though project partners, such as SUN programs, used their digital channels to attempt to reach constituents, the levels of response were shockingly low - especially compared to pre-COVID expectations of attendance for in-person outreach events planned.
through these same organizations.

We hope that the inability of W&R to effectively engage a diverse and representative array of Rosewood community members through a digital survey may serve as a cautionary example for future engagement efforts in this area.

In order to provide engagement in a thorough and equitable way, planning projects cannot simply substitute in-person engagement with surveying. Some planning around large projects within the area may need to be delayed until after the resolution of the global pandemic if they require significant community feedback to move forward. An example of this strategy is the postponement of a design charrette for the Rosewood Initiative hosted by SERA architects.

It should be noted that some groups representing equity in the transportation system called for the suspension of planning activities due to participation barriers alone (Ch. 8). The pandemic creates an uncertain environment for planning projects, especially those projects for which rescheduling is not feasible. However, some planning projects will continue moving forward throughout the Rosewood neighborhood. It is important that jurisdictional project leaders integrate multi-layered approaches to community outreach—especially as the current timeline for re-opening is uncertain.

**FIGURE 4-16. DESIRED DESTINATIONS FOR WALKING 1**

<table>
<thead>
<tr>
<th>Desired Destinations for Walking 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>We would love to go to Parklane Park</td>
</tr>
<tr>
<td>To the store and to the park</td>
</tr>
<tr>
<td>I’d love to be able to walk to a store or something else like that</td>
</tr>
<tr>
<td>The park, the businesses on Stark</td>
</tr>
<tr>
<td>To and from the elementary schools</td>
</tr>
<tr>
<td>Everywhere</td>
</tr>
<tr>
<td>Down the side streets</td>
</tr>
</tbody>
</table>

1 Source: Rosewood Walkability Survey
A key part of effectively planning and advocating to meet the infrastructural needs of a neighborhood is understanding what capital projects are currently in the pipeline. Valuable information for neighborhood stakeholders includes where and when projects will be built, what planning phase they are in, who they will benefit, how much they cost, and whether or not they are backed by committed funding. This can help a community decide how to prioritize and organize around their needs.
However, assessing the totality of planned projects for a given neighborhood is challenging, as municipal transportation plans of any kind are rarely tailored to discrete neighborhood boundaries. In the case of Rosewood, such a task required a synthesis of information across multiple plans with components that affect different areas of the neighborhood.

Focusing on the most recent and salient plans affecting the Rosewood study area, W&R compiled a list of funded pedestrian projects (Figure 5-1). From these projects, this chapter provides a more detailed overview of pedestrian improvements along each focus street selected for this plan. These overviews are intended to inform stakeholders of upcoming projects at a more “zoomed in” level so they may better determine how well these projects address pedestrian needs across important neighborhood streets. Additionally, these focus street project overviews helped to inform recommendations presented in this plan that are rooted in the context of upcoming projects.

Although not a focal point of this chapter, W&R also compiled a list of all unfunded projects within the Rosewood study area (Figure 5-2, Appendix-C). By providing this reference, W&R hopes to help community members identify projects that, although lack a funding source, may be worth advocating for or working to influence while they are still in their earlier planning phases.

5.1. PROJECT REVIEW

Although W&R reviewed many more documents than reflected in this chapter, the plans and projects with the greatest and most immediate impact on Rosewood’s pedestrian infrastructure are:

- SE 162nd Ave Safety and Access to Transit Project (expected construction date: Spring 2021)
- Safer Outer Stark (expected construction date: 2021)
- 4M Greenway (In progress, expected construction completion: Fall 2020)
- East Portland Access to Employment and Education (expected construction date: summer 2021)
- Safe Routes to School Action Plan (2018)

From these plans, W&R identified 12 funded pedestrian projects of varying scale and cost that directly impact the study area of this plan (Figure 5-1). In order to illustrate a cohesive view of the pedestrian project pipeline in the Rosewood study area, W&R also organized the components of each plan by type of improvement, location, level of investment, and funding source (Appendix-C).
Figure 5-1. Funded Projects in Rosewood Study Area

Funded Projects
- Construct Walkway
- Shared Use Path
- Large Street Project

Data Source: City of Portland (2020) Map created by W&R
Safe Routes to School

Portland’s Safe Routes to School program works with schools to implement programs that make walking and biking around Portland neighborhoods and schools safer for students and families. In addition to building safety improvements, education and encouragement programs are also utilized to support safer access to schools.

SE Main St is classified as a City Walkway (Figure 5-3) and a Safe Routes to School Primary Investment Route for Parklane Elementary. Four Safe Routes to School (SRTS) projects are planned along this focus street including the construction of new walkways, crossing improvements, and a signalized intersection review with projected costs of approximately $400,000.

East Portland Access to Employment and Education

East Portland Access to Employment and Education is a transportation plan that aims to provide connections to jobs and education opportunities by improving bike-ped access through building and maintaining sidewalks, crossings, and bicycle facilities. One project from this plan intersects along Main St and aims to improve north-south connectivity by adding sidewalks for access to transit and constructing the 150s Neighborhood Greenway (family-friendly biking and walking route). Shared-use roadway pavement markings (“sharrows”), speed bumps, wayfinding signage, and posted speed signage are included in the project. The total cost is expected to be $6 million and construction is projected to take place in Fall 2020 - Summer 2021.

4M Greenway

Neighborhood Greenways are residential streets that are designed to provide an enhanced, safer pedestrian and bicycling experience. These greenways are strategically designed to reduce car speeds and cars cutting through to avoid traffic on main streets.

Running east-west, the 4M Greenway project will run parallel to the high traffic Stark and Division corridors along SE Mill St, SE Millmain Dr, and SE Main St between SE 130th Ave and SE 174th Ave. Project elements include dedicated bike lane segments, shared lane pavement markings, street lighting, wayfinding signs, speed bumps, and sidewalk infill. This is a $1.7 million project that is currently under construction and is projected to be completed by Fall 2020.
5.4. SE 162ND AVE

Safe Routes to Schools

SE 162nd Ave is classified as a Major City Walkway (Figure 5-3), and a large portion of the focus street segment is considered a Safe Routes to School Primary Investment Route for Patrick Lynch Elementary School. There is one Safe Routes to School signalized intersection review project planned at 162nd Ave and Main St with an estimated cost of $76,500.

SE 162nd Ave Safety and Access to Transit Project

Citing the City’s Vision Zero goals, this active transportation plan aims to address pedestrian, bicycle, and motorist safety along the high crash corridor of 162nd Ave from roughly SE Stark Street to Powell Blvd (1.7 miles). For jurisdictional reasons, the Stark Street intersection and anything north of Stark Street (located in Gresham) is not part of the plan. Since the 74 bus line service was significantly expanded in 2019, the urgency for greater pedestrian/bike safety and connectivity has increased. The primary goals of the plan include:

- Build safer crossings near transit stops
- Increase safety through street design and reduce speeding
- Improve existing bicycle infrastructure and lanes

The plan aims to address these goals through four infrastructure improvements/alterations

1. Conversion of 5 lane roadway to 3 lanes by removing the current striping and painting new striping
2. New safer crossings with lighting at Mill, Lincoln, and Tibbet (all just south of the study area)
3. New sidewalk on Main west of 162nd and 162nd north of Taylor
4. Wide buffered bike lanes

With combined projects totaling $5 million, this plan is in the early design phase with construction expected to begin in Spring 2021.

5.5. SE 174TH AVE

This focus street is designated a City Walkway and is a Safe Routes to School (SRTS) primary investment route for Alder Elementary School. A 10 ft wide sidewalk-level shared pedestrian/bike lane will be constructed on the west side of SE 174th Ave between Stark St and Main St to improve walking and biking to schools in the vicinity. This project is part of a $2 million investment and is expected to be completed in 2022.
5.6. FUNDING

Funding for these projects comes from a variety of sources. City of Portland taxes, development charges and fees, state grants, and regional and federal agencies all contribute to funding upcoming pedestrian improvements in Rosewood. Safe Routes to School projects are funded primarily through Fixing Our Streets, a city-wide gas tax. The specific location and characteristics of proposed projects factor into whether they receive grant funding or contributions from partner agencies.

In some cases, funding exists for potential pedestrian improvements but has not yet been allocated toward specific projects. For instance, in May 2020, voters renewed the Fixing Our Streets program, which allocates $4.5 million towards new street lighting. Knowing this, Rosewood stakeholders could advocate to be included in planning efforts funded by the program.

5.7. UNFUNDED PROJECTS

In addition to the 12 funded projects within the study area, there were 21 unfunded projects with a total of $9,168,995 in projected costs identified from this review (Figure 5-2). All of these projects were identified in the Safe Routes to School Action Plan as necessary improvements but simply have not received funding for implementation. Appendix-C of this plan features a detailed table listing each of these projects and their corresponding costs. Rosewood community stakeholders could use this information to prioritize and advocate for projects in order to garner dedicated funding sources.

5.8. STREET CLASSIFICATIONS

The focus streets selected for Roses from Concrete vary significantly in use and classification (Figure 5-3); it is important to note the various street classifications of each street, as some classifications may impede certain types of pedestrian safety improvements. For example, SE 162nd and SE 174th are classified as Major Emergency Response Routes, and therefore it may be difficult to implement traffic calming measures that may potentially increase emergency response times.

Currently, Portland streets with City Walkway and Major City Walkway classifications have the same minimum 12 feet width requirement. In 2021, an updated Pedestrian Design Guide will be released with potentially different street width minimums for these street types. Moving beyond Roses from Concrete, it will be useful for Rosewood stakeholders and advocates to consider these factors when evaluating potential improvements they would like to see implemented.
Figure 5-2. Unfunded Projects in Rosewood Study Area

Data Source: City of Portland (2020)  
Map created by W&R

Project Type
- Construct Walkway
- Shared Use Path
<table>
<thead>
<tr>
<th>Street Classification</th>
<th>SE Millmain Dr &amp; Main St</th>
<th>SE 162nd Ave</th>
<th>SE 174th Ave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian</td>
<td>City Walkway</td>
<td>Major City Walkway</td>
<td>City Walkway</td>
</tr>
<tr>
<td>Transit</td>
<td>Local Service Transit Street</td>
<td>Major Transit Priority</td>
<td>Local Service Transit Street</td>
</tr>
<tr>
<td>Street Design</td>
<td>Community Corridor</td>
<td>Community Corridor</td>
<td>Community Corridor</td>
</tr>
<tr>
<td>Traffic</td>
<td>Neighborhood Collector</td>
<td>District Collector</td>
<td>Neighborhood Collector</td>
</tr>
<tr>
<td>Emergency Response</td>
<td>Secoary Emergency Response</td>
<td>Major Emergency Response</td>
<td>Major Emergency Response</td>
</tr>
<tr>
<td>Bicycle</td>
<td>Major City Bikeway</td>
<td>City Bikeway</td>
<td>City Bikeway</td>
</tr>
<tr>
<td>Freight</td>
<td>Local Service Truck Street</td>
<td>Truck Access Street</td>
<td>Local Service Truck Street</td>
</tr>
</tbody>
</table>

1 Source: PBOT Transportation System Plan
Endnotes


Chapter Photo Credit: Josie De La Garza
CHAPTER 6

Reflecting on what was learned through research, key informant interviews, and survey results, this chapter contains recommendations aimed at better serving all walkers and rollers in the Rosewood neighborhood. In order to address both high level and discrete pedestrian challenges, recommendations include generalizable approaches at the study area and focus street level as well as specific infrastructure improvements at key challenge points.
6.1. PLAN FOR YOUTH

Children and adolescent community members are especially vulnerable as pedestrians. At these ages, there are few options for mobility outside of walking and rolling. Therefore, it is important to include perspectives focused on youth when considering infrastructural improvements for enhancing walkability.

Increase Visibility

Young children are much more difficult for drivers to see than adults, a problem made worse by poor lighting and pedestrian design. For Rosewood, this means improving visibility through bulbouts/curb extensions, flashing crossing signals at the center of roadways, brightly striped crosswalks, and human-scale lighting. Other critical tools include implementing longer crossing signal timings to accommodate a slower walking pace as well as widening sidewalks and slowing automobile speeds to provide additional room for error - especially in areas of high youth activity and during peak pedestrian time windows.

Multimodal School Drop-Off

Pedestrian access to schools is very limited in Rosewood, making it inconvenient and unsafe for youth to walk to school. W&R suggests purchasing or utilizing right-of-way adjacent to schools explicitly in order to develop alternative paths to reach school entrances. In addition to providing an easier and safer way for children to access their school building, this can also incentivize walking to school, lowering the carbon footprint of daily trips and increasing physical activity. Strategically planning, funding, and building pedestrian-only pathways around school grounds can ultimately help administrators and teachers better separate foot traffic from vehicle traffic, therefore reducing speed and collision-related risk between children and vehicles.

Additionally, more broadly improving neighborhood pedestrian access to schools from key locations - such as nearby parks or shopping centers where parents can park - can facilitate walking trips that are too far or unsafe to be made from home. Such an outcome is, in fact, one of the goals of PBOT's Park + Walk program. Utilizing Safe Routes to School funding to improve walking connections to and from the school, and pedestrian pathways alongside the school for children to enter and exit, is a key recommendation for improving walkability for youth moving forward.
6.2. Plan for Older Adults

While the needs of every older adult are not identical, as a population they require a higher level of service from the built environment that provides comfort and safety while accommodating for declines in ability associated with the aging process. Older adults living in east Portland reported the highest level of barriers to walking out of all groups. Additionally, the sole recent fatality in the Rosewood study area was an older adult.

Improve Crosswalks For Older Adults

Crossing countdowns should be increased to match the needed crossing time for older adults, who often need longer durations - an issue amplified on wide streets. The speed of someone who uses a walker is 2.07 feet per second, compared with 3.5 feet per second for ADA standards. By increasing the countdown beyond ADA requirements, this allows the slowest pedestrians the opportunity to make the crossing at a pace that feels reasonable to them while avoiding conflicts with vehicles. East Portland older adults report lack of time to cross the street as a more substantial barrier to walking than any other group. Additionally, W&R recommends removing the need to press a button to cross, as this can be more difficult for those who use mobility devices or may have limited usage of their hands.

Research has shown that older adults actively seek out higher quality crossings (i.e. more substantial than a crossing marked with paint). Refuge islands should be constructed at intersections that exceed two lanes - but these should not be placed directly in the pedestrian path but rather to the side, as they can become a tripping hazard when located immediately within the crosswalk, especially to visually impaired walkers. These islands create a place to safely wait, if needed, and evaluate each direction of traffic at a time.

Provide Places of Rest

Older adults may not be able to walk as great of distances compared to younger pedestrians. Providing public places to rest, such as benches, is important when considering the needs of this population as it allows for the trip to be broken up. Older adults report challenges carrying physical loads, so these resting places also make utilitarian trips like grocery shopping more accessible. When possible, couple the location of these resting places with transit stops as this is a

“While the needs of every older adult are not identical, as a population they require a higher level of service”
common location for older adults to wait.

**Remove Hazards**

The risk of falling is a serious concern for older adults, as falls can lead to debilitating injuries and sometimes death.4 Removing existing obstacles such as utility poles (Figure 6-1) and repairing jagged sidewalks that increase the risk of falling will improve the walking safety, especially for this population. Additionally, encourage residents and local businesses to trim vegetation that conflicts with movement along the sidewalk, and keep temporary objects like garbage carts and sandwich boards from blocking the path.

**Slow Traffic Speed**

Speed is especially hazardous for those with frailer bodies. Though Rosewood has a higher percentage of youth than older adults, the latter are even more vulnerable to this problem: those age 65 and up are on average five times more likely to die in a collision than a child aged 14 or under.5 East Portland older adults report speeding as a larger barrier to walking than any other group. Reducing the speed limit would both lower the number of crashes by improving driver control of vehicles and reduce the severity of those that do occur. While 5% of collisions at a speed of 20 mph are fatal, 40% are for 30 mph, and 80% are for speeds of 40 mph. W&R prefers a “20 is plenty” policy for residential streets and no more than 30 mph on major roadways.

**Design for Age-Related Mobility Challenges**

Declines in vision, hearing, and motor skills are often a part of the aging process. Signage should be designed with contrast and large print
size for those with low vision, and pedestrian signals should be brightly lit and auditory for the same reason. While everyone benefits from streetlights, brightly-lit streets after dark help further offset the loss of night vision, another consequence of aging. Residents of Rosewood also report feeling unsafe when walking at night at a higher rate than Portlanders citywide.

**IMPROVE PARK ACCESS**

Representatives from the Rosewood Initiative, several survey respondents, and locally-based key informants indicated that safe and equitable access to nearby parks is key to building and maintaining neighborhood identity.

Parklane Park is a central anchor of the local community. Strategically funding access to Parklane Park would enhance interconnectivity between otherwise disconnected parts of Rosewood as they “meet at the park.” By doing this, the overall neighborhood will reap benefits of improved walkability while fostering shared identity and community connectedness. This is particularly critical as the Rosewood population continues to grow and as Parklane receives planned investments from Portland Parks and Recreation (PP&R), including Parks System Development program funds. Safe Routes to School funds may also be used to improve park access from Parklane and Oliver Elementary schools.
6.4. UPGRADE CROSSINGS

For improved visibility and safety, all crosswalks should be striped and well-lit. Many of Rosewood’s crosswalks lack the “zebra stripes” (Figure 6-2) that provide a bright and contrasting pattern allowing pedestrians to be seen more easily by drivers. Pedestrian-level lighting is missing on all crosswalks and this makes for a nerve-racking crossing experience for residents at night. Rosewood residents also report drivers failing to stop for pedestrians crossing the street as a barrier to walking at a level higher than Portlanders citywide.

As previously mentioned, pedestrian islands are effective for improving crossing safety and should be implemented in crosswalks where there is adequate space (i.e. two or more lanes in each direction). If they encroach into the intersection, they can also slow the speed of left turns which are responsible for about a quarter of all vehicle-human collisions.\(^6\) Pedestrian islands have been demonstrated to reduce pedestrian crashes by 56%\(^7\) and may be especially helpful for those who cross more slowly, such as children, older adults, and those with impaired mobility.

Slow turn wedges - posts, humps, or other barriers or indicators at the corners of intersections - also reduce the numbers of sharp turns by drivers, reducing the likelihood of a pedestrian being hit as they are crossing. These can be affordably constructed with paint and plastic posts or humps and should be prioritized to reduce pedestrian impacts.

6.5. FOCUS STREETS

SE 162nd Ave

Portland’s 162nd Safety and Access plan aims to improve walking and biking through constructing new crosswalks, sidewalks, and bike lanes; it also reduces speeds along this focus street by reducing the number of vehicle lanes. Recently, the speed limit was reduced from 40mph to 35mph on this street, but 80% of drivers continue to speed and 17% drive ten or more miles per hour above the posted speed limit,\(^8\) demonstrating the need for major infrastructural changes that have a more substantial impact.

These planned improvements go all the way north to, but do not include or extend past, the intersection of SE 162nd and Stark, which is on the Gresham side of the neighborhood jurisdictional split. Considering the sudden reduction of lanes from five in Gresham to three going into...
Portland and a change in the speed limit from 40mph in Gresham to 35mph in Portland, W&R recommends a transition zone of at least 1000 feet in Gresham to slow drivers as they approach the Portland border. It should also be emphasized that pedestrian safety and ease shouldn’t be confined by city boundaries - Rosewood residents in Gresham have just as much a right to safe transportation as those of Portland. Metro, City of Portland, and the City of Gresham need to improve coordination on transportation and safety challenges facing their respective jurisdictions and plan in a more holistic way from the pedestrian network level (i.e where pedestrians want to go, regardless of the city).

**SE Main St/Millmain Dr**

The existing Parkland Park trail, which is composed of both gravel and hard surface, should be widened and made into an ADA compliant walkway to improve accessibility. An expansion of Parklane Park is currently in process, and more residents are expected to visit the park after the expansion. Creating an expanded concrete walkway/bikeway (10+ feet wide) will provide a path through the park so walkers and rollers may avoid having to use the street for travel, thereby reducing conflicts with vehicles. It will also reduce their travel time by creating an easy way to get through the park rather than having to go around it.

**SE 174th Ave**

As projects are planned for 174th Ave, pedestrian scale lighting should be considered and budgeted for. Since much of 174th Ave within the study area is located in a residential zone and gets less average daily traffic than larger north-south arterials, dimmer lights may be the most prudent choice. These should illuminate the pedestrian environment rather than simply catering to vehicle traffic. Lighting should be installed on both sides of the street in high crash locations even if they are less than 40ft wide (the current Portland standard).

Though the Safe Routes to School plan has made headway in identifying priority investment routes and future crossings, moving forward it will also be critical to prioritize other locations that are of high importance but not as close to schools along 174th Ave. Having more and safer crossings overall helps connect the network and provide connectivity, a key factor in walkability.

**SE 174th Ave** features some of the worst walkway infrastructure in the study area. Any streets classified as a “Pedestrian Walkway” that don’t currently have full sidewalks should at least receive a hard surface dedicated walkway. It may take many years for these smaller residential/collector type streets to receive the massive
investment required for complete sidewalks, and it is important to consider how to reclaim space for pedestrians in a more timely and cost-efficient way. A clearly marked paved walkway with intermittently placed delineator posts would help make this lower cost option more safe and comfortable for pedestrians.

6.6 KEY CHALLENGE POINT RECOMMENDATIONS

Thematic snapshots of existing pedestrian infrastructure conditions at each key challenge point help document the present while providing a foundation for envisioning future interventions. Using these “before” images as a canvas, W&R digitally rendered targeted interventions that address unique issues present at each key challenge point. These “after” images featuring recommendations are intended as both templates to guide future pedestrian projects in the area as well as a way for community members to envision and better advocate for a more walkable Rosewood.

W&R classified interventions into “Tier I” and “Tier II,” differentiated by the estimated level of investment required. Interventions that are estimated at or under $250,000 are classified as Tier I while interventions estimated to cost above $250,000 are classified as Tier II (Figure 6-3).

The considerations that determine the cost estimate of an intervention are:
- Staff time
- Material costs
- Contract labor
- Half-mile length
- Historical cost estimates from 2019 and earlier

It should be noted that as market conditions fluctuate, costs and respective tiers of investments may change correspondingly. Economies of scale may also effectively lower or raise the costs of interventions, depending on the quantities in which they are applied. Moreover, the costs of specific interventions at discrete locations may fluctuate based on the particular pre-existing infrastructure. In short, costs of interventions can change when they are applied in the real world - because unique variables are present at every site.

Cost Estimate Considerations

Cost estimates were derived from multiple publicly available sources and vetted by Timur Ender of Portland Bureau of Transportation (PBOT). All costs were estimated by extrapolating upon historical data from multiple jurisdictions across the United States. See (Appendix-D) for an extensive list of pedestrian infrastructure improvements classified by Tier I and Tier II.
KEY CHALLENGE POINT #1: SE 174TH AVE AND SE MAIN ST

W&R recommends one Tier II and six Tier I projects for this intersection. Each intervention is informed by this area’s proximity to the Rockview Central Park, Patrick Lynch Elementary School and local residential neighborhood.

<table>
<thead>
<tr>
<th>Improvement</th>
<th>Tier</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separated walkway; paint, delineator posts, truncated domes</td>
<td>I</td>
<td>Provides vertical separation creating the effect of grade separation; designates space exclusively for pedestrians</td>
</tr>
<tr>
<td>Slow turn wedges (delineated curbs)</td>
<td>I</td>
<td>Tighter turning radiiuses decrease vehicle speeds; provides addition space dedicated to pedestrians at intersection</td>
</tr>
<tr>
<td>Lower posted speed to 20 MPH at all times</td>
<td>I</td>
<td>Decreases vehicle speeds to a level compatible with high concentration of youth trips</td>
</tr>
<tr>
<td>Striped “zebra style” crosswalk at spacing guidelines</td>
<td>I</td>
<td>Increases visibility of pedestrian crossing</td>
</tr>
<tr>
<td>Signage announcing youth are regularly present</td>
<td>I</td>
<td>Communicates to motorists to expect younger pedestrians</td>
</tr>
<tr>
<td>On-street mural</td>
<td>I</td>
<td>Communicates neighborhood identity</td>
</tr>
<tr>
<td>Streetlights</td>
<td>II</td>
<td>Provides illumination for wayfinding and increases visibility of pedestrians; leverages exists poles</td>
</tr>
</tbody>
</table>
1. A separated, paved walkway provides dedicated pedestrian space, replacing the ditches, mud, and gravel. Walkers and rollers must currently navigate in this area. Additional safety and comfort can be provided with intermittently placed delineator posts along the walkway separation line.

2. Slow turn wedges reduce vehicle turn speeds and provide more space for pedestrians at intersections, making them more visible to drivers. Rather than using concrete, the effect of a slow turn wedge can be created with paint and delineator posts.

3. Speed limit reduction from 25mph to 20mph to be in line with Vision Zero’s “Twenty is plenty” approach along residential streets.

4. Zebra striped crosswalks that improve and optimize visibility of pedestrians along crossings - especially in low-light conditions, at intervals following the City of Portland’s Crosswalk Spacing Guidelines.

5. Street lights improve visibility for pedestrians, auto-users, cyclists and users of other modes.

6. Overhead high-visibility signage that promotes caution to drivers, cyclists and other road users by communicating the presence of children and pedestrians throughout the area.

7. An on-street mural reflecting community identity, giving locals a sense of ownership over newly placed improvements.
KEY CHALLENGE POINT #2: SE 174TH AND SE ALDER ST

W&R recommends 3 Tier II investments for this key challenge point.

Each recommendation is informed by the area’s proximity to Alder Elementary (closest interaction to the school), SE Stark St, numerous affordable apartment buildings, and local businesses. In short, this intersection receives a high level of cross traffic, including many people on foot, yet sidewalks are sporadic or missing.

1. Full sidewalk treatments (with ADA ramps) are suggested on both sides of the roadway to improve pedestrian safety by introducing a clear, physically demarcated, separation of modes.

2. A Pedestrian Hybrid Beacon is recommended because there is currently no stop signal in the north-south direction. Overhead lights provide much more visibility to oncoming traffic than the single existing light on one side of the street.
1. With such close proximity to Alder Elementary, this intersection must be built to ensure the safety and accommodation of children and families.

2. There is a need to control traffic when people—especially children and older adults are crossing—but traffic volume is low enough that a fully signalized intersection is not recommended.

3. Though most sources W&R reviewed pointed to lighting as a tier II intervention, W&R suggests retrofitting existing electrical poles with attached lighting in lieu of standard street light poles, in order to maximize sparse resources by leveraging existing infrastructure.

4. This intersection already has a pedestrian beacon, therefore, this suggestion is to update the touch-activated beacon to be touch-free.

<table>
<thead>
<tr>
<th>Improvement</th>
<th>Tier</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian hybrid beacon (PHB)</td>
<td>II</td>
<td>Provides stop control on demand; leverages existing school zone lights in design</td>
</tr>
<tr>
<td>Streetlights at pedestrian-scale</td>
<td>II</td>
<td>Provides illumination for wayfinding and increases visibility of pedestrians; leverages exists poles</td>
</tr>
<tr>
<td>Full-sidewalk on both sides of roadway</td>
<td>II</td>
<td>Provides grade separation from other modes</td>
</tr>
</tbody>
</table>

**Pedestrian-scale lighting** is suggested in order to ensure visibility during night time and other low-visibility conditions.

**Automated Pedestrian Detection** (not visually depicted) are suggested to improve accessibility for different ages, heights, and visual abilities for this intersection.
1. Full sidewalk treatments (with ADA ramps) are suggested on both sides of the roadway to improve pedestrian safety by introducing a clear, physically demarcated separation of modes.

2. A well-placed bench would provide an area of rest for students, parents, grandparents, guardians and other pedestrians who are either entering and exiting the school or simply passing through.
3. A raised crosswalk would slow traffic through the school zone, increase visibility for pedestrians crossing and serve as an at-grade bridge between sidewalks - reducing barriers for pedestrians with assisted mobility devices.

4. Pedestrian-scale lighting is suggested in order to ensure visibility of during night time and other low-visibility conditions. Presently, lighting in this neighborhood is at a scale oriented for auto-usage.
KEY CHALLENGE POINT #4: SE 162ND AVE AND SE STARK ST

W&R recommends nine Tier I and one Tier II investments for this key challenge point.

Each recommendation is informed by the fact that this location presents unique challenges as the intersection of two major arterials with six lanes in each direction, making this potentially dangerous location for pedestrians. For such a busy intersection near many community destinations, the existing infrastructure at this intersection is particularly underbuilt. This area was also marked as problematic by several survey respondents.
1. **Leading pedestrian interval** will prioritize pedestrians’ safety by giving them a headstart to enter the crosswalk before vehicles may enter the intersection.

2. Replacing the touch-activated signal with a **touch-free pedestrian signal** (not visually depicted here) is suggested to improve accessibility for different ages, heights, and visual abilities at this busy intersection.

3. **Updating with an audible crossing signal to wait/walk** will improve accessibility for users with low-vision, which affects older adults in-particular.

4. **Updating signal phase for longer crossing intervals** will help improve accessibility and comfort for individuals who would otherwise have trouble crossing - such as older adults and pedestrians with mobility devices.

5. **Increasing the size of pedestrian signals** will further improve visibility for both pedestrians crossing the wide street and drivers waiting in the queue.

6. **No right turn on red sign** has the possibility of reducing pedestrian-vehicle conflicts by ensuring separation of modes during pedestrian crossing intervals.

7. **Zebra-style crossings** that improve and optimize visibility of pedestrians along crossings* - especially in low-light conditions.

8. **High-contrast truncated domes** are already required per ADA guidelines, and are therefore a high-priority retrofit for this location.

9. **Vertical travel lane divider** mitigates potential conflicts between vehicles and pedestrians by coordinating lane switching.

10. **Bury / remove obstructing utility poles** currently located in the middle of sidewalks. This will increase sidewalk space for assisted mobility devices, those carrying items, those pushing carts or strollers, and groups of pedestrians walking together.

*at intervals following the City of Portland’s Crosswalk Spacing Guidelines.
Endnotes


Chapter photo: W&R consulting
Nikki Giovanni Image: Brett Weinstein; Flickr
7.1. TOOLS OF EVALUATION

Determining which capital projects to prioritize is necessary when faced with funding limitations, for any jurisdiction. Therefore, Roses From Concrete seeks to catalyze future decision-making processes around infrastructure throughout Rosewood through providing access to, and guidance around, two tools:
Tool 1: W&R’s “Pedestrian Investment Tiers” Table (Appendix-D).

This tool provides an internal breakdown of potential local pedestrian improvements into two funding levels, Tier-1, and Tier 2. Lower-cost projects have a better chance of having dollars allocated to them but may have less impact. It is important for stakeholders in Rosewood to understand what options their community has - pulling from local sources, when deciding on future investments.

Tool 2: W&R’s Rosewood “Walkability Indicator” Table (Figure 7-1).

This allows for The Rosewood Initiative, residents, and the public sector to observe outcomes or lack thereof and adjust the approach to maximum benefits. A series of performance indicators for monitoring and evaluation purposes have been developed. These performance indicators relate to walkability and are in Table 7-1. Rosewood Walkability Indicators.

Using both tools together provides a foundation of data to support conceptualizing prospective costs of future improvements and safety results from prospective future improvements.

Site Evaluation Beyond Rosewood

W&R’s tools are specific to Rosewood. However, for considering pedestrian interventions outside of the Rosewood area, the FHWA’s Pedestrian Safety Guide and Countermeasure Selection System can provide a short-list of pedestrian and safety interventions by applying institutionalized lessons learned from across the United States to local contexts. Whereas this method is not as robust and site-specific as Post Renderings or a neighborhood-specific table of walkability indicators, it is useful for envisioning a more walkable future through multivariate interventions.

Herein, the tools referenced below will be based on W&R's internal research and methodology.

7.2. Monitoring

Impact & Need of Monitoring & Evaluation

Ongoing monitoring and evaluation are essential for effectively implementing walkability improvements outlined in Roses from Concrete. Both allow residents, private businesses, organizations, and members of the public sector to observe outcomes or lack thereof, and correspondingly adjust the approach to maximize benefits. To achieve this goal, W&R has developed a series of performance indicators for monitoring and evaluation purposes that is tailored to the Rosewood neighborhood. These performance indicators relate to walkability and are in Figure 7-1. Rosewood Walkability Indicators.
### FIGURE 7-1. ROSEWOOD WALKABILITY INDICATORS (1 OF 2)

<table>
<thead>
<tr>
<th>Performance Indicator</th>
<th>Indicator Definition</th>
<th>Disaggregation</th>
<th>Means of Verification/Data Source</th>
<th>Frequency of Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking to School</td>
<td>Rate of children walking to school</td>
<td>By school; gender</td>
<td>Metro Safe Routes to School Data</td>
<td>Annual</td>
</tr>
<tr>
<td>Walking to Work</td>
<td>Rates of walking to work</td>
<td>Census tract; zip code</td>
<td>US Census Journey to Work; Portland Insights Survey</td>
<td>Annual</td>
</tr>
<tr>
<td>Transit to Work</td>
<td>Rate of transit to work</td>
<td>Census tract; zip code</td>
<td>US Census Journey to Work; Portland Insights Survey</td>
<td>Annual</td>
</tr>
<tr>
<td>Walking within Focus Streets</td>
<td>Peak number of pedestrians counted in focus street areas</td>
<td>Youth and older adults; gender</td>
<td>LA People Streets Pedestrian Counts Form; Biennial or pre/post for significant infrastructure improvements</td>
<td></td>
</tr>
<tr>
<td>Killed or Severely Injured (k/s) Pedestrian Crashes</td>
<td>Total number of killed or severely pedestrian crashes per 100,000 residents</td>
<td>Youth and older adults</td>
<td>PBOT</td>
<td>Annual</td>
</tr>
<tr>
<td>Pedestrian Crashes</td>
<td>Total pedestrian crashes per 100,000 residents</td>
<td>Youth and older adults</td>
<td>PBOT</td>
<td>Annual</td>
</tr>
<tr>
<td>Parks Investment Dollars</td>
<td>Funding spent on parks improvements</td>
<td></td>
<td>Portland Parks Bureau</td>
<td>Annual</td>
</tr>
<tr>
<td>Healthy Businesses Starts</td>
<td>New businesses started meeting the categories defined by the Rosewood Visioning Report</td>
<td></td>
<td>Prosper Portland</td>
<td>Annual</td>
</tr>
<tr>
<td>Abandoned Automobile</td>
<td>Total number of motorized vehicle that appears to be inoperative or disabled that are reported</td>
<td></td>
<td>PDX Reporter</td>
<td>Annual</td>
</tr>
<tr>
<td>Graffiti</td>
<td>Total number of vandalism instances done without permission that are reported</td>
<td></td>
<td>PDX Reporter</td>
<td>Annual</td>
</tr>
<tr>
<td>Property Crime</td>
<td>Total number of offenses per 100,000 residents that involve taking something of value by theft or deception or the destruction of property</td>
<td></td>
<td>Portland Police Bureau</td>
<td>Annual</td>
</tr>
</tbody>
</table>

### FIGURE 7-1. ROSEWOOD WALKABILITY INDICATORS (2 OF 2)

<table>
<thead>
<tr>
<th>Performance Indicator</th>
<th>Indicator Definition</th>
<th>Disaggregation</th>
<th>Means of Verification/Data Source</th>
<th>Frequency of Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violent Crime</td>
<td>Total number of criminal offenses per 100,000 residents where the victim is present and the act is violent, threatening or has the potential of being physically harmful</td>
<td></td>
<td>Portland Police Bureau</td>
<td>Annual</td>
</tr>
<tr>
<td>Population Density</td>
<td>Number of residents in relational to total area</td>
<td></td>
<td>US Census</td>
<td>Biennial</td>
</tr>
<tr>
<td>Crossing Caps</td>
<td>Percentage of lane miles meetings standards for safe pedestrian crossings</td>
<td></td>
<td>PBOT</td>
<td>Annual</td>
</tr>
<tr>
<td>Tree Canopy</td>
<td>Percentage of roadway with street trees</td>
<td></td>
<td>Portland Parks &amp; Recreation Tree Inventory Map</td>
<td>Annual</td>
</tr>
<tr>
<td>ADA Compliance</td>
<td>Percentage of intersections meeting ADA design standards</td>
<td></td>
<td>PBOT</td>
<td>Annual</td>
</tr>
<tr>
<td>Miles of Sidewalk</td>
<td>Miles of sidewalk</td>
<td></td>
<td>PBOT</td>
<td>Annual</td>
</tr>
<tr>
<td>Street Investment Dollars for Active Modes</td>
<td>Total number of dollars spent on projects supportive of active modes</td>
<td></td>
<td>PBOT</td>
<td>Annual</td>
</tr>
<tr>
<td>Intersection Density</td>
<td>Number of intersections in relation to total land area</td>
<td></td>
<td>PBOT</td>
<td>5-year interval</td>
</tr>
<tr>
<td>Streetlight Caps</td>
<td>Percentage of lane miles meeting standards for streetlight installation</td>
<td></td>
<td>PBOT</td>
<td>Annual</td>
</tr>
<tr>
<td>Sidewalk Trip Hazard</td>
<td>Total number of obstructions on the sidewalk that may result in a fall that are reported</td>
<td></td>
<td>PDX Reporter</td>
<td>Annual</td>
</tr>
<tr>
<td>Sidewalk Vegetation</td>
<td>Total number of vegetative obstructions that may impede travel along the sidewalk</td>
<td></td>
<td>PDX Reporter</td>
<td>Annual</td>
</tr>
</tbody>
</table>
Three Categories of Indicators

1. People- It is recommended that indicators related to people are disaggregated to assess disparate impacts and positive outcomes by subpopulations.

2. Built environment- Built environment indicators are directly related to capital investment and activities commonly associated with planning and improvements to the transportation network.

3. Other influences for walkability- As evidence points to multiple factors that influence walkability and the use of public space, it is also recommended to monitor and evaluate additional indicators outside of people or infrastructure.

For example, indicators may be related to other social and physical outcomes such as graffiti and interpersonal violence.

How To Use Indicators For Monitoring and Evaluation

Measure <Performance Indicator>, as defined by <Indicator Definition>, pulling data from <Data source> at the interval of <Frequency of Reporting> and record the results.

During the next interval of <Frequency of Reporting>, repeat analyzing <Performance Indicator> against the data gathered previously, measuring changes in variables within <disaggregation> over time - preferably within the context of new investments.

Use new data to suggest a proposed intervention that has proven to be effective in the local context.

Connecting Walkability with Existing Services.

Many of these indicators are interrelated with other community building practices of the Rosewood Initiative. As the lead organization for Prosper Portland’s Rosewood Neighborhood Prosperity Initiative they are responsible for community economic development. The Rosewood Initiative is also involved with intergovernmental partnerships to improve public safety. Rosewood Initiative also provides human services that benefit the target populations of youth and older adults. As their organizational outcomes are congruent with the full cross-section of indicators, monitoring for walkability is in perfect alignment.

Tool Composition

Administrative data comprise the vast majority of data sources. This has the benefits of being reliable, inexpensive, and requiring minimal time on the part of the Rosewood Initiative. It is recommended that data agreements are established with the relevant public sector agencies
to routinize the transference of this data; data are also available through open data channels and public records requests. Data channels and public records requests.

**Manual Entry**

There is one indicator that requires manual data collection: a Focus Streets pedestrian count. It is recommended that counts are conducted before and after any significant infrastructure improvements are made within a discrete focus street (e.g. SE 162nd Ave., SE Main St.). Data may be conducted by representatives of Oregon Walks, Rosewood Initiative, PBOT, or a combination thereof. While PBOT has materials for counts, it is recommended that the form developed by LADOT for the People Streets be utilized (Appendix - B), which also includes the recommended frequency of reporting (typically annually). This form has fields that allow for disaggregation by the target population of youth and older adults.

**Use Cases**

With the Rosewood area poised to receive significant investment in the near term it is important to remain proactive in monitoring outcomes. Outcomes monitoring has several advantages, such as observing rates of walking to school or transit. Observations about where people cross but lack crosswalks can also be recorded, or how that may tie into frequency of walking. For example, it is assumed that as crossing gaps (distance between crosswalks) decrease, the rate of youth walking to school will increase. However, if infrastructure improvements are made and walking trips do not improve, evaluating other factors such as social and physical disorder should be explored.

Monitoring also keeps the public sector accountable to the residents of

“An 8 to 80 pedestrian network would not result in higher percentages of older residents being disproportionately impacted by traffic safety. At the other end of the spectrum for younger residents an 8 to 80 system would result in higher levels of walking. Parents would have less fear of allowing their children to walk places.”

-Key Informant
Rosewood. This is a longstanding area of disinvestment and unfilled promises on the part of the public sector. If the status quo continues and public benefits go unfilled, additional advocacy and power building is required.

**Long-term Value**

Consistent and longitudinal evaluation affords local learning opportunities by quantifying what is working and should be enhanced, and what needs to be redesigned to deliver the intended outcomes.

Retrofitting a suburban geography to be walkable for all ages and abilities is a challenge facing municipalities across the United States. While there is significant optimism that Rosewood will emerge as an early success story through a combination of increasing public investments and the community support of organizations like The Rosewood Initiative, the path to success is ambiguous; therefore, learning what works in this context is part of the process.

This tool offers a methodology for capturing data and then organizing and making sense of it in order to improve community-based knowledge of local infrastructure. Local, community-driven evaluation catalyzes lowering the barriers for local community members getting informed and involved in local issues around walkability and transportation. Therefore, leveraging the Rosewood Walkability Indicators to their fullest potential is contingent up the Rosewood Initiative’s ability and capacity to convene consensual data-sharing throughout the neighborhood’s diverse array of stakeholders - and later centralize the recording and reporting for the data.


The Rosewood W&R envisions a place where a boy like Emilio is able to walk (or run) to the store for some ice cream with his friend, safely and enjoyably, without his mom worrying too much about whether he will make it home. It should be a neighborhood where Nadia can pull her growing granddaughter to the park in a little red wagon without concern about uneven or missing sidewalks or curb ramps; and can grow older
while feeling comfortable crossing the street, able to meet most of her daily needs nearby.

8.2. A BETTER FUTURE FOR ROSEWOOD

W&R’s suite of recommendations in Roses from Concrete are suggestions for making Rosewood into this kind of neighborhood. W&R’s goal is to help the Rosewood community have slower residential-area traffic, better pedestrian connections between neighborhood destinations, and fewer barriers to walking and rolling over the next five years and beyond.

Realizing these priorities will take the commitment of continued and direct engagement with the local and diverse Rosewood community, especially with vulnerable populations that have historically been left out of the planning process; pledges of long-term political support from local and regional municipalities; stable and dedicated funding for walkability improvements; unprecedented coordination between and by public agencies to preface collaboration with groups like the Rosewood Initiative; and an unwavering will to advocate for this area from each of parties involved with this community, neighborhood, county, metro-region and neighboring local cities - both Gresham and Portland.

Getting There Beyond 2020

Unprecedented coordination, activism and advocacy are needed from and between these groups because these changes will be transformative, expensive and profoundly impactful for the future of this neighborhood’s residents. Sidewalks are a big deal, are really expensive, and also change lives by providing a safe space to be pedestrian. Curb cuts extend that right to movement across a broader range of residents who are otherwise impaired in their range of mobility options. This plan, though centered around walkability, is about extending the right to freely move throughout space to a community and neighborhood that has historically been underserved in its infrastructural needs because its residents reside in an almost forgotten interjurisdictional purgatory between two cities and a very large - comparatively wealthy, county.

Stakeholder Responsibilities for Defining & Meeting Community Needs

People need the right to move freely across space in order to complete essential tasks throughout their lives. This is true whether one is age 8, 80, or anywhere in-between or beyond. People are either directly reliant on their own mobility or that of others near them. Therefore, W&R has worked hard with The Rosewood Initiative, Oregon Walks, Key informants,
Community Members, and Portland State University to curate a compelling and useful array of resources, tools, and stories that will help this community strategically leverage - or apply for, future transportation-related funding and projects into opportunities for expanding walkability from all of Rosewood. This means incorporating a lens of targeted universalism into future work, advocating for the most vulnerable users of the streets - and the definitions of vulnerable will only expand with time, and focusing on lifesaving - not simply timesaving, improvements to the streetscape.

From W&R to all who walk and roll, a more walkable Rosewood is possible. Strategy, collaboration, public participation and community engagement are each foundational components of a community-based transition to a more walkable and equitable future. Through coordinated application of these foundational components, shared dreams today will become the more walkable future of tomorrow.

W&R’s Contribution to The Rosewood Community

W&R’s contribution to this shared future are the words, analyses, research, images, tables, pie charts, and well-designed tools contained within Roses From Concrete.

The Role of Community in Using Roses From Concrete as a Tool

Rosewood community members should use this plan as a tool to educate locals, organize around key topics of walkability, and ultimately advocate for community-defined interests. Advocacy and organizations require pooling resources around collective political capital, expertise on local living experiences and cultural history, and shared passion for the Rosewood area in order to bring key players to the table and hold them accountable.

The Role of Community Organizations

Community organizations have the responsibility of leveraging resources and connections into catalyzing the actualization of community
needs and desires - as defined by members of the community.

**The Role of Government**

Governmental entities have the responsibility to represent the voiced needs and desires of community in their allocation of resources - which should be inherently equitable.

**Shared Responsibilities for a Better Future**

Roses From Concrete is a stepping stone for community, community organizations and governmental entities to come together and make Rosewood a more walkable community for all who live there.

As time passes and projects improve the local area, please consider revisiting this report to reminisce on the opportunities that rose from concrete.

W&R is proud to present this report.
8.3. COVID-19 PANDEMIC

During the time Roses from Concrete was being produced, the U.S. was hit with a pandemic more severe than almost anyone alive has ever faced. This impacted W&R’s work and that of the client and partners. It required the team to adapt to electronic meetings and ever-changing conditions and re-evaluate priorities and scope. In addition, it reinforced the importance of in-person engagement, especially for reaching marginalized populations. However, there are some planning-related lessons we may be able to take from this public health crisis.

Lessons Learned

Out of the tragedy of the pandemic, there are some hopeful changes happening within the pedestrian environment across the globe - and some within Portland - that should be adopted here or made permanent, where applicable. These recommendations fall into three categories: providing more space for walking, preventing direct transmission of germs by eliminating the need to touch contaminated surfaces, and slowing the speed of traffic to allow people to more safely use their streets.

Provide More Pedestrian Space

Current guidelines from the Centers for Disease Control call for people to be at least six feet apart from others who are not members of their household at all times to lessen the chance of infection with COVID-19, while some studies have shown that the virus can be transmitted up to 27 feet away. With narrow sidewalks, and no sidewalks in much of Rosewood, it is difficult or impossible to stay a safe distance from traffic when going out for a walk, which is one of the few forms of recreation that most people can currently do - and perhaps a safer form of transportation.
than commuting to essential jobs on transit.

Cities around the country, such as Oakland, Minneapolis, Seattle, Boston, and Brookline, MA began responding to the need for increased space for people walking and rolling by converting a parking lane to pedestrian space² and closing streets to through vehicular traffic while expanding pedestrian and bicycling space.³ Now Portland has taken this up with the Slow Streets, Safer Streets program which allocates 100 miles of roadway to distancing efforts⁴. Seattle has committed to making these changes permanent in an effort to boost biking and walking into the future⁵; Portland should do the same.

However, it is important to note that Slow Streets, Safer Streets has not been extended as far east as Rosewood⁶ - another example of outer communities being left out of opportunities provided to inner Portland. In Rosewood, 22% of residents do not engage in leisure-time physical activity (compared to 15% citywide)⁷, so they may benefit even more from having extra space to walk, roll, and play. Public investments - all of them but including those that result from COVID-19 - must be distributed equitably. This is especially important to emphasize in this context because communities of color are at disproportionate risk from the COVID-19.⁸

Provide No-Touch Crossing

Nearly all crosswalks in the Rosewood neighborhood have what are called pedestrian push buttons or “beg buttons”; anyone needing to cross must touch the signal to activate it. There are multiple problems with this design: it may be difficult for those with disabilities to use, it signifies that driving is the expected mode of travel in this area (drivers do not have to consciously activate a light change), and that walking deviates from the norm, requiring an extra step for pedestrians to simply use this mode of travel - and another example of pedestrians being a low priority in this area. Pedestrians may have to wait through a full signal round, watching drivers pass in each direction, if they do not hit the button at the right time, further complicating and discouraging walking.

Another concern is that SARS-CoV-2 can survive up to three days on stainless steel and plastic, the materials that make up these beg buttons⁹; and even beyond the current pandemic, these buttons should be considered hubs of germs. Though there is nothing in the American Institute of Certified Planners’ Code of Ethics on health or safety, the National Society of Professional Engineers’ Code of Ethics requires holding “paramount the safety, health, and welfare of the public”.¹⁰ ¹¹ Because it is the engineers who decide on appropriate traffic control technology, W&R calls on them to take both pedestrian ease
of access and disease transmission into account, bringing back automatic pedestrian recall with the “walk” signal activated on every cycle. These should be visual as well as audible signals to accommodate those who are blind or low visual acuity. Cities such as Los Angeles, Berkeley, and Emeryville, California; Chapel Hill, North Carolina; and Brookline, Cambridge, and Arlington, MA, have instituted this change; Providence, RI has as well and has stated these changes are permanent. Portland should follow their lead.

**Slow Vehicle Speed**

With a lower volume of traffic on the roadways due to an increased number of people staying at home, the congestion that normally forces a slower driving speed is not present, and this has given reckless drivers an excuse to violate the speed limit. So while we are seeing stay-at-home orders reduce the total number of crashes, there has also been a documented increase in crash rate in some cities, corresponding with an increase in speeding. By reducing travel lanes and allocating that space to people on foot or bike, this provides a double safety benefit by allowing people to practice safe physical distancing and slowing vehicles by constricting roadways. In addition, reducing the speed limit throughout Portland - but especially on high crash corridors, including those in Rosewood - would save lives through reduced number and severity of collisions and make walking more pleasant, as speeding has come up as a common complaint from pedestrians.

As we anticipate an extended pandemic and a post-pandemic world, and as we mourn for the lives lost, we should plan for a future that better protects and values human life, especially those who are most vulnerable. With fewer cars on the road, we have more opportunities to undertake infrastructural improvements such as permanent sidewalk widening and pedestrian lighting installation without impacting travel as significantly; and also less capital-intensive but impactful changes such as automatic pedestrian recall, longer crossing times, and reductions in the speed limit.

**Engage the Community**

In future years, in-person engagement will be again possible. Portland in the Streets is a program of PBOT that provides tools, permits, and up to $20,000 in grants for communities to use their rights-of-way for events and activities - everything from block parties to street painting. Metro also offers Community Placemaking grants that may be used similarly. These programs would provide opportunities for community organizations, such as the Rosewood Initiative, to inform neighborhood residents about proposed projects, including ones that...
are unfunded (see Unfunded Projects in Appendix C), and gather feedback to determine which would be community priorities if funding became available or where additional improvements are needed.

Considering the impact Safe Routes to School funding has - and can have - on pedestrian improvements in the area, and the fact that only 2% of the SRTS surveys came from Rosewood residents, these public events are also prime chances to gather more survey responses from parents and students on how to improve the journey to school, helping direct investments to the underserved population of Rosewood.

Resources for Walkability Engagement

Using existing tools such as the PEDSAFE Countermeasure Selection tool and Selection Matrices\(^\text{20}\) can be used as a starting point to understand what types of pedestrian treatments could be suitable to implement based on specific road conditions. These tools can be used as an educational model to explain how and why these improvements are proven to be effective in benefitting the pedestrian experience.
Endnotes


4 Balick, Lisa. May 4, 2020. “‘Slow Streets’ plan to treat 100 miles of Portland roads”. KOIN.


8 Covid-19: Black people and other minorities are hardest hit in US. British Medical Journal. 2020; 369 doi: https://doi.org/10.1136/bmj.m1483


APPENDIX
APPENDIX -A
TARGET POPULATION
To: Ashton Simpson, Rosewood Initiative
   Izzy Armenta, Oregon Walks

From: Matthew Cramer, W & R Consulting

Date: May 18, 2020

Re: Human-Centered Design Deliverables Memo

Memo Sections

1. Target Population: Rosewood youth and older adults
2. Methods
3. Nadia, Rosewood older adult persona and journey maps
4. Emilio, Rosewood youth persona and journey map
5. Interventions
6. Literature Review
7. Variables for Personas
8. References
Section 1. Target Population of Rosewood Youth and Older Adults

Cities globally are reimagining how they may develop to support all generations through the concept of “8-80 cities” (8-80 Cities, 2017; The Age-Friendly Portland Advisory Council, 2013). The City of Portland Transportation System Plan contextualizes this to transportation systems in Policy 9.19, “[i]mprove pedestrian safety, accessibility, and convenience for people of all ages and abilities” (City of Portland, PBOT, 2020, p. 19). This builds on the work of universal design (Carr et al., 2013), which corrects for the mismatch in functional ability (Microsoft, 2015) of the person, and what the built environment presently affords.

This analysis takes a targeted universalism (Powell, 2008) approach to the transportation system, centering youth and older adults. Targeted universalism allows the needs across a population to be met when solving for subpopulations with the highest needs. If older adults are able to do their grocery shopping, and youth are able to travel with friends to the ice cream shop comfortably as pedestrians, those in the middle of the age continuum will be taken care of as well (see Figure 1). This idea is rooted in transportation with the “curb-cut effect” (Glover-Blackwell, 2017). Curb-cuts were originally required to meet the needs of those with mobility devices, but benefits extend to a diverse populations such as those pushing strollers, a delivery person wheeling packages, to a person in a leg cast using a mobility device for a temporary period.

Selecting these target populations of youth and older adults is also responsive to the Rosewood community. Rosewood is distinguished by a high concentration of youth with a network of schools throughout the area. The analysis of crash data within the study area identified the single, recent pedestrian fatality as an older adult (see Figure 2). The rate of older adults killed as pedestrians is 25 percent higher than the national rate of total pedestrians (National Highway Traffic Safety Administration, 2019). Additional research has shown that older adults experience a higher rate of fatalities compared to younger pedestrians in crashes at equivalent speeds (Tefft, 2013). W & R found a statistically significant difference in killed or server injuries in older adult pedestrians compared with the total population in Portland (see Table 1).
Mobility is also a key driver of access to opportunity. Those with limited mobility experience higher rates of social exclusion (Lucas, 2012) resulting in opportunities that influence one’s entire life such employment. Research has shown these target populations are more dependent on active modes, but also more vulnerable when using these modes (Sandt et al., 2016). Older adult drivers are more likely to shift to walking over alternative modes, and take fewer trips than those who drive (Dumbaugh, 2008). Correcting for gaps in the transportation network to serve this target population will have long term effects on broader opportunity for Rosewood.

While the average youth does not experience limitations around functional ability to the same degree as older adults, youth do contend with distinct barriers to mobility. There is some evidence that youth are more sensitive than adults to indicators of social disorder such as the presence of narcotics and violence in the public realm (Jamme et al., 2018). Those under the age of 16 fundamentally do not have access to operating an automobile, and therefore must depend on either being driven or access alternative modes. For neighborhood level trips, walking has the advantage of not requiring equipment like bicycles (which can be storage and cost prohibitive), and is more flexible than transit. Transit is complementary to walking trips and accessing opportunities outside of one’s neighborhood. Youth do report a higher preference for more robust pedestrian supportive infrastructure like improved crossings, and nearby access to commercial land uses (Cain et al., 2014). These findings overlap with preferences of older adults, therefore would result in co-benefits.
“Having the MAX stops just 10 blocks away could be a huge resource because then you can get all over the place. But a lot of people don’t see it that way. They don’t want their high school kids going up to the MAX walking up there.”

- Key Informant

Rosewood is a highly diverse community and the role of intersectionality (Crenshaw, 1991) must be taken into account in realizing equitable outcomes for community members. An example of intersectionality could be a youth of color, with a disability impacting their mobility, could experience greater limitations than an older adult in good health. Emilio (see Section 4) does not have any features of disability, but as a youth of color he experiences public space differently than a peer who is non-Hispanic white (Anderson, 2015). Research conducted in Portland found that black pedestrians waited longer for motorists to yield for them to cross the street than white pedestrians (Goddard et al., 2014). Additionally, focus groups held exclusively with black Portlanders found that participants reported higher degrees of barriers as pedestrians than reported citywide (City of Portland, PBOT, 2018). These higher rates are comparable to the higher rates reported by older adults living in East Portland (see Table 2). Additionally, research found that communities with a lower socioeconomic status (SES), but the same quality of pedestrian supportive infrastructure as communities with higher SES experience less benefit in terms of minutes spent walking in the neighborhood (Adkins et al., 2017). Interventions for this target population are intended to create vertical equity across race, and need and ability, by investing in those with the greatest need (Litman, 2020).

### Table 2. Barriers to Walking in Portland

| Demographics          | Poor lighting | Sidewalks/ walking paths missing on busy streets | Sidewalks/ walking paths missing on residential streets | People driving too fast on busy streets | People driving too fast on residential streets | Drivers not stopping for pedestrians crossing the street | Not enough safe places to cross busy streets | Missing curb ramps at intersections | Recessed/ cracked/ uplifted sidewalks, or other tripping hazards | Not enough time to cross the street | Mean | Total Responses (n) |
|-----------------------|---------------|-------------------------------------------------|--------------------------------------------------------|----------------------------------------|---------------------------------------------|-------------------------------------------------------|---------------------------------|----------------------------------|---------------------------------|--------------------------------|--------------------------|
| East Portland          |               |                                                 |                                                        |                                        |                                             |                                                       |                                 |                                  |                                 |                                |                          |                          |
| Older Adults (65+)     | 4.05          | 5.04                                            | 4.53                                                   | 4.75                                   | 4.94                                        | 4.68                                                  | 4.63                            | 3.57                             | 4.03                            | 3.65                           | 4.39                     | 147-159                  |
| All Portland Youth under age 18 | 3.40          | 4.34                                            | 3.76                                                   | 4.77                                   | 4.23                                        | 4.21                                                  | 4.00                            | 3.67                             | 3.86                            | 3.54                           | 3.84                     | 29-38                    |
| East Portland Residents | 3.92          | 4.76                                            | 4.36                                                   | 4.25                                   | 4.53                                        | 4.33                                                  | 4.41                            | 3.22                             | 3.43                            | 3.03                           | 4.02                     | 785-903                  |
| Citywide               | 3.63          | 4.67                                            | 3.95                                                   | 4.29                                   | 4.44                                        | 4.29                                                  | 4.46                            | 3.22                             | 3.45                            | 3.08                           | 3.95                     | 4318-4690                |

1 Source: PedPDX Public Survey
Section 2. Methods

W & R developed personas to aid in keeping the target population of youth and older adults centered in the process of analyzing needs and potential interventions. A persona is based on actual users, representing traits, goals, and issues that are intended to be met with the intervention. Personas have long been used within the field of design (Wöckl et al., 2012; Pruitt & Grudin, 2003; Antle, 2007) and are increasingly being utilized with urban planning and transportation (Baumann, 2010; Dill & McNeil, 2016). These personas were developed based on a literature review (Cain et al., 2014; Davison & Lawson, 2006; Dumbaugh, 2008; Tournier et al., 2016; Jamme et al., 2018; Molnar et al., 2004) of youth and older adults pedestrians, key informant interviews, publicly available administrative data, and survey data. While these personas are grounded in data, they have not been validated with Rosewood residents within the target population due to the contact limitations of COVID-19. Therefore, it is recommended that additional engagement is conducted when conditions improve, with new insights collected, and the personas refined. These personas are a starting point for continued usage in informing transportation decisions in Rosewood, but are incomplete without feedback from lived experience (Hekman, 1997).

W & R developed three pedestrian journey maps that are paired with the personas. A journey map is a diagram that visualizes an experience into discrete stages from the perspective of the person undergoing the experience. This allows interventions to be developed for each discrete stage, and the outcomes of the collective experience to be improved (Adaptive Path, 2013). Like personas, journey maps range in the presentation of information displayed. To depict the experience W & R used the categories of “doing” (i.e. actions taken by person at each stage), thinking (i.e. how the person is assessing and reacting to the conditions), and a graph based on a Likert scale, which rates the stage. At the bottom of each journey map is an “opportunities” section which captures ideas for interventions to improve the future state of the journey. There is a journey map of each focus street, for a specific trip (e.g. shopping, recreation, school) from the perspective of a persona in the target population. Like the personas, the journey maps are unvalidated with Rosewood residents. It is recommended that they are validated at a future date by using contextual inquiry (i.e. receiving feedback from residents while walking the focus streets).

Nadia, the persona of an older adulting living in Rosewood, and Emilio, a youth living in Rosewood, are meant to be representative of what someone in these demographics would encounter as a pedestrian. Both of them are in relatively good health, and do not use a mobility device. Those who are in poor health report greater barriers to traveling as a pedestrian (Shumway-Cook et al., 2003). Therefore, it should be noted that those in Rosewood with higher degrees of mobility limitations than Nadia and Emilio would encounter greater challenges in an already challenging geography for active modes.

Journey maps and personas are used within human-centered design. Human-centered design is used to develop products, services, interventions keeping those impacted by their use at the center of the process (Brown & Wyatt, 2010). This leads to
increased positive outcomes for the target population, realizing the mission of the organization (IBM, 2018). Human centered design has been applied in transportation (Winter, 2006; Metro, 2019) and urban planning context (Lydon & Garcia, 2015).
Section 3. Nadia

For Nadia, review the following materials in this order:

1. Persona Nadia, older adult living in Rosewood
2. Figure 3. Nadia’s trips as a pedestrian in Rosewood (update with better image)
3. Journey Map:
   - Nadia older adult living in Rosewood journey map: home > convenience store > E 162nd MAX station
   - Nadia older adult living in Rosewood journey map: home > Parklane Park
4. Proposed Interventions

Figure 3. Nadia’s trips as a pedestrian in Rosewood

Note: house icon indicates Nadia’s house, park bench icon indicates Parklane Park, train icon indicates E 162nd MAX station, and purple lines indicate a focus street
Nadia, older adult living in Rosewood

Bio

Nadia has lived in her house in Rosewood for 22 years. Recently widowed, and originally from Ukraine, she never obtained a drivers license, as her husband did all of the driving. Her immediate family lives in the Portland metro, including her granddaughter whom she takes to Parklane Park by stroller. Nadia accesses the majority of services outside of Rosewood by walking to, and taking the MAX from the E 162nd Ave. Station. Her health is good and she would like to continue aging in her home.

“+want to feel connected to those I care for.”

Hindrances

- Inefficient route options
- Intermittent pedestrian infrastructure
- High stress conditions at intersections
- Physical disorder can feel threatening
- Social milieu can feel threatening

Goals

- Meeting daily living needs
- Sustain independence
- Age in place
- Remain involved within the community
- Feel dignified
- Be a supportive grandmother/caregiver

Mode (by frequency)

- Walk or roll
- Cycle
- Transit
- Private automobile passenger
- Private automobile driver

Disability

- Wheelchair user
- Walking with use of ambulatory aides
- Hearing impairment
- Visual impairment
- Limited use of hands
- Cognitive impairment

RACE/ETHNICITY: White non-Hispanic

OCCUPATION: Retired

HOUSEHOLD: Lives alone

LOCATION: Rosewood area in Portland, OR

DEVELOPMENT PATTERN: Suburban-retrofit

ARCHETYPE: Older adult
Nadia older adult living in Rosewood journey map: home > convenience store > E 162nd MAX station

Guiding Principles

Spaces must be responsive to the full range of needs and abilities
People are sensitive to the social cues of a space and those that coinhabit it
Invest in and protect our most vulnerable

Pedestrian Journey

STAGES

To SE Main St.  To SE 162nd Ave.  To SE Taylor St.  To SE Alder St.  To SE Stark St.  To E Burnside St.

DOING

- Looking for cross traffic
- Evaluating road in relation to the weather
- Crossing the roadway
- Negotiating roller bag around parked cars
- Looking for oncoming traffic
- Evaluating if the puddles are too deep to roll through
- Looking for turning vehicles

THINKING

- Can I make the crossing or should I wait longer?
- The puddles are a manageable size today
- What would I park with enough space for me to pass by without going in the road?
- It's too short for me to cross
- That car turned right in front of me
- What is that person crossing the street safely?
- Why don't they ride in the bike lane?
- That car has been parked in the same spot for months
- I recall when that poor boy was shot
- Some of these businesses do more harm than good for our neighborhood
- That mural is so beautiful
- I'm getting a bit tired
- I can barely see that walk sign
- How much cash do I have for my transit card?

EXPERIENCE

Very good (5)
Very good (4)
Very good (3)
Very good (2)
Very good (1)
Very bad (0)

Opportunities

- Install an all ages and abilities pedestrian facility on both sides of the roadway.
- Install facilities that are clearly for and supportive of pedestrians.
- Create more frequent opportunities to cross at a speed that feels reasonable to them.
- Offer places to discard trash.
- Cultivate businesses that foster healthy living.
- Protect pedestrians at the hectic intersection of two major roads.
- Simply complexities for what could become a stressful situation.

Nadia older adult living in Rosewood journey map: home > Parklane Park

Guiding Principles
- Spaces must be responsive to the full range of needs and abilities
- People are sensitive to the social cues of a space and those that coinhabit it
- Invest in and protect our most vulnerable

Pedestrian Journey

<table>
<thead>
<tr>
<th>STAGES</th>
<th>To SE Main St.</th>
<th>To SE 162nd Ave.</th>
<th>To SE 160th Ave.</th>
<th>To SE 159th Ave.</th>
<th>To SE 158th Ave.</th>
<th>To Parklane Park</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOING</td>
<td>Placing child in stroller</td>
<td>Regulating stroller around parked car</td>
<td>Monitoring feet and stroller to avoid tripping over uplifted sidewalk</td>
<td>Checking in on child</td>
<td>Crossing under vegetation</td>
<td>Checking in on child</td>
</tr>
<tr>
<td>THINKING</td>
<td>Can I make the crossing or should I wait longer?</td>
<td>The puddles are a manageable size today</td>
<td>The light is too short for me to cross</td>
<td>That car turned right in front of me</td>
<td>This sidewalk wide enough for both of us to pass?</td>
<td>I would appreciate a real place to cross here</td>
</tr>
</tbody>
</table>

**EXPERIENCE**

- Very good (5)
- Very bad (1)

Note: possible experience response ranges from Very Good (5) to Very Bad (1)

Opportunities

- Install an all ages and abilities pedestrian facility on both sides of the roadway.
- Install facilities that are clearly safe and supportive of pedestrians.
- Resolve any tripping hazards related to tree roots or vegetation.
- Encourage residents to maintain vegetation on their property.
- Complete missing sidewalk segments along the block face.
- Install ADA compliant ramps to afford crossing for those with wheels and/or a limited gait.
- Create conditions for pedestrians traveling opposite directions to pass each other with ease.
- Resolve connectivity issues within the park.
- Optimize pedestrian connectivity through major neighborhood nodes.

Section 4. Emilio

For Emilio, review the following materials in this order:

1. Persona Emilio, youth living in Rosewood
2. Figure 4. Emilio’s trips as a pedestrian in Rosewood
3. Journey Map:
   ○ Emilio youth living in Rosewood journey map: friend’s home > Alder Elementary School
4. Proposed Interventions

Figure 4. Emilio’s trips as a pedestrian in Rosewood

Note: building icon indicates Emilio’s apartment, house icon indicates house belonging to Emilio’s friend, school icon indicates Alder Elementary School, and purple lines indicate a focus street
Emilio, youth living in Rosewood

Bio

Emilio has lived in Rosewood with his parents and older sister at the Springtree Apartments for 3 years. He is a student at Alder Elementary School. He loves soccer and wants to play for the Portland Timbers. Each morning Emilio is dropped off by his mother at his friend’s house before she goes to work. The two boys walk to Alder under the supervision of an adult. After school Emilio will participate in the SUN program, play sports at the Boys and Girls Club Rockwood, or head to a park.

“I want to play with my friends and have fun.”

Goals

• Socialize with friends
• Have fun
• Become educated
• Be active daily
• Meeting daily living needs

Hindrances

• Pedestrian spaces as an afterthought
• An environment with little margin for error
• Dependent on others who drive
• Too many barriers get in the way of having fun along the walk

Disability

• Wheelchair user
• Walking with use of ambulatory aides
• Hearing impairment
• Visual impairment
• Limited use of hands
• Cognitive impairment

Mode (by frequency)

Walk or roll
Cycle
Transit
Private automobile passenger
Private automobile driver

RACE/ETHNICITY: Hispanic or Latino

OCCUPATION: Student

HOUSEHOLD: Lives with parents and sister

LOCATION: Rosewood area in Portland, OR

DEVELOPMENT PATTERN: Suburban-retrofit

ARCHETYPE: Youth
Emilio youth living in Rosewood journey map: friend’s home > Alder Elementary School

Guiding Principles
- Spaces must be responsive to the full range of needs and abilities
- People are sensitive to the social cues of a space and those that coinhabit it
- Invest in and protect our most vulnerable

Pedestrian Journey

<table>
<thead>
<tr>
<th>STAGES</th>
<th>To SE Main St.</th>
<th>To SE 169th Ave.</th>
<th>To SE 172nd Ave.</th>
<th>To SE 174th Ave</th>
<th>To SE Taylor St.</th>
<th>To SE Alder St.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOING</td>
<td>- Walking side-by-side with friend</td>
<td>- Avoiding the growing puddles</td>
<td>- Looking for signal to walk across</td>
<td>- Walking in the street to negotiate around garbage bins and puddles</td>
<td>- Avoiding cars parked where a sidewalk would be</td>
<td>- Paying attention to oncoming cars</td>
</tr>
<tr>
<td>THINKING</td>
<td>- It takes too long for cars to stop for us.</td>
<td>- Hopefully it won’t rain any further.</td>
<td>- I do that house because my friend Sara lives there!</td>
<td>- I wonder if I can climb that tree?</td>
<td>- That big truck was going way too fast! Scary! Did they even see us?</td>
<td>- Are we walking in someone’s front yard?</td>
</tr>
</tbody>
</table>

EXPERIENCE
- Very good (5)
- (4)
- (3)
- (2)
- (1)
- Very bad (0)

Note: possible experience response ranges from Very Good (5) to Very Bad (1)

Opportunities
- Establish a culture that the pedestrian has the right of way at every intersection.
- Establish an explicit location for pedestrian usage with supportive infrastructure.
- Encourage residents to maintain access for pedestrians to pass through.
- Encourage elements that invite activity such as street trees and public art.
- Install traffic calming devices to lower speeds to a level compatible with daily use of elementary school youths.
- Provide additional visual cues that the space is used by children daily.
- Resolve drainage issues.

Section 5. Proposed Interventions

Table 3. Composite interventions from pedestrian journey maps

<table>
<thead>
<tr>
<th>Pedestrian Specific Interventions</th>
<th>General Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Install facilities that are clearly for and supportive of pedestrians.</td>
<td>● Offer places to discard trash.</td>
</tr>
<tr>
<td>● Create more frequent opportunities to cross at a speed that feels reasonable to them.</td>
<td>● Create conditions supportive for people riding bikes to feel safe in the roadway.</td>
</tr>
<tr>
<td>● Provide public resting places for pedestrians.</td>
<td>● Cultivate businesses that foster healthy living.</td>
</tr>
<tr>
<td>● Establish a culture that the pedestrian has the right of way at every intersection.</td>
<td>● Resolve drainage issues.</td>
</tr>
<tr>
<td>● Remove obstacles cluttering the pedestrian through zone.</td>
<td>● Encourage residents to maintain vegetation on their property.</td>
</tr>
<tr>
<td>● Encourage residents to maintain access for pedestrians to pass through.</td>
<td>● Encourage elements that invite activity such as street trees and public art.</td>
</tr>
<tr>
<td>● Install traffic calming devices to lower speeds to a level compatible with daily use of elementary school youths.</td>
<td>● Create conditions for motorists to slow to a speed that compliments a high concentration of youth.</td>
</tr>
<tr>
<td>● Provide additional visual cues that the space is used by children daily.</td>
<td>● Optimize pedestrian connectivity through major neighborhood nodes.</td>
</tr>
<tr>
<td>● Resolve any tripping hazards related to tree roots or vegetation.</td>
<td>● Discourage behaviors that degrade public safety.</td>
</tr>
<tr>
<td>● Complete missing sidewalk segments along the block face.</td>
<td>● Simply complexities for what could become a stressful situation.</td>
</tr>
<tr>
<td>● Install ADA compliant ramps to afford crossing for those with wheels and/or a limited gait.</td>
<td></td>
</tr>
<tr>
<td>● Create a space in the signal timing that specifically protects pedestrians as they cross.</td>
<td></td>
</tr>
<tr>
<td>● Create conditions for pedestrians traveling opposite directions to pass each other with ease.</td>
<td></td>
</tr>
</tbody>
</table>
## Older Adult Pedestrian Literature Review

<table>
<thead>
<tr>
<th>Need/Challenge</th>
<th>Source</th>
<th>Design Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking speed with an ambulatory device disability is slower than one without</td>
<td>(Oxley et al, 2004) in (Dumbaugh, 2008)</td>
<td>increase length of crossing time to slowest speed (walker at 2.07 ft/s) - 3.5 ft/s is ada</td>
</tr>
<tr>
<td>that condition to correct for older adults are generally more cautious as</td>
<td>(Bernhoft and Carstensen, 2008) in (Tourniera et al, 2016)</td>
<td>provide a higher level of service for pedestrian supportive infrastructure</td>
</tr>
<tr>
<td>pedestrians. Older pedestrians are much less likely than younger pedestrians to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>be involved in crashes associated with unsafe or reckless pedestrian behavior,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>such as midblock &quot;dart outs&quot; or other improper crossings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absence of resting places</td>
<td>(AARP, 2002); (Carlsson, 2004) in (Tourniera et al, 2016)</td>
<td>publicly accessible resting places (e.g. benches)</td>
</tr>
<tr>
<td>Older adults also appear to be more vigilant in searching out opportunities for</td>
<td>(Dumbaugh, 2008)</td>
<td>increase frequency protected crossing opportunities</td>
</tr>
<tr>
<td>protected crossing locations than other age groups</td>
<td></td>
<td>leading pedestrian interval, pedestrian only signal phase, no turn on red</td>
</tr>
<tr>
<td>Delayed reaction time when conflict with vehicles during the turning phase</td>
<td>(Dumbaugh, 2008)</td>
<td>maximize connectivity, mixed use zoning</td>
</tr>
<tr>
<td>walking distance is too far to destinations</td>
<td>(AARP, 2002)</td>
<td>lower speed limit and design speed of roadway</td>
</tr>
<tr>
<td>frail bodies are more vulnerable to impact</td>
<td>Tefft, 2013</td>
<td>remove obstacles and trip hazards</td>
</tr>
<tr>
<td>fear of falling resulting in a need to monitor steps generally</td>
<td>(Avineri et al., 2012) in (Tourniera et al, 2016)</td>
<td>keep pedestrian through zone on the sidewalk unobstructed (e.g. signs, utility boxes, vegetation, sidewalk buckling, poor drainage)</td>
</tr>
<tr>
<td>trip hazards and obstacles</td>
<td>(Paquette and Vallis, 2010) in (Tourniera et al, 2016)</td>
<td></td>
</tr>
<tr>
<td>wayfinding navigation issues related to aging</td>
<td>Klencklen et al., 2012; Moffat, 2009 in (Tourniera et al, 2016)</td>
<td>landmarks; public art</td>
</tr>
<tr>
<td>far side lane crash risk</td>
<td>in (Tourniera et al, 2016)</td>
<td>reduce number of travel lanes and install center median island</td>
</tr>
<tr>
<td>visual decline associated with aging</td>
<td>in (Tourniera et al, 2016)</td>
<td>larger print of signage and do not rely on visual cues alone (e.g. audible cues)</td>
</tr>
<tr>
<td>Topic</td>
<td>Source</td>
<td>Notes</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>hearing decline associated with aging</td>
<td>(Salonen et al., 2011; Smith et al., 2008) in (Tourniera et al, 2016)</td>
<td>do not rely on audible cues alone (e.g. visual cues)</td>
</tr>
<tr>
<td>processing speed or cognitive decline associated with aging; increased stress of cognitive load</td>
<td>(Holtzer et al., 2007; Owsley and McGwin, 2004; Rosano et al., 2012; Welmerink et al., 2010) in (Tourniera et al., 2016)</td>
<td>systemic</td>
</tr>
<tr>
<td>ambient lighting</td>
<td>(Shumway-Cook et al., 2003)</td>
<td>pedestrian-scale lighting</td>
</tr>
<tr>
<td>physical load limits</td>
<td>(Shumway-Cook et al., 2003)</td>
<td>curb cuts</td>
</tr>
<tr>
<td>fear of crime</td>
<td>(AARP, 2002)</td>
<td>eyes on the street; police</td>
</tr>
<tr>
<td>issues judging gaps in traffic</td>
<td>Dommes et al., 2014</td>
<td>refuge island, fewer lanes</td>
</tr>
<tr>
<td>non-residential destinations</td>
<td>(Cain et al., 2014)</td>
<td>mixed-use zoning</td>
</tr>
<tr>
<td>positive aesthetics and social features</td>
<td>(Cain et al., 2014)</td>
<td>public art</td>
</tr>
<tr>
<td>quality crossings</td>
<td>(Cain et al., 2014)</td>
<td>crossing with supportive treatments</td>
</tr>
<tr>
<td>Personal Characteristics</td>
<td>Personal Attributes</td>
<td>Context</td>
</tr>
<tr>
<td>--------------------------</td>
<td>---------------------</td>
<td>---------</td>
</tr>
<tr>
<td>AGE</td>
<td>DISABILITY</td>
<td>DEVELOPMENT PATTERN</td>
</tr>
<tr>
<td>child</td>
<td>wheelchair user</td>
<td>urban</td>
</tr>
<tr>
<td>adolescent</td>
<td>walking disability</td>
<td>suburban</td>
</tr>
<tr>
<td>adult</td>
<td>hearing impairment</td>
<td>suburban retrofit</td>
</tr>
<tr>
<td>older adult</td>
<td>visual impairment</td>
<td>rural</td>
</tr>
<tr>
<td>GENDER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>limited use of hands</td>
<td>DWELLING TYPE</td>
</tr>
<tr>
<td>female</td>
<td>cognitive impairment</td>
<td>single-family</td>
</tr>
<tr>
<td>nonbinary</td>
<td></td>
<td>multi-family</td>
</tr>
<tr>
<td>RACE/ETHNICITY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White (non-Hispanic)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African-American or African</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiracial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Indian/Native American/Alaskan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDUCATIONAL LEVEL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>high school graduate or less</td>
<td></td>
<td></td>
</tr>
<tr>
<td>noncollege post-high school or some college</td>
<td></td>
<td></td>
</tr>
<tr>
<td>college graduate (including graduate school)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOUSEHOLD INCOME</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;$14,999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$15,000 to $24,999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$25,000 to $35,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$35,000 to $49,999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$50,000 to $74,999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$75,000 to $99,999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$100,000 to $149,999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$150,000 or more</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NUMBER OF PEOPLE IN HOUSEHOLD</td>
<td>1</td>
<td>NUMBER OF PEOPLE IN HOUSEHOLD UNDER 18</td>
</tr>
<tr>
<td>OCCUPATION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>student</td>
<td></td>
<td></td>
</tr>
<tr>
<td>employed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>unemployed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>retired</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author's modification of Konrad Baumann's "Personas as a user-centred design method for mobility-related services" (2010)
Section 8. References


APPENDIX-B
SURVEY MATERIALS
### Figure. Rosewood Walkability Survey Respondent Characteristics

<table>
<thead>
<tr>
<th>Gender</th>
<th>Value (%)</th>
<th>Race/Ethnicity</th>
<th>Value (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>15.4</td>
<td>White non-Hispanic</td>
<td>84.6</td>
</tr>
<tr>
<td>Female</td>
<td>77.0</td>
<td>African-American or African</td>
<td>0.0</td>
</tr>
<tr>
<td>Non-binary/Third Gender</td>
<td>7.7</td>
<td>Asian or Pacific Islander</td>
<td>0.0</td>
</tr>
<tr>
<td>Age (in years)</td>
<td></td>
<td>American Indian/Native American/Alaskan Native</td>
<td>0.0</td>
</tr>
<tr>
<td>&lt;18</td>
<td>0.0</td>
<td>Hispanic or Latino/Latina</td>
<td>7.7</td>
</tr>
<tr>
<td>18-24</td>
<td>0.0</td>
<td>Multiracial</td>
<td>0.0</td>
</tr>
<tr>
<td>25-34</td>
<td>23.1</td>
<td>Prefer to self-describe</td>
<td>7.7</td>
</tr>
<tr>
<td>35-44</td>
<td>69.2</td>
<td>Anyone &lt;18 years old in household (n=13)</td>
<td></td>
</tr>
<tr>
<td>45-54</td>
<td>7.7</td>
<td>Yes</td>
<td>92.3</td>
</tr>
<tr>
<td>55-64</td>
<td>0.0</td>
<td>No</td>
<td>7.7</td>
</tr>
<tr>
<td>65+</td>
<td>0.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hello, we are Portland State University students working with the Rosewood Initiative on a project to make the area safe and comfortable to be a pedestrian. Whether this means walking, rolling with a mobility device, or pushing a stroller, we are inviting you to take a brief survey - it will take about 5 minutes. Your responses will be anonymous. The information gathered from your participation in this project will be used to develop recommendations on how to make the neighborhood better to travel as a pedestrian.
Rosewood Pedestrian Survey

Rosewood Walkability (1/3)

Gift Card
If you want to be entered for the prize gift card, please enter your email address and first name below.

First Name

Email
Map of the Area [graphic has a map displaying streets, schools, and parks, found between SE 148th to 174th and between SE Stark St to SE Main St]
What makes walking difficult in the area pictured in the map above? The range is (1) Not a concern to (6) A major concern. Please try to think of the neighborhood as a whole in your response.

<table>
<thead>
<tr>
<th></th>
<th>(1) Not a concern</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6) A major concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor lighting</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Sidewalks missing</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>People driving too fast</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Drivers not stopping for pedestrians crossing the street</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Not enough safe places to cross</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Missing curb ramps</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Obstacles and tripping hazards</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Issue</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Not enough time to cross the street</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public safety/Fear of crime</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not enough destinations I want/need</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Any additional comments about walking within this area?
Please select the frequency you walk for these trips in a NORMAL month

<table>
<thead>
<tr>
<th></th>
<th>Daily</th>
<th>Sometimes (1-3 times per week)</th>
<th>Rarely (1-2 times per month)</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>School</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Taking Public Transportation</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Run Errands, Shop or Eat Out</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Excercise</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Leisure</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Other</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
As a pedestrian, where do you encounter the most difficulties while walking in your neighborhood? Click the map to mark the specific spot.
Please describe the problems you have at this spot

Where would you like to walk in your neighborhood if it felt comfortable and safe?
Which statement best describes how often you allow your K-8th grade child to walk in your neighborhood? Please skip if this doesn't apply to you.

- My child always walks
- My child walks as much as our schedule permits.
- My child occasionally walks in my neighborhood
- My child never walks in my neighborhood
- Walking is not an option for my child
What factors limit walking for your K-8th grade child? Multiple responses allowed. Skip if this doesn't apply to you.

☐ Parent(s) work schedules

☐ Household routines/schedules (sibling activities, dual households)

☐ Weather

☐ Distance (destinations are too far away to walk)

☐ Child does not enjoy it

☐ Parent does not enjoy it

☐ Poor walking facilities (lack of sidewalks)
| ☐ | Concerns about traffic safety |
| ☐ | Neighborhood safety/crime ("stranger danger") |
| ☐ | Child's ability to walk safely |
| ☐ | Other |
What is Your Age?

- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- **55-64**
- 65 or more
What is your gender?

- Male
- Female
- Other

Do you have anyone under 18 years old in your household?

- Yes
- No
What is Your Race or Ethnicity?

- White (non-Hispanic)
- African-American or African
- Asian or Pacific Islander
- American Indian/Native American/Alaskan Native
- Hispanic or Latino/Latina
- Multiracial
- Prefer to self-describe
What is your home zip code?

- 97233
- 97230
- 97236
- Write in
APPENDIX-C
PROJECTS IN STUDY AREA
<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project/Plan Name</th>
<th>Project Description</th>
<th>Location</th>
<th>Projected Cost</th>
<th>Funding Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE Main, between SE 160th Pl and SE 162nd</td>
<td>$57,079</td>
<td>OTHER</td>
</tr>
<tr>
<td>2</td>
<td>Safe Routes to School</td>
<td>Construct 10 ft sidewalk level shared pedestrian/bike lane</td>
<td>SE 174th, between SE Stark and SE Main</td>
<td>$2,000,000</td>
<td>Fixing Our Streets</td>
</tr>
<tr>
<td>3</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE Millmain Dr, between SE 157th Dr and SE Main</td>
<td>Unknown</td>
<td>OTHER</td>
</tr>
<tr>
<td>4</td>
<td>Safe Routes to School</td>
<td>Crossing Improvement</td>
<td>SE Main at SE 167th</td>
<td>$10,000</td>
<td>OTHER</td>
</tr>
<tr>
<td>5</td>
<td>Safe Routes to School</td>
<td>Mark or Update Crosswalk</td>
<td>SE 174th at SE Alder</td>
<td>$5,000</td>
<td>Fixing Our Streets</td>
</tr>
<tr>
<td>6</td>
<td>Safe Routes to School</td>
<td>Crossing Improvement</td>
<td>SE Stark at SE 155th Pl</td>
<td>$181,500</td>
<td>OTHER</td>
</tr>
<tr>
<td>7</td>
<td>Safe Routes to School</td>
<td>Signalized Intersection Review</td>
<td>SE 162nd at SE Main</td>
<td>$76,500</td>
<td>OTHER</td>
</tr>
<tr>
<td>8</td>
<td>Safe Routes to School</td>
<td>Crossing Improvement</td>
<td>SE 148th Ave at SE Main</td>
<td>$275,000</td>
<td>Fixing Our Streets</td>
</tr>
</tbody>
</table>

1 Source: See plans featured in Chapter 5
### FIGURE. LARGER FUNDED STREET/CORRIDOR PROJECTS

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project/Plan Name</th>
<th>Project Description</th>
<th>Location</th>
<th>Projected Cost</th>
<th>Funding Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Outer Stark Safety and Access to Transit</td>
<td>Construct priority pedestrian and bicycle access to transit improvements in the Outer Stark corridor, as identified in the Growing Transit Communities Plan. Elements include improved pedestrian crossings, enhanced bikeways, transit stop improvements, lighting upgrades, and roadway design changes to improve traffic safety.</td>
<td>Stark, SE (108th - City Limits)</td>
<td>$4,000,000</td>
<td>House Bill 2017 funds, development fees, cannabis taxes, and Build Portland funds</td>
</tr>
<tr>
<td>2</td>
<td>4M Bikeway</td>
<td>Design and implement a bikeway, with improved crossings at major streets.</td>
<td>Market / Mill / Millmain / Main, SE (I-205 - 174th)</td>
<td>$1,750,000</td>
<td>Fixing Our Streets, federal grant funding</td>
</tr>
<tr>
<td>3</td>
<td>East Portland Access to Employment: 150s Neighborhood Greenway</td>
<td>Build sidewalks and crossing improvements on Powell Blvd, improve sidewalks for access to transit, improve transit stops, improve transit operations, and build the 100s and 150s Neighborhood Greenways.</td>
<td>NE Halsey Street &amp; 158th to SE Powell Boulevard &amp; 156th</td>
<td>$5,870,072</td>
<td>Federal grant funding</td>
</tr>
<tr>
<td>4</td>
<td>SE 162nd Ave Safety and Access Project/SE 162nd Avenue Corridor Improvements</td>
<td>Construct safety and access to transit improvements from Stark to Powell to support bus service, including enhanced bike lanes and crossings.</td>
<td>162nd Ave, SE (Stark-Powell)</td>
<td>$5,000,000</td>
<td>House Bill 2017 funds and Trimet Federal Transit Administration funds</td>
</tr>
</tbody>
</table>

1 Source: See plans featured in Chapter 5

---

### FIGURE. ADOPTED UNFUNDED NEIGHBORHOOD PLANS IN ROSEWOOD

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project/Plan Name</th>
<th>Project Description</th>
<th>Location</th>
<th>Projected Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rosewood Connected Centers Project Phase 1</td>
<td>Construct local street network connections and multi-modal improvements on key pedestrian and bicycle routes within and connecting to Rosewood Center.</td>
<td>Rosewood Neighborhood Center</td>
<td>$2,000,000</td>
</tr>
</tbody>
</table>

1 Source: See plans featured in Chapter 5
<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project/Plan Name</th>
<th>Project Description</th>
<th>Location</th>
<th>Projected Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE Market, between SE 162nd and SE 169th Pl</td>
<td>$607,980</td>
</tr>
<tr>
<td>2</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE Alder, between SE 155th and SE 160th</td>
<td>$358,832</td>
</tr>
<tr>
<td>3</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE 157th Dr/SE 157th, between SE Millin and SE Division</td>
<td>$848,388</td>
</tr>
<tr>
<td>4</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE 154th, between SE Stark and SE Alder</td>
<td>$902,320</td>
</tr>
<tr>
<td>5</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE Main, between SE 146th and SE 151st</td>
<td>$437,021</td>
</tr>
<tr>
<td>6</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE Main, between SE 158th and SE 160th</td>
<td>$788,821</td>
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<tr>
<td>7</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE 156th, between SE Main and SE Mill</td>
<td>$396,203</td>
</tr>
<tr>
<td>8</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE 174th, between SE Mill and SE Division</td>
<td>$1,076,780</td>
</tr>
<tr>
<td>9</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE 174th, between SE Mill and SE Division</td>
<td>$1,076,780</td>
</tr>
<tr>
<td>10</td>
<td>Safe Routes to School</td>
<td>Shared Use Path</td>
<td>Parklane Park from SE Main to SE Millin</td>
<td>$149,470</td>
</tr>
<tr>
<td>11</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE 144th, between E Burnside and SE Stark</td>
<td>$295,548</td>
</tr>
<tr>
<td>12</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE Main, between SE 162nd and SE 167th</td>
<td>$343,139</td>
</tr>
<tr>
<td>13</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE Millin Dr, between SE 150th and SE 158th</td>
<td>$647,383</td>
</tr>
<tr>
<td>14</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE 167th, between SE Taylor and SE Market</td>
<td>$356,120</td>
</tr>
<tr>
<td>15</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE Main, between SE 146th and SE 151st</td>
<td>$575,975</td>
</tr>
<tr>
<td>16</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE Millin Dr, between SE 159th and SE Main</td>
<td>$607,988</td>
</tr>
<tr>
<td>17</td>
<td>Safe Routes to School</td>
<td>Shared Use Path</td>
<td>SE Alder to Parklane track</td>
<td>$39,258</td>
</tr>
<tr>
<td>18</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE 164th, between E Burnside and SE Stark</td>
<td>$397,216</td>
</tr>
<tr>
<td>19</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE Main, between SE 162nd and SE 167th</td>
<td>$389,864</td>
</tr>
<tr>
<td>20</td>
<td>Safe Routes to School</td>
<td>Construct Walkway</td>
<td>SE 174th, between SE Stark and SE Main</td>
<td>$606,784</td>
</tr>
<tr>
<td>21</td>
<td>Safe Routes to School</td>
<td>Mark or Update Crosswalk</td>
<td>SE Main St and SE 151st</td>
<td>$3,500</td>
</tr>
<tr>
<td>Focus Street</td>
<td>Pedestrian Design Classification</td>
<td>Land Use</td>
<td>Improvements</td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>SE Millmain Dr/</td>
<td>City Walkways: City Walkways are intended to provide safe, convenient, and attractive pedestrian</td>
<td>City Walkways should provide access along major streets to neighborhood</td>
<td>City Walkways should have regularly-spaced marked crossings (with closer spacing in Pedestrian Districts), sidewalks on both sides, and a pedestrian realm that can accommodate moderate levels of pedestrian activity.</td>
<td></td>
</tr>
<tr>
<td>Main St &amp; SE 194th</td>
<td>access along major streets and trails with moderate level of pedestrian activity supported by current and planned land uses. These includes Community and Regional Corridors, non-frequent transit lines, and moderate-demand off-street trails.</td>
<td>commercial areas, another community destinations. Where auto-oriented land uses are allowed on City Walkways, site development standards should address the needs of pedestrians for access.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE 162nd Ave</td>
<td>Major City Walkway: Major City Walkway are intended to provide safe, convenient, and attractive pedestrian access along major streets and trails with a high level of pedestrian activity supported by current and planned land uses. These include Civic and Neighborhood Corridors, Civic and Neighborhood Main Streets, frequent transit lines, high-demand off-street trails, and streets in areas with a high density of pedestrian-oriented uses.</td>
<td>Land Use: Major City Walkways generally serve areas with the highest density of mixed-use zoning, major commercial areas, and major destinations. Where auto-oriented land uses are allowed on Major City Walkways, site development standards should address the needs of pedestrians for access.</td>
<td>Consider special design treatments for Major City Walkways that are also designated as Civic or Neighborhood Main Streets. Major City Walkways should have regularly-spaced marked crossings (with closer spacing in Pedestrian Districts), wide sidewalks on both sides, and a pedestrian realm that can accommodate high volumes of pedestrian activity.</td>
<td></td>
</tr>
</tbody>
</table>

1 Source: PBOT Transportation System Plan
Imponer las calles
Diversión
me gusta la hospitalidad, sois muy hospitales, los parques
Facilidades
APPENDIX-D
TIER I & II
### Tier I: Ped Improvements Estimated at or Below $250K

<table>
<thead>
<tr>
<th>Type</th>
<th>Image</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marked Crosswalks</td>
<td><img src="image1" alt="Image" /></td>
<td>Marked crosswalks indicate optimal or preferred locations for pedestrians to cross and help designate right-of-way for motorists to yield to pedestrians.</td>
</tr>
<tr>
<td>Curb Ramps</td>
<td><img src="image2" alt="Image" /></td>
<td>Curb ramps provide access between the sidewalk and roadway for people using wheelchairs, strollers, walkers, crutches, handcarts, bicycles, or who have mobility restrictions that make it difficult to step up and down high curbs.</td>
</tr>
<tr>
<td>Separated Walkways</td>
<td><img src="image3" alt="Image" /></td>
<td>While sidewalks are typically made of concrete, less expensive walkways may be constructed of asphalt, crushed stone, or other materials if they are properly maintained and accessible (firm, stable, and slip-resistant).</td>
</tr>
</tbody>
</table>
## Tier I: Ped Improvements Estimated at or Below $250K

<table>
<thead>
<tr>
<th>Type</th>
<th>Image</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lane Reduction (Road Diet)</td>
<td><img src="image1.png" alt="Lane Reduction" /></td>
<td>Lane reductions and road diets can decrease the lane crossing distance and reduce vehicle speeds.</td>
</tr>
<tr>
<td>Raised Medians</td>
<td><img src="image2.png" alt="Raised Medians" /></td>
<td>Raised medians are curbed sections that typically occupy the center of a roadway.</td>
</tr>
<tr>
<td>Textured Crosswalks</td>
<td><img src="image3.png" alt="Textured Crosswalks" /></td>
<td>Paving materials are important to the function and look of a street, both in the road and on the sidewalk. Occasionally, paving materials in and of themselves act as a traffic-calming device (e.g., when the street is paved in brick or cobblestone).</td>
</tr>
<tr>
<td>Type</td>
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</tr>
<tr>
<td>Neighborhood Identity</td>
<td></td>
<td>Many neighborhoods or business districts want to be recognized for their unique character. This can enhance the walking environment and sense of community.</td>
</tr>
<tr>
<td>Leading Pedestrian Interval</td>
<td></td>
<td>LPIs can be programmed into traffic signals to minimize conflicts between pedestrians crossing a roadway and left or right turning vehicles. LPIs give the pedestrian the WALK signal 3–7 seconds before the motorists are allowed to proceed through the intersection. ...2010.</td>
</tr>
<tr>
<td>Street Furniture</td>
<td></td>
<td>Walking areas should be interesting for pedestrians, provide a secure environment, should be well lit, and have good sightlines.</td>
</tr>
<tr>
<td>Type</td>
<td>Image</td>
<td>Notes</td>
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</tr>
<tr>
<td>Advanced Yield</td>
<td><img src="image1.jpg" alt="Image" /></td>
<td>Advance yield/stop line include the stop bar or “sharks teeth” yield markings placed 20 to 50 feet in advance of a marked crosswalk to indicate where vehicles are required to stop or yield in compliance with the accompanying “STOP Here for Pedestrians” or “YIELD Here to Pedestrians”.</td>
</tr>
<tr>
<td>Stop Lines</td>
<td><img src="image2.jpg" alt="Image" /></td>
<td></td>
</tr>
<tr>
<td>Signing</td>
<td><img src="image3.jpg" alt="Image" /></td>
<td>Regulatory signs, such as STOP, YIELD, or turn restriction signs such as NO TURN ON RED require compliant driver actions and can be enforced. Warning signs can provide helpful information, especially to motorists and pedestrians unfamiliar with an area.</td>
</tr>
<tr>
<td>Speed Bumps</td>
<td><img src="image4.jpg" alt="Image" /></td>
<td>Speed humps are paved (usually asphalt) and approximately 3 to 4 in. high at their center, and extend the full width of the street with height tapering near the drain gutter to allow unimpeded bicycle travel.</td>
</tr>
<tr>
<td>Type</td>
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</tr>
<tr>
<td><strong>Lighting &amp; Illumination</strong></td>
<td></td>
<td>Appropriate quality and placement of lighting can enhance an environment and increase comfort and safety.</td>
</tr>
<tr>
<td><strong>Curb Extensions</strong></td>
<td></td>
<td>Curb extensions—also known as bulb-outs or neckdowns—extend the sidewalk or curb line out into the parking lane and reduce the effective street width.</td>
</tr>
<tr>
<td><strong>Sidewalks</strong></td>
<td></td>
<td>Sidewalks are associated with significant reductions in pedestrian collisions with motor vehicles. Such facilities also improve mobility for pedestrians and provide access for all types of pedestrian travel: to and from home, work, parks, schools, shopping areas, and transit stops.</td>
</tr>
<tr>
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<tr>
<td>Pedestrian Overpass</td>
<td>Pedestrian overpasses and underpasses allow for the uninterrupted flow of pedestrian movement separate from vehicle traffic.</td>
<td></td>
</tr>
<tr>
<td>Pedestrian Overpass</td>
<td>However, they should be a measure of last resort, and it is usually more appropriate to use traffic-calming measures or install a pedestrian-activated signal that is accessible to all pedestrians because overpasses and underpasses are costly, visually intrusive, and poorly utilized when a more direct at-grade crossing is possible.</td>
<td></td>
</tr>
<tr>
<td>Rectangular Rapid-Flashing-Beacon (RRFB)</td>
<td>RRFBs are pedestrian-actuated conspicuity enhancements used in combination with a pedestrian, school, or trail crossing warning sign to improve safety at uncontrolled, marked crosswalks.</td>
<td></td>
</tr>
<tr>
<td>Type</td>
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</tr>
<tr>
<td><strong>Pedestrian Hybrid Beacon (PHB)</strong></td>
<td><img src="image1.png" alt="Image" /></td>
<td>Pedestrian Hybrid Beacons (PHBs) can warn and control traffic at unsignalized locations and assist pedestrians in crossing a street or highway at a marked crosswalk.</td>
</tr>
<tr>
<td><strong>Crossing Island</strong></td>
<td><img src="image2.png" alt="Image" /></td>
<td>A crossing island is a median with a refuge area that is intended to help protect pedestrians crossing a multilane road. This countermeasure is sometimes referred to as a pedestrian refuge island.</td>
</tr>
<tr>
<td><strong>Pedestrian Signals</strong></td>
<td><img src="image3.png" alt="Image" /></td>
<td>Pedestrian signals provide positive guidance to pedestrians regarding the permitted signal interval to cross a street and prohibit pedestrian crossings when conflicting traffic may impact pedestrian safety.</td>
</tr>
</tbody>
</table>
### Tier II: Ped Improvements Estimated Above $250K

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Automated Pedestrian Detection</td>
<td></td>
<td>Automated pedestrian detection devices are able to sense when a pedestrian is waiting at a crosswalk and automatically send a signal to switch to a pedestrian WALK phase.</td>
</tr>
</tbody>
</table>
